



Ministry of Human Resources  
Malaysia

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2008

**MALAYSIA  
STANDARD  
CLASSIFICATION  
OF OCCUPATIONS  
2008**

3<sup>rd</sup> Edition

## **MALAYSIA STANDARD CLASSIFICATION OF OCCUPATIONS 2008 THIRD EDITION**

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The tasks and duties described in this classification at Major Group level, Sub-Major Group, Minor Group or Unit Group level are not always, nor should they always be performed completely by all occupations listed under the respective group. This document must not be used for settling jurisdictional/legal matters concerning issues such as tasks and duties, job or professional titles, wages and hours.

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# ***PREFACE***

*Malaysia Standard Classification of Occupations 2008 (MASCO-08) is a national benchmark for occupations which respect to reflect occupational structure and national employment. MASCO was developed in accordance with International Standard Classification of Occupations by International Labour Organization widely used worldwide. The Ministry of Human Resources Malaysia is responsible for developing MASCO-08 to improve the classification of occupational structure and update job titles in current market concordant with economic growth, new technology and organizational changes in Malaysia.*

*The publication of MASCO-08 supersedes previous edition which was published in year 1998. MASCO-08 consists of 4,257 job titles including 1,024 new job titles and 296 in the public sector. MASCO-08 retains the basic principle of occupational classification, based on type of work and tasks or job performed as well as the concept of skill level and specialization. There are 12 occupations has been dropped since they were redundant, while 138 occupations has to be reclassified, merged or split into several groups to reflect the current economic scenario and complexity of economic activities in certain sectors.*

*The transition of MASCO-98 to MASCO-08 carried some challenges to the Ministry especially over the past 10 to 15 years, during which Malaysian economy and employment structure has changed significantly as the country evolved from manufacturing to commerce and services industry. As the nation transformed into a more developed economy, occupations in the major group of managerial, professionals and technicians move more rapidly as compared to occupations in other major groups.*

*The updating of MASCO-08 version involved various approaches including workshops with government agencies and private sectors, establishment surveys, identifying new job titles advertised in newspapers and JobsMalaysia. MASCO should continue to be reviewed and updated periodically to reflect changes and development in the employment structure and the emergence of new occupations in Malaysia.*

*It is my hope that this publication will serve as a comprehensive guidance and reference to both public and private sectors especially to policy makers, education and training institution as well as human resources planner. MASCO is useful to researchers involved with survey and population census which used as important references on occupations and labour market information.*

*I would like to express my appreciations and congratulations to all individuals, establishments, professional associations, related ministries and government departments for their comments and contributions towards this publication. Special thanks especially to the MASCO-08 working group of the Ministry of Human Resources for their effort in realizing the publication of MASCO-08.*

**DATO' SERI ZAINAL RAHIM BIN SEMAN**

*Secretary General*

*Ministry of Human Resources, Malaysia*



# *Acknowledgements*

Malaysia Standard Classification of Occupations 2008 Second Edition (MASCO-08) was developed by the Ministry of Human Resources Malaysia (MoHR) under advisory and leadership of Y.Bhg. Dato' R. Segarajah, Secretary General and Tuan Haji Mohd Shariff bin Hussin, Deputy Secretary General (Policy) and the working group, chaired by Encik Mohd. Sahar bin Darusman who was responsible for the overall coordination including the final editing of MASCO-08.

Several people have played important roles in completing MASCO-08. They are Encik Mustapha bin Ab. Rahman, Encik Mustaffa bin Md Ali and YM. T. Kamazeri bin T. Ismail who lead the task of updating job titles, developing new code and systematic alphabetical order.

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# Challenges in Developing MASCO 08



Difficulty to put job title or terminology with identical meaning (eg: Sub-Assistant, Assistant, Senior, Junior, Executive and Chief)



Adaptation of traditional job titles or by local names (eg: *Kapitan*, House leader/ *Tuai house*, *Penghulu* / *Penggawa*, Chief village, *Dang pawara* etc.)



Coordinating or adjusting names resulted from popularity or aimed to increase promotion or morale from the job title created (eg: Sales ambassador / products, Concierge, Customer service executive and Global support service executive.



Classification principle has to be loosened due to report requirement by JobsMalaysia system for job application and matchmaking.



To fulfill JobsMalaysia's user requirement in job selection and application for the same job title in public and private sector (eg: Civil Engineer J41 - public sector, Civil Engineer - private sector)



Job titles with similar task and responsibility but having different name. (eg: Vacuum And Blower).

# Principles of Classification of Occupations

The two main concept used in occupational classification are the concept of the kind of work performed or job and the concept of skill.

Job is defined as a set of tasks and duties performed by one person. A set of jobs whose main tasks and duties are similar is referred to an occupation. In other words, persons who perform similar main tasks are considered doing the same type of work and are classified in the same occupational group, regardless of the level of authority, responsibility or work experience. For instance, chief civil engineer is classified among civil engineers (unit group 2142) and chief accountant among accountants (unit group 2411).

Skill is defined as the ability to perform tasks and duties of an occupation and has, for the purpose of the MASCO 08, the following two dimensions;

- 1) Skill level - which is a function of the complexity and range of tasks and duties involved; and
- 2) Skill specialization - defined by the field of knowledge required the tools and machinery used, the material worked on or with, as well as the kinds of goods and services provided.

The operational definitions of the four main skill levels are summarized as follows:

| Skill Level | Educational Level  |
|-------------|--|
| First       | Primary education  |
| Second      | Secondary or post-secondary education;<br>Malaysian Skills Certificate (SKM) Level 1-3   |
| Third       | Tertiary education leading to an award not equivalent to a first University Level; Malaysian Skills Certificate (SKM) Level 4, or Malaysian Skills Diploma (DKM) Level 4 |
| Fourth      | Tertiary education leading to a University or postgraduate university degree; Malaysian Skills Advanced Diploma (DLKM) Level 5-8   |

The use of the educational categories to define the four skill levels does not mean that the skill necessary to perform the tasks and duties of a given occupation can be acquired through formal education. The skills may be, and often are, acquired through informal training and experience. So, when classifying an occupation as for example engineer, it does not mean that the post can only be occupied by a formal, registered engineer, although the activities will correspond quite close to those undertaken by the said engineer. In addition, the focus is on the skills required to carry out the tasks and duties and not on whether a worker having a particular occupation is more or less skilled than another worker in the same occupation.

The Major Group of the MASCO 08 can be categorized according to the following four common skill levels:

| <b>Skill Level</b> | <b>Educational Level</b>  | <b>Major Groups</b>  |
|--------------------|---|--|
| Fourth             | Tertiary education leading to a University or postgraduate university degree; Malaysian Skills Advanced Diploma (DLKM) Level 5-8  | 2. Professionals   |
| Third              | Tertiary education leading to an award not equivalent to a first University Level; Malaysian Skills Certificate (SKM) Level 4, or Malaysian Skills Diploma (DKM) Level 4. | 3. Technicians and Associate Professionals   |
| Second             | Secondary or post-secondary education; Malaysian Skills Certificate (SKM) Level 1-3   | 4. Clerical Support Workers<br><br>5. Service and Sales Workers<br><br>6. Skilled Agricultural, Forestry and Fishery Workers<br><br>7. Craft and Related Trades Workers<br><br>8. Plant and Machine-operators and Assemblers |
| First              | Primary education   | 9. Elementary Occupations  |

However, the concept of skill level is not applicable to Major Group 1: Managers and Major Group 0: Armed Forces Occupations. For these two groups, the skill level concept does not reflect the main skill requirements for distinguishing them from other Major Groups.

# MASCO 08

## Structure of Classification

The occupational classification structure has four main levels, namely, major groups, sub-major groups, minor groups and small unit groups tabulated as follows:

| Major Group<br>(1-digit)                                | Sub-major<br>Groups<br>(2-digit) | Minor<br>Groups<br>(3-digit) | Unit<br>Groups<br>(4-digit) | Small Unit<br>Groups<br>(5-digit) |
|---|----------------------------------|------------------------------|-----------------------------|-----------------------------------|
| 1 Managers  | 4                                | 11                           | 37                          | 310                               |
| 2 Professionals   | 7                                | 35                           | 119                         | 1,245                             |
| 3 Technicians and Associate<br>Professionals            | 5                                | 21                           | 89                          | 804                               |
| 4 Clerical Support Workers                              | 4                                | 8                            | 29                          | 416                               |
| 5 Service and Sales Workers                             | 4                                | 13                           | 41                          | 333                               |
| 6 Skilled Agricultural, Forestry and<br>Fishery Workers | 3                                | 9                            | 20                          | 144                               |
| 7 Craft and Related Trades Workers                      | 5                                | 14                           | 66                          | 580                               |
| 8 Plant and Machine-operators and<br>Assemblers         | 3                                | 16                           | 46                          | 682                               |
| 9 Elementary Occupations                                | 6                                | 11                           | 36                          | 230                               |
| 0 Armed Forces Occupations                              | 3                                | 6                            | 6                           | 60                                |
| <b>10</b>   | <b>44</b>                        | <b>144</b>                   | <b>489</b>                  | <b>4,804</b>                      |

In the classification, all occupations are categorized into ten (10) major groups (1-digit). Subsequently, the major groups are divided into **44** sub-major groups (2-digit) which comprise **144** minor groups (3-digit). The minor groups are further sub-divided into **489** unit groups (4-digit) and the unit groups are further sub-divided into **4,804** (5-digit).



A number of occupational titles are classified within each unit group. Occupational titles classified in the same unit group are assigned different sub-codes. The numeral 9 in the last digit of a two-, three-, and four- or five-digit code refers to all other groups. Residual occupational category or miscellaneous group usually has 'not elsewhere classified' at the end.

The following example depicts the finer details of several occupations:

| <b><i>Group</i></b> | <b><i>Title</i></b>                       | <b><i>Code</i></b> |
|---------------------|---|--------------------|
| Major Group         | Professionals                             | 2                  |
| Sub-Major Group     | Sciences and Engineering Professionals    | 21                 |
| Minor Group         | Physical and Earth Sciences Professionals | 211                |
| Unit Group          | Chemists                                  | 2113               |
|                     | Chemist                                   | 21131              |
|                     | Chemist-Rubber/Organic                    | 21132              |
|                     | Chemist-Corrosion                         | 21133              |
|                     | Chemist-Physical                          | 21134              |

# Notes on Some Particular Occupations

Supervisory occupations, as well as those of a foreman, which are mainly concerned with the control of the professional or technical quality of the work done, are classified together with the jobs whose tasks they supervise. However, if the main tasks and duties of a job consist of planning, organizing and directing the daily work activities of a group of subordinate workers, the occupation should be considered as a managerial occupation and classified in the appropriate group belonging either to Sub-major Group 12: Administrative and Commercial Managers or 13 : Production and Specialized Services Managers. Only in large enterprises, with many levels of decision making, where between the supervisor and the operators there is at least one other supervisory level, and at the same time there is one or more levels between the supervisor and the management, supervisors may be grouped in Sub-major Group 31: Physical and Engineering Associate Professionals.

Working proprietors are not listed as a special group, but classified according to their activities. A shop owner, who spends most of the behind, the counter, helping customers, should be classified under Sub-major Group 52: Sales Workers. If however his/her activities consist mainly of managing resources, finance and personnel, he/she should be classified under Sub-Major Group 12: Administrative and Commercial Managers.

Occupations mainly concerned with on-job training by continuous observation, assessment and guidance are classified with the occupations whose workers they instruct, in a particular trade, craft or machine- operating task.

Apprentices and trainees are classified according to the tasks and duties actually performed, and not according to their future occupation.

Job titles with prefix are referring to posts in public sector (eg; Engineer, civil J41). Job titles with non-prefix (except military, under group 0) are referring to posts in private sector (eg; Engineer, civil). Difference job titles in both public and private sector do not distinguish the task in code referred.

# Summary of Major Groups

## **1. MANAGERS**

Managers determine, formulate, direct or advise on government policies, as well as those of special-interest organizations, formulate laws, public rules and regulations, represent governments and act on their behalf, oversee the interpretation and implementation of government policies and legislation, or plan, direct and co-ordinate the policies and activities of enterprises or organizations, or their internal departments or sections. Reference to skill level has not been made in defining the scope of this major group.

## **2. PROFESSIONALS**

Professionals increase the existing stock of knowledge, apply scientific or artistic concepts and theories, teach about the foregoing in a systematic manner, or engage in any combination of these three activities. Most occupations in this major group require skills at the fourth skill level.

## **3. TECHNICIANS AND ASSOCIATE PROFESSIONALS**

Technicians and associate professionals perform mostly technical and related tasks connected with research and the application of scientific or artistic concepts and operational methods, and government or business regulations, and teach at certain educational levels. Most occupations in this major group require skills at the third skill level.

## **4. CLERICAL SUPPORT WORKERS**

Clerical support workers record, organize, store and retrieve information related to the work in question, compute financial, statistical and other numerical data, and perform a number of client-oriented clerical duties especially in connection with money-handling operations, travel arrangements and business information and appointments. Most occupations in this major group require skills at the second skill level.

## **5. SERVICES AND SALES WORKERS**

Services and sales workers provide personal and protective services related to travel, housekeeping, catering, personal care, or protection against fire and unlawful acts, or they pose as models for artistic creation and display, or demonstrate and sell goods in wholesale or retail shops and similar establishments, as well as at stalls and markets. Most occupations in this major group require skills at the second skill level.

## **6. SKILLED AGRICULTURAL, FORESTRY AND FISHERY WORKERS**

Skilled agricultural, forestry and fishery workers grow and harvest field or tree and shrub crop, gather wild fruits and plants breed, tend or hunt animals, produce a variety of animal husbandry products, cultivate, conserve and exploit forests, breed or catch fish and cultivate or gather other forms of aquatic life. Most occupations in this major group require skills at the second skill level.

## **7. CRAFT AND RELATED TRADES WORKERS**

Craft and related trades workers apply their specific knowledge and skills in the fields of mining and construction, form metal, erect metal structures, make, fit, maintain and repair machinery, equipment or tools, carry out printing work as well as produce or process foodstuffs, textiles, or wooden, metal and other articles.

The work is carried out by hand and by hand-powered and other tools which are used to reduce the amount of physical effort and time required for specific tasks, as well as to improve the quality of the products. The tasks call for an understanding of all stages of the production process, the materials and tools used, and the nature and purpose of the final product. Most occupations in this major group require skills at the second skill level.

## **8. PLANT AND MACHINE-OPERATORS AND ASSEMBLERS**

Plant and machine-operators and assemblers operate and monitor industrial and agricultural machinery and equipment, drive and operate trains, motor vehicles and mobile machinery and equipment, or assemble products from component parts according to strict specifications and procedures.

The work mainly calls for experience with and an understanding of industrial and agricultural machinery and equipment as well as an ability to cope with machine-paced operations and to adapt to technological innovations. Most occupations in this major group require skills at the second skill level.

## **9. ELEMENTARY OCCUPATIONS**

Elementary occupations perform single and routine tasks which mainly require the use of handheld tools and in some cases considerable physical effort. Most occupations in this major group require skills at the first level.

## **0. ARMED FORCES OCCUPATIONS**

Members of the armed forces occupations are those personnel who are currently serving in the armed forces and who are not free to accept civilian employment. Included are regular members of the army, navy, air force and other military services. Excluded are person in civilian employment of government establishments concerned with defence issues, police (other than military police), customs inspectors and members of border or other armed civilian services, and members of military reserves not currently on active service. Reference to a skill level has not been used in defining the scope of this major group.

# Major, Sub-Major, Minor and Unit Group Titles

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**MAJOR GROUP 1**  
**MANAGERS**

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**11 CHIEF EXECUTIVES, SENIOR OFFICIALS & LEGISLATORS****111 LEGISLATORS AND SENIOR OFFICIALS**

- 1111 Legislators
- 1112 Senior Government Officials
- 1113 Traditional Chiefs and Heads of Village
- 1114 Senior Officials of Special-Interest Organizations

**112 MANAGING DIRECTORS AND CHIEF EXECUTIVES**

- 1120 Managing Directors and Chief Executives

**12 ADMINISTRATIVE AND COMMERCIAL MANAGERS****121 BUSINESS SERVICES AND ADMINISTRATION MANAGERS**

- 1211 Finance Managers
- 1212 Human Resource Managers
- 1213 Policy and Planning Managers
- 1214 Business Services Managers
- 1215 Administrative Managers
- 1219 Business Services and Administration Managers Not Elsewhere Classified

**122 SALES, MARKETING AND DEVELOPMENT MANAGERS**

- 1221 Sales and Marketing Managers
- 1222 Advertising and Public Relations Managers
- 1223 Research and Development Managers

**13 PRODUCTION AND SPECIALIZED SERVICES MANAGERS****131 PRODUCTION MANAGERS IN AGRICULTURE, FORESTRY AND FISHERIES**

- 1311 Agricultural and Forestry Production Managers
- 1312 Aquaculture and Fisheries Production Managers

**132 MANUFACTURING, MINING, CONSTRUCTION AND DISTRIBUTION MANAGERS**

- 1321 Manufacturing Managers
- 1322 Mining Managers



- 1323 Construction Managers
- 1324 Supply, Distribution and Related Managers
  
- 133 INFORMATION AND COMMUNICATIONS TECHNOLOGY SERVICES MANAGERS**
- 1330 Information and Communications Technology Services Managers
  
- 134 PROFESSIONALS SERVICES MANAGERS**
- 1341 Child Care Services Managers
- 1342 Health Services Managers
- 1343 Aged Care Services Managers
- 1344 Social Welfare Managers
- 1345 Education Managers
- 1346 Financial and Insurance Services Branch Managers
- 1349 Professional Services Managers Not Elsewhere Classified
  
- 14 HOSPITALITY, RETAIL AND OTHER SERVICES MANAGERS**
  
- 141 HOTEL AND RESTAURANT MANAGERS**
- 1411 Hotel Managers
- 1412 Restaurant Managers
  
- 142 RETAIL AND WHOLESALE TRADE MANAGERS**
- 1420 Retail and Wholesale Trade Managers
  
- 143 OTHER SERVICES MANAGERS**
- 1431 Sports, Recreation and Cultural Centre Managers
- 1432 Personal care, Cleaning and Related Services Managers
- 1433 Legal Managers
- 1434 Property Managers
- 1435 Safety and Security Managers
- 1439 Services Managers Not Elsewhere Classified

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## **MAJOR GROUP 2**

### **PROFESSIONALS**

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- 21 SCIENCE AND ENGINEERING PROFESSIONALS**
  
- 211 PHYSICISTS, CHEMIST AND RELATED PROFESSIONALS**
- 2111 Physicists and Astronomers
- 2112 Meteorologists and Seismologists
- 2113 Chemists
- 2114 Geologists and Geophysicists
  
- 212 MATHEMATICIANS, ACTUARIES AND STATISTICIANS**

2120 Mathematicians, Actuaries and Statisticians

**213 LIFE SCIENCE PROFESSIONALS**

2131 Biologists, Botanists, Zoologists and Related Professionals

2132 Farming, Forestry and Fisheries Advisers

2133 Environmental Protection Professionals

2134 Pharmacologists, Pathologists and Related Professionals

**214 ENGINEERING PROFESSIONALS (EXCLUDING ELECTROTECHNOLOGY)**

2141 Industrial and Production Engineers

2142 Civil Engineers

2143 Environmental Engineers

2144 Mechanical Engineers

2145 Chemical Engineers

2146 Mining Engineers, Metallurgists and Related Professionals

2149 Engineering Professionals Not Elsewhere Classified

**215 ELECTROTECHNOLOGY ENGINEERS**

2151 Electrical Engineers

2152 Electronic Engineers

2153 Telecommunications Engineers

**216 ARCHITECTS, PLANNERS, SURVEYORS AND DESIGNERS**

2161 Building Architects

2162 Landscape Architects

2163 Product and Garment Designers

2164 Town and Traffic Planners

2165 Cartographers and Surveyors

2166 Graphic and Multimedia Designers

**217 SHIP, AIRCRAFT AND TRAIN/LOCOMOTIVE CONTROLLERS**

2171 Ships Engineers

2172 Ships Deck Officers and Pilots

2173 Aircraft Pilots and Related Professionals

2174 Air Traffic Controllers

2175 Train/Locomotive Controller

2179 Transport Controller Not Elsewhere Classified

**218 MINING, MANUFACTURING & CONSTRUCTION PROFESSIONALS**

2181 Mining Professionals

2182 Manufacturing Professionals

2183 Construction Professionals

**22 HEALTH PROFESSIONALS**

**221 MEDICAL DOCTORS**

2211 Generalist Medical Practitioners  
2212 Specialist Medical Practitioners

**222 NURSING AND MIDWIFERY PROFESSIONALS**

2221 Nursing Professionals  
2222 Midwifery Professionals

**223 TRADITIONAL AND COMPLEMENTARY MEDICINE PROFESSIONALS**

2230 Traditional and Complementary Medicine Professionals

**224 PARAMEDICAL PRACTITIONERS**

2240 Paramedical Practitioners

**225 VETERINARIANS**

2250 Veterinarians

**226 OTHER HEALTH PROFESSIONALS**

2261 Dentists  
2262 Pharmacists  
2263 Environmental and Occupational Health and Hygiene Professionals  
2264 Physiotherapists  
2265 Dieticians and Nutritionists  
2266 Audiologist and Speech Therapist  
2267 Optometrists and Ophthalmic Opticians  
2268 Occupational Therapists  
2269 Health Professionals Not Elsewhere Classified

**23 TEACHING PROFESSIONALS**

**231 UNIVERSITY AND HIGHER EDUCATION TEACHERS**

2310 University and Higher Education Teachers

**232 VOCATIONAL EDUCATION TEACHERS**

2320 Vocational Education Teachers

**233 SECONDARY EDUCATION TEACHERS**

2330 Secondary Education Teachers

**234 PRIMARY SCHOOL AND EARLY CHILDHOOD TEACHERS**

2341 Primary School Teachers  
2342 Early Childhood Educators

**235 MUSIC, ARTS AND PERFORMING ARTS TEACHERS**

2351 Music Teachers  
2352 Arts Teachers

2353 Performing Arts Teachers

**236 LANGUAGE TEACHERS**

2360 Language Teachers

**237 RELIGIOUS TEACHERS**

2370 Religious Teachers

**238 SKILL TECHNOLOGY AND TECHNICAL TRAINERS**

2381 Vocational Training Officers

**239 OTHER TEACHING PROFESSIONALS**

2391 Education Methods Specialists

2392 Special Needs Teachers

2393 Information Technology Trainers

2399 Teaching Professionals Not Elsewhere Classified

**24 BUSINESS AND ADMINISTRATION PROFESSIONALS**

**241 FINANCE PROFESSIONALS**

2411 Accountants

2412 Financial and Investment Advisers

2413 Financial Analysts

**242 ADMINISTRATION PROFESSIONALS**

2421 Management and Organization Analysts

2422 Policy Administration Professionals

2423 Personnel and Careers Professionals

2424 Training and Staff Development Professionals

2425 Administrative Professionals

**243 SALES, MARKETING AND PUBLIC RELATIONS PROFESSIONALS**

2431 Advertising and Marketing Professionals

2432 Public Relations Professionals

2433 Technical and Medical Sales Professionals (Excluding ICT)

2434 Information and Communications Technology (ICT) Sales Professionals

**244 REGULATORY GOVERNMENT PROFESSIONALS**

2441 Customs, Border and Immigration Inspector Professionals

2442 Taxation and Excise Officials Professionals

2443 Government Social Benefits Officials Professionals

2444 Government Licensing Officials Professionals

2445 Police Inspectors and Detectives Professionals

2446 Civil Officials Professionals

2449 Regulatory Government Professionals Not Elsewhere Classified

**25 INFORMATION AND COMMUNICATIONS TECHNOLOGY PROFESSIONALS**

**251 SOFTWARE AND APPLICATIONS DEVELOPERS AND ANALYSTS**

- 2511 Systems Analysts
- 2512 Software Developers
- 2513 Web and Multimedia Developers
- 2514 Applications Programmers
- 2519 Software and Applications Developers and Analysts Not Elsewhere Classified

**252 DATABASE AND NETWORK PROFESSIONALS**

- 2521 Database Designers and Administrators
- 2522 Systems Administrators
- 2523 Computer Network Professionals
- 2529 Database and Network Professionals Not Elsewhere Classified

**26 LEGAL, SOCIAL AND CULTURAL PROFESSIONALS**

**261 LEGAL PROFESSIONALS**

- 2611 Lawyers
- 2612 Judges
- 2619 Legal Professionals Not Elsewhere Classified

**262 LIBRARIANS, ARCHIVISTS AND CURATORS**

- 2621 Archivists and Curators
- 2622 Librarians and Related Information Professionals

**263 SOCIAL AND RELIGIOUS PROFESSIONALS**

- 2631 Economists
- 2632 Sociologists, Anthropologists and Related Professionals
- 2633 Philosophers, Historians and Political Scientist
- 2634 Psychologists
- 2635 Social Work and Counseling Professionals
- 2636 Religious Professionals

**264 AUTHORS, JOURNALISTS AND LINGUISTS**

- 2641 Authors and Related Writers
- 2642 Journalists
- 2643 Translators, Interpreters and Other Linguists

**265 CREATIVE AND PERFORMING ARTISTS**

- 2651 Visual Artists
- 2652 Musicians, Singers and Composers
- 2653 Dancers and Choreographers
- 2654 Film, Stage and Related Directors and Producers
- 2655 Actors
- 2656 Announcers on Radio, Television and Other Media



- 2657 Clowns, Magicians, Acrobats and Related Professionals
- 2658 Animals Keepers and Trainers
- 2659 Creative and Performing Artists Not Elsewhere Classified

**27 HOSPITALITY, RETAIL AND OTHER SERVICES PROFESSIONALS**

**271 HOTEL AND RESTAURANT PROFESSIONALS**

- 2711 Hotel, Hospitality and Related Professionals
- 2712 Restaurant and Related Professionals

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**MAJOR GROUP 3**

**TECHNICIANS AND ASSOCIATE PROFESSIONALS**

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**31 SCIENCE AND ENGINEERING ASSOCIATE PROFESSIONALS**

**311 PHYSICAL AND ENGINEERING SCIENCE TECHNICIANS**

- 3111 Chemical and Physical Science Technicians
- 3112 Civil Engineering Technicians
- 3113 Electrical Engineering Technicians
- 3114 Electronics Engineering Technicians
- 3115 Mechanical Engineering Technicians
- 3116 Chemical Engineering Technicians
- 3117 Mining and Metallurgical Technicians
- 3118 Draughtspersons
- 3119 Physical and Engineering Science Technicians Not Elsewhere Classified

**312 MINING, MANUFACTURING AND CONSTRUCTION SUPERVISORS**

- 3121 Mining Supervisors
- 3122 Manufacturing Supervisors
- 3123 Construction Supervisors
- 3129 Other Supervisor Not Elsewhere Classified

**313 PROCESS CONTROL TECHNICIANS**

- 3131 Power Production Plant Operators
- 3132 Incinerator and Water Treatment Plant Operators
- 3133 Chemical Processing Plant Controllers
- 3134 Petroleum and Natural Gas Refining Plant Operators
- 3135 Metal Production Process Controllers
- 3139 Process Control Technicians Not Elsewhere Classified

**314 LIFE SCIENCE TECHNICIANS AND RELATED ASSOCIATE PROFESSIONALS**

- 3141 Life Science Technicians (Excluding Medical)
- 3142 Agricultural Technicians
- 3143 Forestry Technicians

**315 SHIP, AIRCRAFT AND TRAIN TECHNICIANS**

- 3151 Air Traffic Technicians
- 3152 Ship/Marine Technicians
- 3153 Train/Rel Technicians
- 3159 Transport Technicians Not Elsewhere Classified

**316 SCIENCE NUCLEAR ASSOCIATE PROFESSIONALS**

- 3160 Nuclear Research and Development Associate Professionals

**32 HEALTH ASSOCIATE PROFESSIONALS**

**321 MEDICAL AND PHARMACEUTICAL TECHNICIANS**

- 3211 Medical Imaging and Therapeutic Equipment Technicians
- 3212 Medical and Pathology Laboratory Technicians
- 3213 Pharmaceutical Technicians and Assistants
- 3214 Medical and Dental Prosthetic Technicians
- 3215 Orthotic and Prosthetic Technicians

**322 NURSING AND MIDWIFERY ASSOCIATE PROFESSIONALS**

- 3221 Nursing Associate Professionals
- 3222 Midwifery Associate Professionals

**323 TRADITIONAL AND COMPLEMENTARY MEDICINE ASSOCIATE PROFESSIONALS**

- 3230 Traditional and Complementary Medicine Associate Professionals

**324 VETERINARY TECHNICIANS AND ASSISTANTS**

- 3240 Veterinary Technicians and Assistants

**325 OTHER HEALTH ASSOCIATE PROFESSIONALS**

- 3251 Dental Assistants and Therapists
- 3252 Medical Records and Health Information Technicians
- 3253 Community Health Workers
- 3254 Dispensing Opticians
- 3255 Physiotherapy Technicians and Assistants
- 3256 Medical Assistants
- 3257 Environmental and Occupational Health Inspectors and Associates
- 3258 Ambulance Workers
- 3259 Health Associate Professionals Not Elsewhere Classified

**33 BUSINESS AND ADMINISTRATIONS ASSOCIATE PROFESSIONALS**

**331 FINANCIAL AND MATHEMATICAL ASSOCIATE PROFESSIONALS**

- 3311 Securities and Finance Dealers and Brokers
- 3312 Credit and Loans Officers
- 3313 Accounting Associate Professionals
- 3314 Statistical, Mathematical and Actuarial Associate Professionals
- 3315 Valuers and Loss Assessors

**332 SALES AND PURCHASING AGENTS AND BROKERS**

- 3321 Insurance Representatives
- 3322 Commercial Sales Representatives
- 3323 Buyers
- 3324 Trade Brokers

**333 BUSINESS SERVICES AGENTS**

- 3331 Clearing and Forwarding Agents
- 3332 Conference and Event Planners
- 3333 Employment Agents and Contractors
- 3334 Real Estate and Property Agents
- 3339 Business Services Agents Not Elsewhere Classified

**334 ADMINISTRATIVE AND SPECIALIZED SECRETARIES**

- 3341 Office Supervisors
- 3342 Legal Secretaries
- 3343 Administrative and Executive Secretaries
- 3344 Medical Secretaries
- 3349 Administrative and Specialized Secretaries Not Elsewhere Classified

**335 REGULATORY GOVERNMENT ASSOCIATE PROFESSIONALS**

- 3351 Customs and Border Inspector
- 3352 Taxation and Excise Officials
- 3353 Government Social Benefits Officials
- 3354 Government Licensing Officials
- 3355 Police Inspectors and Detectives
- 3356 Civil Defence Associate Professionals
- 3359 Regulatory Government Associate Professionals Not Elsewhere Classified

**34 LEGAL, SOCIAL, CULTURAL AND RELATED ASSOCIATE PROFESSIONALS**

**341 LEGAL, SOCIAL, AND RELIGIOUS ASSOCIATE PROFESSIONALS**

- 3411 Legal and Related Associate Professionals
- 3412 Social Work Associate Professionals
- 3413 Religious Associate Professionals

**342 SPORTS, SELF DEFENCE AND FITNESS ASSOCIATE PROFESSIONALS**

- 3421 Athletes and Sports Players
- 3422 Sports Coaches, Instructors and Officials
- 3423 Fitness and Recreation Instructors and Program Leaders

**343 ARTISTIC, CULTURAL AND CULINARY ASSOCIATE PROFESSIONALS**

- 3431 Photographers
- 3432 Interior Designers and Decorators
- 3433 Gallery, Museum and Library Technicians
- 3434 Chefs

3435 Other Artistic and Cultural Associate Professionals

**35 INFORMATION AND COMMUNICATIONS TECHNICIANS**

**351 INFORMATION AND COMMUNICATIONS TECHNOLOGY  
OPERATIONS AND USER SUPPORT TECHNICIANS**

3511 Information and Communications Technology Operations Technicians  
3512 Information and Communications Technology User Support Technicians  
3513 Computer Network and Systems Technicians  
3514 Web Technicians

**352 TELECOMMUNICATIONS AND BROADCASTING TECHNICIANS**

3521 Broadcasting and Audio-Visual Technicians  
3522 Telecommunications Engineering Technicians

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**MAJOR GROUP 4**

**CLERICAL SUPPORT WORKERS**

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**41 OFFICE CLERKS**

**411 GENERAL OFFICE CLERKS**

4110 General Office Clerks

**412 SECRETARIES (GENERAL)**

4120 Secretaries (General)

**413 KEYBOARD OPERATORS**

4131 Typist and Word Processor Operators  
4132 Data Entry Clerks

**42 CUSTOMER SERVICES CLERKS**

**421 TELLERS, MONEY COLLECTORS AND RELATED CLERKS**

4211 Bank Tellers and Related Clerks  
4212 Bookmakers, Croupiers and Related Gaming Workers  
4213 Pawnbrokers and Money-Lenders  
4214 Debt-Collectors and Related Workers

**422 CLIENT INFORMATION WORKERS**

4221 Travel Consultants and Clerks  
4222 Contact/Call Centre Information Clerks  
4223 Telephone Switchboard Operators  
4224 Hotel Receptionists  
4225 Enquiry Clerks  
4226 Receptionist (General)

- 4227 Survey and Market Research Interviewers
- 4229 Client Information Workers Not Elsewhere Classified

**43 NUMERICAL AND MATERIAL RECORDING CLERKS**

**431 NUMERICAL CLERKS**

- 4311 Accounting and Bookkeeping Clerks
- 4312 Statistical, Finance and Insurance Clerks
- 4313 Payroll Clerks

**432 MATERIAL - RECORDING AND TRANSPORTATION CLERKS**

- 4321 Stock Clerks
- 4322 Production Clerks
- 4323 Transportation Clerks

**44 OTHER CLERICAL SUPPORT WORKERS**

**441 OTHER CLERICAL SUPPORT WORKERS**

- 4411 Library Clerks
- 4412 Mail Carriers and Sorting Clerks
- 4413 Coding, Proof-Reading and Related Clerks
- 4414 Scribes and Related Workers
- 4415 Filing and Copying Clerks
- 4416 Personnel Clerks
- 4419 Clerical Support Workers Not Elsewhere Classified

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**MAJOR GROUP 5**

**SERVICE AND SALES WORKERS**

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**51 PERSONAL SERVICES WORKERS**

**511 TRAVEL ATTENDANTS, CONDUCTORS AND TRAVEL GUIDES**

- 5111 Travel Attendants and Travel Stewards
- 5112 Transport Conductors
- 5113 Travel Guides

**512 COOKS**

- 5120 Cooks

**513 WAITERS AND BARTENDERS**

- 5131 Waiters and Waitress
- 5132 Bartenders

**514 HAIRDRESSERS, BEAUTICIANS AND RELATED WORKERS**

- 5141 Hairdressers
- 5142 Beauticians and Related Workers



**515 BUILDING AND HOUSEKEEPING SUPERVISORS**

- 5151 Cleaning and Housekeeping Supervisors in Offices, Hotel and Other Establishments
- 5152 Domestic Housekeepers
- 5153 Building Caretakers

**516 OTHER PERSONAL SERVICES WORKERS**

- 5161 Astrologers, Fortune-Tellers and Related Workers
- 5162 Companions and Valets
- 5163 Undertakers and Embalmers
- 5164 Pet Groomers and Animal Care Workers
- 5165 Driving Instructors
- 5169 Personal Services Workers Not Elsewhere Classified

**52 SALES WORKERS**

**521 STREET AND MARKET SALESPERSON**

- 5211 Stall and Market Salespersons
- 5212 Street Food Salespersons

**522 SHOP SALESPERSONS**

- 5221 Shop Keepers
- 5222 Shop Supervisors
- 5223 Shop Sales Assistants

**523 CASHIERS AND TICKET CLERKS**

- 5230 Cashiers and Ticket Clerks

**524 OTHER SALES WORKERS**

- 5241 Fashion and Other Models
- 5242 Sales Demonstrators
- 5243 Door To Door Salespersons
- 5244 Contact Centre Salespersons
- 5245 Service Station AND Pump Attendants
- 5246 Food Service Counter Attendants
- 5249 Sales Workers Not Elsewhere Classified

**53 EDUCATION AND SOCIAL SERVICES WORKERS**

**531 CHILD CARE WORKERS AND TEACHERS AIDE**

- 5311 Child Care Workers
- 5312 Teachers Aide

**532 PERSONAL CARE WORKERS IN MEDICAL CENTER**

- 5321 Health Care Assistants
- 5322 Home-Based Personal Care Workers

5329 Personal Care Workers in Medical Services Center Not Elsewhere Classified

**54 PROTECTIVE SERVICES WORKERS**

**541 PROTECTIVE SERVICES WORKERS**

5411 Fire-Fighters  
5412 Police Officers  
5413 Prison Guards  
5414 Security Guards  
5415 Immigration/Custom Officers and Assistant  
5419 Protective Services Workers Not Elsewhere Classified

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**MAJOR GROUP 6**

**SKILLED AGRICULTURAL, FORESTRY, LIVESTOCK AND FISHERY WORKERS**

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**61 MARKET-ORIENTED SKILLED AGRICULTURAL AND LIVESTOCK WORKERS**

**611 MARKET GARDENERS AND CROP GROWERS**

6111 Field Crop Growers  
6112 Shrub Crop Growers  
6113 Gardeners, Horticultural and Nursery Growers  
6114 Mixed Crop Growers  
6115 Vegetable Growers

**612 ANIMAL PRODUCERS, LIVESTOCK FARMERS AND ANIMAL PRODUCT PRODUCERS**

6121 Livestock and Dairy Producers  
6122 Aves Producers  
6123 Fishery Producers and Farmers  
6129 Animal Producers Not Elsewhere Classified

**613 MIXED CROP AND ANIMAL PRODUCERS**

6130 Mixed Crop and Animal Producers

**62 MARKET-ORIENTED SKILLED FORESTRY, FISHERY AND HUNTING WORKERS**

**621 FORESTRY AND RELATED WORKERS**

6211 Forestry and Related Workers  
6212 Charcoal Burners and Related Workers

**622 FISHERY WORKERS, HUNTERS AND TRAPPERS**

6221 Aquaculture Workers  
6222 Inland and Coastal Waters Fishery Workers  
6223 Deep-Sea Fishery Workers  
6224 Hunters and Trappers

**63 SUBSISTENCE FARMERS, FISHERMAN, HUNTERS AND GATHERERS**

**631 SUBSISTENCE CROP FARMERS**

6310 Subsistence Crop Farmers

**632 SUBSISTENCE LIVESTOCK FARMERS**

6320 Subsistence Livestock Farmers

**633 SUBSISTENCE MIXED CROP AND LIVESTOCK FARMERS**

6330 Subsistence Mixed Crop and Livestock Farmers

**634 SUBSISTENCE FISHERS, HUNTERS, TRAPPERS AND GATHERERS**

6340 Subsistence Fishers, Hunters, Trappers and Gatherers

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**MAJOR GROUP 7**

**CRAFT AND RELATED TRADES WORKERS**

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**71 BUILDING AND RELATED TRADES WORKERS, EXCLUDING ELECTRICIANS**

**711 BUILDING FRAME AND RELATED TRADES WORKERS**

7111 House Builders

7112 Bricklayers and Related Workers

7113 Stonemasons, Stone Cutters, Splitters and Carvers

7114 Concrete Placers, Concrete Finishers and Related Workers

7115 Carpenters and Joiners

7119 Building Frame and Related Trades Workers Not Elsewhere Classified

**712 BUILDING FINISHERS AND RELATED TRADES WORKERS**

7121 Roofers

7122 Floor Layers and Tile Setters

7123 Plasterers

7124 Insulation Workers

7125 Glaziers

7126 Plumbers and Pipe Fitters

7127 Air Conditioning and Refrigeration Mechanics

**713 PAINTERS, BUILDING STRUCTURE CLEANERS AND RELATED TRADES WORKERS**

7131 Painters and Related Workers

7132 Spray Painters and Varnishers

7133 Building Structure Cleaners

**72 METAL, MACHINERY AND RELATED TRADES WORKERS**

**721 SHEET AND STRUCTURAL METAL WORKERS, MOULDERS AND WELDERS AND RELATED WORKERS**

- 7211 Metal Moulders and Coremakers
- 7212 Welders and Flame cutters
- 7213 Sheet-Metal Workers
- 7214 Structural Metal-Preparers and Erectors
- 7215 Riggers and Cable Splicers

**722 BLACKSMITHS, TOOLMAKERS AND RELATED TRADES WORKERS**

- 7221 Blacksmiths, Hammersmiths and Forging-Press Workers
- 7222 Toolmakers and Related Workers
- 7223 Metal Working Machine Tool Setters and Operators
- 7224 Metal Polishers, Wheel Grinders and Tool Sharpeners

**723 MACHINERY MECHANICS AND REPAIRERS**

- 7231 Motor Vehicle Mechanics and Repairers
- 7232 Aircraft Engine Mechanics and Repairers
- 7233 Agricultural and Industrial Machinery Mechanics and Repairers
- 7234 Bicycle and Related Repairers

**73 HANDICRAFT AND PRINTING WORKERS**

**731 HANDICRAFT WORKERS**

- 7311 Precision Instrument Makers and Repairers
- 7312 Musical Instrument Makers and Tuners
- 7313 Jewellery and Precious-Metal Workers
- 7314 Potters and Related Workers
- 7315 Glass Makers, Cutters, Grinders and Finishers
- 7316 Sign Writers, Decorative Painters, Engravers and Inscribers
- 7317 Handicraft Workers of Wood, Basketry and Related Materials
- 7318 Handicraft Workers of Textile, Leather and Related Materials
- 7319 Handicraft Workers Not Elsewhere Classified

**732 PRINTING TRADES WORKERS**

- 7321 Pre-Press Technicians
- 7322 Printers
- 7323 Print Finishing and Binding Workers
- 7324 Printing and Photo Engravers and Inscribers

**74 ELECTRICAL AND ELECTRONIC TRADES WORKERS**

**741 ELECTRICAL EQUIPMENT INSTALLERS AND REPAIRERS**

- 7411 Building and Related Electricians
- 7412 Electrical Mechanics and Fitters
- 7413 Electrical Line Installers and Repairers

**742 ELECTRONICS AND TELECOMMUNICATIONS INSTALLERS AND REPAIRERS**

- 7421 Electronics Mechanics and Servicers
- 7422 Information and Communications Technology Installers and Services

**75 FOOD PROCESSING, WOOD WORKING, GARMENT AND OTHER CRAFT AND RELATED TRADES WORKERS**

**751 FOOD PROCESSING AND RELATED TRADES WORKERS**

- 7511 Butchers, Fishmongers and Related Food Preparers
- 7512 Bakers, Pastry-Cooks and Confectionery Makers
- 7513 Dairy-Products Makers
- 7514 Fruit, Vegetable and Related Preservers
- 7515 Food and Beverage Tasters and Graders
- 7516 Tobacco Preparers and Tobacco Products Makers

**752 WOOD TREATERS, CABINET-MAKERS AND RELATED TRADES WORKERS**

- 7521 Wood Treaters
- 7522 Cabinet-Makers and Related Workers
- 7523 Woodworking-Machine Tool Setters and Operators

**753 GARMENT AND RELATED TRADES WORKERS**

- 7531 Tailors, Dressmakers, Furriers and Hatters
- 7532 Garment and Related Pattern-Makers and Cutters
- 7533 Shoemakers and Related Workers
- 7534 Upholsterers and Related Workers
- 7535 Pelt Dressers, Tanners and Fellmongers

**754 OTHER CRAFT AND RELATED WORKERS**

- 7541 Underwater Divers
- 7542 Shotfirers and Blasters
- 7543 Product Graders and Testers (Excluding Foods And Beverages)
- 7544 Fumigators, Pest and Weed Controllers
- 7549 Craft and Related Trades Workers Not Elsewhere Classified

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**MAJOR GROUP 8**

**PLANT AND MACHINE OPERATORS AND ASSEMBLERS**

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**81 STATIONARY PLANT AND MACHINE OPERATORS**

**811 MINING AND MINERAL PROCESSING PLANT OPERATORS**

- 8111 Miners and Quarry Workers
- 8112 Mineral and Stone Processing Plant Operators
- 8113 Well Drillers and Borers and Related Workers
- 8114 Cement, Stone and Other Mineral Products Machine Operator

**812 METAL PROCESSING AND FINISHING PLANT OPERATORS**

- 8121 Metal Processing Plant Operators
- 8122 Metal Finishing, Plating and Coating Machine Operators

**813      CHEMICAL AND PHOTOGRAPHIC PRODUCTS PLANT AND MACHINE OPERATORS**

8131      Chemical Product Plant and Machine Operators

8132      Photographic Products Machine Operators

**814      RUBBER, PLASTIC AND PAPER PRODUCTS MACHINE OPERATORS**

8141      Rubber Products Machine Operators

8142      Plastic Products Machine Operators

8143      Paper Products Machine Operators

**815      TEXTILE, FUR AND LEATHER PRODUCTS MACHINE OPERATORS**

8151      Fiber Preparing, Spinning and Winding Machine Operators

8152      Weaving and Knitting Machine Operators

8153      Sewing Machine Operators

8154      Bleaching, Dyeing and Fabric Cleaning Machine Operators

8155      Fur and Leather Preparing Machine Operators

8156      Shoemaking and Related Machine Operators

8157      Laundry Machine Operators

8159      Textile, Fur and Leather Products Machine Operators Not Elsewhere Classified

**816      FOOD AND RELATED PRODUCTS MACHINE OPERATORS**

8160      Food and Related Products Machine Operators

**817      WOOD PROCESSING AND PAPERMAKING PLANT OPERATORS**

8171      Pulp and Papermaking Plant Operators

8172      Wood Processing Plant Operators

8173      Wood Products Machine Operators

**818      OTHER STATIONARY PLANT AND MACHINE OPERATORS**

8181      Glass and Ceramics Plant Operators

8182      Steam Engine and Boiler Operators

8183      Packing, Bottling and Labeling Machine Operators

8184      Glass and Ceramics Kiln and Related Machine Operators

8189      Stationary Plant and Machine Operators Not Elsewhere Classified

**819      PRINTING, BINDING AND PAPER PRODUCTS MACHINE OPERATORS**

8191      Printing Machine Operators

8192      Bookbinding Machine Operators

**82      ASSEMBLERS**

**821      ASSEMBLERS**

8211      Mechanical Machinery Assemblers

8212      Electrical and Electronics Equipment Assemblers

8213      Leather, Metal, Rubber and Plastic Products Assemblers

|            |  |
|------------|--|
| 8219       | Assemblers Not Elsewhere Classified                  |
| <b>822</b> | <b>METAL AND MINERALS PRODUCTS MACHINE OPERATORS</b> |
| 8221       | Machine-Tool Setter-Operators                        |
| <b>83</b>  | <b>DRIVERS AND MOBILE PLANT OPERATORS</b>            |
| <b>831</b> | <b>LOCOMOTIVE ENGINE DRIVERS AND RELATED WORKERS</b> |
| 8311       | Locomotive Engine Drivers                            |
| 8312       | Railway Brake, Signal and Switch Operators           |
| <b>832</b> | <b>CAR, VAN AND MOTORCYCLE DRIVERS</b>               |
| 8321       | Motorcycle Drivers                                   |
| 8322       | Car, Taxi and Van Drivers                            |
| <b>833</b> | <b>HEAVY TRUCK AND BUS DRIVERS</b>                   |
| 8331       | Bus and Tram Drivers                                 |
| 8332       | Heavy Truck and Lorry Drivers                        |
| <b>834</b> | <b>MOBILE PLANT OPERATORS</b>                        |
| 8341       | Mobile Farm and Forestry Plant Operators             |
| 8342       | Earthmoving and Related Plant Operators              |
| 8343       | Crane, Hoist and Related Plant Operators             |
| 8344       | Lifting Truck Operators                              |
| <b>835</b> | <b>SHIPS DECK CREWS AND RELATED WORKERS</b>          |
| 8350       | Ships Deck Crews and Related Workers                 |

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## MAJOR GROUP 9

### ELEMENTARY OCCUPATIONS

|            |   |
|------------|---|
| <b>91</b>  | <b>CLEANERS AND HELPERS</b>                                     |
| <b>911</b> | <b>DOMESTIC, HOTEL AND OFFICE CLEANERS AND HELPERS</b>          |
| 9111       | Domestic Cleaners and Helpers                                   |
| 9112       | Cleaners and Helpers in Offices, Hotel and Other Establishment  |
| <b>912</b> | <b>VEHICLE, WINDOW, LAUNDRY AND OTHER HAND CLEANING WORKERS</b> |
| 9121       | Hand Laundryman and Ironers                                     |
| 9122       | Vehicle Cleaners  |
| 9123       | Window Cleaners   |
| 9129       | Other Cleaning Workers  |
| <b>92</b>  | <b>AGRICULTURAL, FORESTRY, FARMING AND FISHERY LABOURERS</b>    |

**921 AGRICULTURAL, FORESTRY, FARMING AND FISHERY LABOURERS**

- 9211 Crop Farm Labourers
- 9212 Livestock Farm Labourers
- 9213 Mixed Crop and Livestock Farm Labourers
- 9214 Garden and Horticultural Labourers
- 9215 Forestry Labourers
- 9216 Fishery and Aquaculture Labourers

**93 MINING, CONSTRUCTION, MANUFACTURING AND TRANSPORTATION LABOURERS**

**931 MINING AND CONSTRUCTION LABOURERS**

- 9311 Mining and Quarrying Labourers
- 9312 Civil Engineering Labourers
- 9313 Building Construction Labourers

**932 MANUFACTURING LABOURERS**

- 9321 Hand Packers
- 9322 Rubber Processing Workers
- 9329 Manufacturing Labourers Not Elsewhere Classified

**933 TRANSPORTATION AND STORAGE LABOURERS**

- 9331 Hand and Pedal Vehicle Drivers
- 9332 Machinery and Animal – Drawn Vehicles Drivers
- 9333 Freight Handlers
- 9334 Shelf Fillers
- 9335 Storage Labourers

**94 FOOD PREPARATION ASSISTANT**

**941 FOOD PREPARATION ASSISTANT**

- 9411 Fast Food Preparers
- 9412 Kitchen Helpers

**95 STREET AND RELATED SALES AND SERVICES WORKERS**

**951 STREET AND RELATED SERVICES WORKERS**

- 9510 Street and Related Service Workers

**952 STREET VENDORS (EXCLUDING FOOD)**

- 9520 Street Vendors (Excluding Food)

**96 REFUSE WORKERS AND OTHER ELEMENTARY WORKERS**

**961 REFUSE WORKERS**

- 9611 Garbage Collectors
- 9612 Refuse Sorters
- 9613 Sweepers and Related Labourers



**962 OTHER ELEMENTARY WORKERS**

- 9621 Messengers, Package Deliverers and Luggage Porters
- 9622 Odd Job Persons
- 9623 Meter Readers and Vending-Machine Collectors
- 9624 Water and Firewood Collectors
- 9625 Attendants
- 9629 Elementary Workers Not Elsewhere Classified

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**MAJOR GROUP 0**

**ARMED FORCES OCCUPATIONS**

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**01 THE MALAYSIAN ARMY**

**011 THE MALAYSIAN ARMY COMMISSIONED OFFICERS**

- 0110 The Malaysian Army Commissioned Officers

**012 THE MALAYSIAN ARMY OTHER RANKS**

- 0120 The Malaysian Army Other Ranks

**02 ROYAL MALAYSIAN NAVY**

**021 ROYAL MALAYSIAN NAVY COMMISSIONED OFFICERS**

- 0210 Royal Malaysian Navy Commissioned Officers

**022 ROYAL MALAYSIAN NAVY OTHER RANKS**

- 0220 Royal Malaysian Navy Other Ranks

**03 ROYAL MALAYSIAN AIR FORCE**

**031 ROYAL MALAYSIAN AIR FORCE COMMISSIONED OFFICERS**

- 0310 Royal Malaysian Air Force Commissioned Officers

**032 ROYAL MALAYSIAN AIR FORCE OTHER RANKS**

- 0320 Royal Malaysian Air Force Other Ranks

**MAJOR GROUP**



**MANAGERS**

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**2008**

**2<sup>nd</sup> Edition**

# Major Group 1:

## MANAGERS

Managers determine, formulate, direct or advise on government policies as well as those of special-interest organizations, formulate laws, public rules and regulations, represent governments and act on their behalf, oversee the interpretation and implementation of government policies and legislation, or plan, direct, and coordinate the policies and activities of enterprises or organizations or their internal departments or sections. Reference to skill level has not been made in defining the scope of this major group.

**This major group consists of the following sub-major groups:**

- 11 CHIEF EXECUTIVES, SENIOR OFFICIALS AND LEGISLATORS**
- 12 ADMINISTRATIVE AND COMMERCIAL MANAGERS**
- 13 PRODUCTION AND SPECIALIZED SERVICES MANAGERS**
- 14 HOSPITALITY, RETAIL AND OTHER SERVICES MANAGERS**

### **11 CHIEF EXECUTIVES, SENIOR OFFICIALS AND LEGISLATORS**

Chief executives, senior officials and legislators determine, formulate or advise on and direct government policies, make, ratify, amend and repeal laws, public rules and regulations, represent governments and act on their behalf, oversee the interpretation and implementation of government policies and legislation, or carry out similar tasks on behalf of special-interest organizations.

**This sub-major group consists of the following minor groups:**

- 111 LEGISLATORS AND SENIOR OFFICIALS**
- 112 MANAGING DIRECTORS AND CHIEF EXECUTIVES**

### **111 LEGISLATORS AND SENIOR OFFICERS**

Legislators and senior officers determine, formulate and direct policies of national, state, regional or local governments, and make, ratify, amend or repeal laws, public rules and regulations.

#### **1111 LEGISLATORS**

Legislators determine, formulate and direct policies of national, state, regional or local governments and make, ratify, amend or repeal laws, public rules and regulations.

**Tasks include:**

- presiding over or participating in the proceedings of legislative bodies and administrative councils of national, state, regional or local governments or legislative assemblies;
- determining, formulating and directing policies of national, state, regional or local governments;
- making, ratifying, amending or repealing laws, public rules and regulations within the framework of a Constitution determining their powers and fields of jurisdiction;
- serving on government administrative boards or officials committees;
- promoting the interests of the constituencies which they represent;

- directing senior administrators and officials of government departments and agencies in the interpretation and implementation of government policies;
- performing related task;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

**Examples of the occupations classified here:**

- 11111 Member of parliamentarian / Parliamentarian**
- 11112 Chief minister / Deputy minister / Minister**
- 11113 Senator / Speaker / State assemblyman**
- 11114 Mayor**
- 11115 Officials, legislative**

## **1112 SENIOR GOVERNMENT OFFICIALS**

Senior government officials advise governments on policy matters, oversee the interpretation and implementation of government policies and legislation by government departments and agencies or represent their country abroad and act on its behalf.

**Tasks include:**

- advising national, state, regional or local governments on policy matters;
- advising on the preparation of government budgets, laws and regulations, including amendments;
- interpreting and implementing government policies and legislation by government departments and agencies;
- representing their country abroad;
- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

**Examples of the occupations classified here:**

- 11121 Administrator, government / Secretary-general, government**
- 11122 Senior officials, statutory board**
- 11123 Ambassador / Secretary, embassy / Consul-general**
- 11124 Director-general, fire and rescue / Inspector-general, police**
- 11125 Officer, administrative and diplomatic M41**
- 11126 Officer, administrative N41**

## **1113 TRADITIONAL CHIEFS AND HEADS OF VILLAGE**

Traditional chiefs and heads of villages perform a variety of legislative, administrative and ceremonial tasks and duties, determined by ancient traditions, as well as by the division of rights and responsibilities between village chiefs and the local, regional and national authorities.

**Tasks include:**

- allocating the use of communal land among households in the community or village;
- settling disputes between members of the community or village;
- disciplining members of the community or village for violation of rules and customs;
- performing ceremonial duties in connection with births, marriages, deaths, harvests and other traditional feasts;

- representing the community or village on local or regional councils;
- informing the community or village about government rules and regulations;
- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

**Examples of the occupations classified here:**

- 11131 *Penggawa***
- 11132 *Chief, village / Sidang***
- 11133 *Tribe leader (Ketua anak negeri)***
- 11134 *Kapitan / Tuai rumah / Tok Batin***
- 11135 *Penghulu NP27***

#### **1114 SENIOR OFFICIALS OF SPECIAL – INTEREST ORGANIZATIONS**

Senior officials of special-interest organizations determine, formulate and direct the implementation of policies of special-interest organizations such as political-party organizations, trade unions, employers organizations, trade and industry associations, humanitarian or charity organizations, or sports associations, and represent their organizations and act on their behalf.

**Tasks include:**

- determining and formulating the political-party's policies, organization's policies, rules and regulations;
- negotiating on behalf of the political party;
- promoting the interests of the organization before the legislature, government or general public;
- planning and organizing campaigns for the election of its political candidates;
- planning and organizing campaigns to recruit and educate party members;
- planning, organizing and directing the implementation of the political-party's policies, organization's policies, rules and regulations;
- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

**Examples of the occupations classified here:**

- 11141 *Chairman, political party / Senior officials, political party organization***
- 11142 *Director-general, employers' organization***
- 11143 *Leader, trade union / Senior officials, workers organization***
- 11144 *Senior officials, other economic-interest organization***
- 11145 *Secretary-general, human rights organization***

#### **112 MANAGING DIRECTORS AND CHIEF EXECUTIVES**

Managing directors and chief executives head a government agency, corporate business, or organization (except special-interest organizations) and, with the help of at least two (2) other managers, formulate policies and plan, direct, control and coordinate the activities within a government agency, corporate business, or organization, usually with the guidelines set up by a board of directors or a governing body to whom they are answerable for the operations undertaken and results obtained.

## **1120 MANAGING DIRECTORS AND CHIEF EXECUTIVES**

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### **Tasks include:**

- formulating policies of the enterprise or organization;
- planning, directing, controlling and coordinating the general functioning of the enterprise or organization;
- determining and directing a particular policy, through consultation with subordinate managers;
- reviewing the operations and results of the enterprise or organization and reporting to governing bodies;
- representing the enterprise or organization in its dealings with outside bodies, including government or other authorities;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

### **Examples of the occupations classified here:**

**11201 *Chairman, enterprise / President, enterprise / Company director***

**11202 *Chairman, organization / President, organization / Director, organization***

## **12 ADMINISTRATIVE AND COMMERCIAL MANAGERS**

Administrative and commercial managers formulate policies, plan, direct, control and coordinate activities of the administration and business operation within government agency, corporate business, or organization under the broad guidance of directors and chief executive.

### **This sub-major group consists of the following minor groups:**

**121 BUSINESS SERVICES AND ADMINISTRATION MANAGERS**

**122 SALES, MARKETING AND DEVELOPMENT MANAGERS**

### **121 BUSINESS SERVICES AND ADMINISTRATION MANAGERS**

Business services and administration managers plan, direct and coordinate activities concerning finance, human resource, policy and planning and business operation under guidance of directors and chief executives.

## **1211 FINANCE MANAGERS**

Finance managers plan, direct and coordinate the financial operations and participates in formulating the financial policy within a government agency, corporate business, or organization.

### **Tasks include:**

- planning, directing, controlling and coordinating the internal financial operations of the enterprise or organization;
- assessing the financial situation of the enterprise or organization, preparing budgets and overseeing various financial operations;
- controlling expenditure and ensuring efficient use of resources;
- planning and directing daily operations;
- overseeing the selection, training and performance of staff;
- representing the department in its dealing with other parts of the organization or with outside bodies;
- performing related tasks;
- organizing, planning and distributing tasks and setting targets to other officers;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

**Examples of the occupations classified here:**

**12111 *Manager, account / Manager, budget / Manager, credit / Manager, finance***

**12112 *Manager, insurance***

**12113 *Manager, fund***

**12114 *Manager, treasury***

**12115 *Manager, financial and institution***

**12116 *Manager, expenditure, costing***

**12117 *Manager, audit / Manager, audit and risk assessment***

## **1212 HUMAN RESOURCE MANAGERS**

Human resource managers plan, direct and coordinate human resources management activities to maximize the strategy use of human resource and maintain functions such as employee compensation, recruitment, personal policies, and regulatory compliance within a government agency, corporate business, or organization.

**Tasks include:**

- planning, directing and coordinating policies concerning human resources and the industrial relations activities of the enterprise or organization;
- planning and organizing procedures for recruitment, training, promotion, determination of wage structures and negotiations about wages, liaison and consultation with workers, and related personnel matters;
- overseeing occupational health and safety and related programmes and activities, with the participation of all concerned;
- controlling expenditure and ensuring the efficient use of resources;
- establishing and directing operational and administration procedures;
- planning and directing daily operations;
- overseeing the selection, training and performance of staff;
- overseeing the maintenance of personnel records and various human resource information system requirement;
- representing the department in its dealings with other parts of the organization or with outside bodies;
- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

**Examples of the occupations classified here:**

**12121 *Manager, human resource/personnel***

**12122 *Manager, industrial relations***

**12123 *Manager, occupational health and safety***

## **1213 POLICY AND PLANNING MANAGERS**

Policy and planning managers plan, direct and coordinate policy advice and strategic planning within a government agency, corporate business, or organization.

### **Tasks include:**

- directing, and reviewing policy and planning programs;
- analyzing policies, government regulations, and legislation to develop new policies and plans or revise existing policies, plans, or programs;
- analyzing statistical data and reports to identify and determine causes of problems and develop recommendations for improvement of organization's policies and practices;
- analyzing and interpreting results of studies, and prepare reports detailing findings, recommendations, or conclusions;
- consulting with and advise government officials and staff, civic bodies, and research agencies on legislative, policy, and planning issues;
- designing, evaluate and modify policies to ensure that programs are effective and in compliance with legal requirements;
- directing preparation and distribution of written and verbal information to inform management and employees of organizational and administrative policies;
- managing the design and development of tools to assist management in developing and interpreting policies and to guide managers through policy and planning decisions;
- advising and monitoring executive level state and agency decision-makers;
- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

### **Examples of the occupations classified here:**

**12131 Manager, policy and planning**

## **1214 BUSINESS SERVICES MANAGERS**

Business services managers plan, direct and coordinate the business services activities within a government agency, corporate business, or organization.

### **Tasks include:**

- planning, directing and coordinating the business services activities of the enterprise or organization;
- planning and organizing special sales and marketing programmes based on sales records and market assessments;
- planning, administering and reviewing customer services and after-sales services and maintaining sound customer relations;
- determining price lists, discount and delivery terms, credit arrangements, product mix, geographical sales areas, sales promotion budgets, sales methods, customer service standards, special incentives and special campaigns;
- directing merchandising methods and distribution policy by coordinating the work of salespersons or organizing agents and distributors;
- controlling expenditure and ensuring the efficient use of resources;
- monitoring customer service, invoicing, payments and administration costs;
- establishing and directing operational and administrative procedures;
- planning and directing daily operations;
- overseeing the selection, training and performance of staff;



- representing the department in its dealings with other parts of the organization or with outside bodies;
- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

**Examples of the occupations classified here:**

**12141** *Manager, production and operation/business*

**12142** *Manager, business services/development*

## **1215 ADMINISTRATIVE MANAGERS**

Administrative managers plan, direct and coordinate supportive services such as record-keeping, mail distribution, telephone operator/receptionist and other office support services within a government agency, corporate business, or organization.

**Tasks include:**

- planning, administering and controlling budgets for contracts, equipment and supplies;
- monitoring the facility to ensure that it remains safe, secure, and well-maintained;
- directing or coordinating the supportive services department of a business, agency, or organization;
- setting goals and datelines for the department;
- preparing and reviewing operational reports and schedule to ensure accuracy and efficiency;
- analyzing internal processor and recommend and implement procedural or policy changes to improve operations, such as supply changes or the disposal of records;
- acquiring, distributing, and storing supplies;
- overseeing construction and renovation projects to improve efficiency and to ensure that facilities meet environmental, health, and security standards and comply with government regulation;
- overseeing the selection, training and performance of staff;
- representing the department in its dealings with other parts of the organization or with outside bodies;
- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

**Examples of the occupations classified here:**

**12151** *Manager, administrative*

## **1219 BUSINESS SERVICES AND ADMINISTRATION MANAGERS NOT ELSEWHERE CLASSIFIED**

This unit group covers business services and administration not elsewhere classified in minor group 121: Business Services and Administration Managers.

**Tasks include:**

- planning and implementing policies;
- making budgetary estimates;
- negotiating with suppliers, customers and other organizations;
- planning and controlling the use of human resources and hiring workers;
- managing daily operations;

- reporting to owners, if any;
- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

## **122 SALES, MARKETING AND DEVELOPMENT MANAGERS**

Sales, marketing and development managers plan, direct and coordinate the sales, marketing and development activities within a government agency, corporate business, or organization.

### **1221 SALES AND MARKETING MANAGERS**

Sales and marketing managers plan, direct and coordinate the sales, marketing and development activities within a government agency, corporate business, or organization.

#### **Tasks include:**

- planning, directing and coordinating the sales and marketing activities of the enterprise or organization;
- planning and organizing special sales and marketing programmes based on sales records and market assessments;
- planning, administering and reviewing customer services and after-sales services and maintaining sound customer relations;
- determining price lists, discount and delivery terms, credit arrangements, product mix, geographical sales areas, sales promotion budgets, sales methods, customer service standards, special incentives and special campaigns;
- directing merchandising methods and distribution policy by coordinating the work of salespersons or organizing agents and distributors;
- controlling expenditure and ensuring the efficient use of resources;
- monitoring customer service, invoicing, payments and administration costs;
- planning and directing daily operations;
- overseeing the selection, training and performance of staff;
- representing the department in its dealings with other parts of the organization or with outside bodies;
- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

#### **Examples of the occupations classified here:**

**12211 Manager, sales / Manager, marketing**

**12212 Manager, market research / Manager, customer service**

**12213 Manager, shopping centre / Manager, supermarket**

### **1222 ADVERTISING AND PUBLIC RELATIONS MANAGERS**

Advertising and public relations managers plan, direct and coordinate the advertising, public relations and public information activities within a government agency, corporate business, or organization.

#### **Tasks include:**

- planning, directing and coordinating the advertising and public relations activities of the enterprise or organization;
- negotiating advertising contracts with officials newspapers, radio and television stations, sports and cultural organizations and advertising agencies;

- planning and managing information programmes to inform legislators, the mass media and the general public about the plans, accomplishments and points of view of the enterprise or organization;
- planning and managing fundraising activities for educational, humanitarian and other non profit-making organizations;
- controlling expenditure and ensuring the efficient use of resources;
- establishing and directing operational and administrative procedures;
- planning and directing daily operations;
- overseeing the selection, training and performance of staff;
- representing the department in its dealings with other parts of the organization or with outside bodies;
- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

**Examples of the occupations classified here:**

**12221** *Manager, advertising*

**12222** *Manager, public relations / Manager, communications*

**12223** *Manager, display*

### **1223 RESEARCH AND DEVELOPMENT MANAGERS**

Research and development managers plan, direct and coordinate the research and development activities within a government agency, corporate business, or organization.

**Tasks include:**

- planning, directing and coordinating research and development activities, in-house or commissioned from external research organizations;
- planning the overall research and development programme of the enterprise or organization, specifying goals and budgetary requirements;
- controlling expenditure and ensuring the efficient use of resources;
- planning and directing daily operations;
- overseeing the selection, training and performance of staff;
- representing the department in its dealings with other parts of the organization or with outside bodies;
- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

**Examples of the occupations classified here:**

**12231** *Manager, research and development*

### **13 PRODUCTION AND SPECIALIZED SERVICES MANAGERS**

Production and specialized services managers formulate policies, plan, direct, control and coordinate activities of the production department within government agency, corporate business, or organization under the broad guidance of directors and chief executive.

**This sub-major group consists of the following minor groups:**

**131 PRODUCTION MANAGERS IN AGRICULTURE, FORESTRY AND FISHERIES**

**132 MANUFACTURING, MINING, CONSTRUCTION AND DISTRIBUTION MANAGERS**

**133 INFORMATION AND COMMUNICATIONS TECHNOLOGY SERVICES MANAGERS**

## **134 PROFESSIONAL SERVICES MANAGERS**

### **131 PRODUCTION MANAGERS IN AGRICULTURE, FORESTRY AND FISHERIES**

Production managers in agriculture, forestry and fisheries plan, direct and coordinate activities concerning the production of agriculture, forestry, hunting and fisheries under the broad guidance of directors and chief executives.

#### **1311 AGRICULTURAL AND FORESTRY PRODUCTION MANAGERS**

Production managers in agricultural and forestry plan, direct and coordinate activities concerning the production of agriculture, forestry and hunting under the broad guidance of directors and chief executives.

##### **Tasks include:**

- planning policies, government regulations, and legislation;
- analyzing statistical data, studies and reports to identify and determine causes of problems and develop recommendations for improvement of agricultural systems, procedures, or programs;
- planning, directing and coordinating activities concerning the production of agriculture, forestry and hunting;
- consulting with and advise government officials and staff, civic bodies, and other agencies on legislative, policy and agricultural issues;
- ensuring the efficient use of resources and the fulfillment of production quotas;
- working with law enforcement and others for the protection of crops, animals and public safety and enforcement of the laws, rules and regulations;
- planning and managing daily operations;
- overseeing the selection, training and performance of staff and others through consultation, supervision, and liaison activities;
- attend meetings and conferences relating to products, livestock and agricultural practices;
- negotiating with suppliers, customers and other organizations;
- representing the department in its dealings with other parts of the enterprise or with outside bodies;
- reporting to owners, if any;
- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

##### **Examples of the occupations classified here:**

**13111 *Manager, production and operation/forestry***

**13112 *Manager, production and operation/agricultural / Manager, estate/plantation***

#### **1312 AQUACULTURE AND FISHERIES PRODUCTION MANAGERS**

Production managers in aquaculture and fisheries plan, direct and coordinate activities concerning the production of aquaculture and fishery, under the broad guidance of directors and chief executives.

##### **Tasks include:**

- planning and implementing policies and legislation;

- planning, directing and coordinating activities concerning the production of aquaculture and fishery;
- ensuring the efficient use of resources and the fulfillment of production quotas;
- planning and directing daily operations;
- controlling expenditure;
- making budgetary estimates;
- establishing and directing operational and administrative procedures;
- overseeing the application of work safety and related procedures;
- overseeing the selection, training and performance of staff;
- negotiating with suppliers, customers and other organizations;
- representing the department in its dealings with other parts of the enterprise or with outside bodies;
- reporting to owners, if any;
- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

**Examples of the occupations classified here:**

**13121 *Manager, production and operation/fishery***

**132 MANUFACTURING, MINING, CONSTRUCTION AND DISTRIBUTION MANAGERS**

Production managers in manufacturing, mining, construction and distribution plan, direct and coordinate activities concerning the production of manufacturing, mining, construction and distribution managers under the broad guidance of directors and chief executives.

**1321 MANUFACTURING MANAGERS**

Production managers in manufacturing plan, direct and coordinate activities concerning the manufacturing activities under the broad guidance of directors and chief executives.

**Tasks include:**

- planning and implementing policies;
- planning, directing and coordinating activities concerning the production of goods;
- ensuring the efficient use of resources and the fulfillment of production quotas;
- planning and directing daily operations;
- controlling expenditure;
- making budgetary estimates;
- establishing and directing operational and administrative procedures;
- overseeing the application of work safety and related procedures;
- overseeing the selection, training and performance of staff;
- negotiating with suppliers, customers and other organizations;
- representing the department in its dealings with other parts of the enterprise or with outside bodies;
- ensuring all production processes fall within the manufacturing specification and product characteristics are following company's standard document;
- implementing production plan through subordinate, ensure that utilization of manpower, machine and equipment are optimized;
- establishing and maintaining production KPI of cost effectiveness, delivery, safety and quality;
- reporting to owners, if any;
- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

**Examples of the occupations classified here:**

- 13211** *Manager, production and operation/manufacturing*
- 13212** *Manager, factory*
- 13213** *Manager, quality control / Manager, quality assurance*

**1322 MINING MANAGERS**

Production managers in mining plan, direct and coordinate activities concerning the mining activities such as extracting coal, ore, stone, clay and other solid minerals from the earth, under the broad guidance of directors and chief executives.

**Tasks include:**

- planning, directing and coordinating activities concerning the extraction of minerals from mine and stone, or slate and clay from quarries;
- ensuring the efficient use of resources and the fulfillment of production quotas;
- planning and directing daily operations;
- controlling expenditure;
- making budgetary estimates;
- establishing and directing operational and administrative procedures;
- overseeing the application of work safety and related procedures;
- overseeing the selection, training and performance of staff;
- representing the department in its dealings with other parts of the enterprise or with outside bodies;
- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

**Examples of the occupations classified here:**

- 13221** *Manager, production and operation/mining and quarry*

**1323 CONSTRUCTION MANAGERS**

Production managers in construction plan, direct and coordinate activities concerning the construction projects under the broad guidance of directors and chief executives.

**Tasks include:**

- planning, directing and coordinating activities concerning the construction of buildings, dams, highways, pipelines and related construction projects;
- planning procedures for construction on basis of starting and completion times and staffing requirements for each phase of constructions, based on knowledge of available tools and equipment and various building methods;
- planning and organization daily operations;
- controlling expenditure;
- establishing and directing operational and administrative procedures;
- overseeing the application of work safety and related procedures;
- overseeing the selection, training and performance of staff;
- representing the department in its dealings with other parts of the enterprise or with outside bodies;
- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

**Examples of the occupations classified here:**

**13231** *Manager, production and operation/construction*

**13232** *Manager, contract / Manager, project / Manager, site*

**13233** *Manager, operation*

#### **1324 SUPPLY, DISTRIBUTION AND RELATED MANAGERS**

Production managers in supply, distribution and related managers plan, direct and coordinate activities concerning the managing processes involved in a supply chain and liaises with a variety of parties, including suppliers of raw materials, manufacturers, retailers and, increasingly, consumers under the broad guidance of directors and chief executives.

**Tasks include:**

- planning and implementing policies and legislation;
- ensuring the efficient use of resources and the fulfillment of production quotas;
- planning and directing daily operations;
- controlling expenditure;
- making budgetary estimates;
- establishing and directing operational and administrative procedures;
- overseeing the application of work safety and related procedures;
- overseeing the selection, training and performance of staff;
- negotiating with suppliers, customers and other organizations;
- representing the department in its dealings with other parts of the enterprise or with outside bodies;
- monitoring the quality, cost and efficiency of the movement and storage of goods;
- coordinating and controlling the order cycle and associated information systems;
- analyzing data to monitor performance and plan improvements;
- allocating and managing staff resources according to changing needs;
- developing business by gaining new contracts, analyzing logistical problems and producing new solutions;
- reporting to owners, if any;
- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

**Examples of the occupations classified here:**

**13241** *Manager, production and operation/transport*

**13242** *Manager, storage / Manager, distribution / Manager, warehouse*

**13243** *Manager, purchasing*

**13244** *Postmaster*

#### **133 INFORMATION AND COMMUNICATIONS TECHNOLOGY SERVICES MANAGERS**

Production managers in information and communications technology service plan, direct and coordinate the acquisition, development, maintenance and use of computer and telecommunications systems within government agency, corporate business, or organization under the broad guidance of directors and chief executive.

#### **1330 INFORMATION AND COMMUNICATIONS TECHNOLOGY SERVICE MANAGERS**

Production managers in information and communications technology service plan, direct and coordinate the acquisition, development, maintenance and use of computer and

telecommunications systems within government agency, corporate business, or organization under the broad guidance of directors and chief executive.

**Tasks include:**

- analyzing information needs and specifying technology to meet those needs;
- directing the formulation of information technology strategies, policies and plans;
- directing the selection and installation of information technology and the provision of user training;
- directing information technology operations, integrating computer hardware, operating systems communications, software application and data processing;
- setting priorities between system developments, maintenance and operations;
- controlling the security of the information technology systems;
- managing information technology development projects to ensure that the projects are completed on schedule, within budget and to the level of quality in accordance with objectives;
- controlling the budget and expenditure of the department or organization;
- overseeing the selection, training and performance of staff;
- representing the department in its dealings with other parts of the organization as with outside bodies;
- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

**Examples of the occupations classified here:**

**13301 Manager, production and operation/communications**

**13302 Manager, information systems / Manager, information technology**

**13303 Manager, computer services**

**13304 Manager, data processing**

**134 PROFESSIONAL SERVICES MANAGERS**

Professional services managers plan, direct and coordinate activities concerning services of child care, health, aged care, social welfare, education, and insurance under the broad guidance of directors and chief executives.

**1341 CHILD CARE SERVICES MANAGERS**

Child care services managers plan individual and group activities for children, monitors those activities to promote social skills, confers with parents to explain the center's programs and discuss how they can promote the child's development at home, administers tests to gauge each child's development, recruits and trains staff, and administers the business functions of the center.

**Tasks include:**

- managing multiple professional social services programs to protect children and families to include services and activities pertaining to adult and child abuse and neglect investigations;
- planning and monitoring business management, facilities management, human resources management, and child safety requirements;
- planning and implementing policies;
- making budgetary estimates;
- negotiating with suppliers, customers and other organizations;



- planning and controlling the use of human resources and hiring workers;
- managing daily operations;
- reporting to owners, if any;
- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

**Examples of the occupations classified here:**

**13411 *Manager, child care centre***

#### **1342 HEALTH SERVICES MANAGERS**

Health services managers responsible for the provision and commissioning of local health care through the management of hospital, general practitioner (GP) and community health services. Managers liaise with all levels of medical staff, whilst considering the demands of political policy and local circumstances.

**Tasks include:**

- liaising and negotiating with medical (often at the most senior levels) and non-medical staff internally, and with people in external organizations, e.g. social services, voluntary groups or the private sector;
- managing clinical, professional, clerical and administrative staff;
- managing the recruitment, selection, appraisal and development of staff;
- overseeing the day-to-day management of an organization, a specific unit or a service area;
- implementing new policies and directives;
- gathering and analyzing data and using it to plan and manage both projects and systems;
- evaluating new strategies and systems;
- extrapolating data for monitoring and quality assurance purposes;
- setting budgets and maintaining finances within tight constraints;
- planning and implementing strategic changes to improve service delivery;
- attending meetings, writing reports and delivering presentations to a variety of audiences;
- sitting on committees and representing the views of departments and teams;
- handling communications and corporate affairs;
- managing premises, catering, cleaning, portering and security (often via sub-contractors);
- purchasing equipment and supplies, and organizing stores;
- using computers to manage information and financial data, and to analyze and measure performance;
- supporting ICT systems and planning new provision and development, sometimes for major projects;
- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

**Examples of the occupations classified here:**

**13421 *Manager, production and operation/health / Director of nursing***

**13422 *Administrator, hospital***

### **1343 AGED CARE SERVICES MANAGERS**

Aged care service managers responsible for the provision of care for older people and people with chronic conditions and complex care needs in a seamless continuum.

#### **Tasks include:**

- providing policy direction and assisting in the development of appropriate funding and/or targets to enable health services to be flexible enough to provide the right care, in the right place at the right time;
- responsible for meeting, maintaining and exceeding the high standard of quality care and services;
- planning and monitoring business management, facilities management, human resources management, and safety requirements;
- planning and implementing policies;
- making budgetary estimates;
- negotiating with suppliers, customers and other organizations;
- planning and controlling the use of human resources and hiring workers;
- managing daily operations;
- reporting to owners, if any;
- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

#### **Examples of the occupations classified here:**

**13431** *Manager, aged care services*

### **1344 SOCIAL WELFARE MANAGERS**

Social welfare managers plan, evaluate and coordinate social service programs and assists in program planning, development and implementation of local welfare.

#### **Tasks include:**

- developing and implementing of goals, objectives, policies and priorities for multi-program areas;
- managing program funds and/or budget;
- negotiating contracts and writes agreements with providers of specific program components related to protective services;
- coordinating the development of policies, procedures, and “best practices” within specific program area;
- implementing new local and state policies;
- documenting, revising and implementing quality changes in the clinical processes;
- reviewing preliminary investigative reports and other eligibility data;
- making recommendations for financial aid service assistance, participates personally in more difficult cases;
- making regular periodic review of all cases of each subordinate and ensures effective follow-up practices and makes recommendations on basis of subordinate reports for discontinuing cases;
- maintaining continuing liaison with local welfare and social service agencies;
- monitoring and evaluating the efficiency and effectiveness of service delivery methods and procedures;
- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

**Examples of the occupations classified here:**

**13441 *Manager, production and operation/social work***

#### **1345 EDUCATION MANAGERS**

Education managers plan, direct and coordinate activities in the educational sector, ranging from the development of policy to the development and review of course curricula and teaching materials, preparing reports, information papers and submissions, or advise senior management or interdepartmental committees on education strategies and initiatives.

They may also be involved in the management of educational systems at a regional, district or state level, and may have to manage financial and physical resources for education, or recruit educational officers.

**Tasks include:**

- providing educational leadership to teachers, principals and administrative officials of education institutions in the development and coordination of educational programs;
- overseeing educational research aimed at providing new directions for the educational system;
- representing the organization on committees to identify present and future needs within the educational system, and plan, develop and modify facilities and programs;
- managing the evaluation of new approaches and development of new courses;
- organizing and conducting workshops and conferences to train teachers in new programs and methods;
- applying for and managing funding for new educational programs;
- managing processes to do with school reviews, teacher assessment and education planning in primary and secondary schools;
- preparing or overseeing the preparation of reports and information papers;
- managing the provision of education in rural or remote areas, or within specific institutions;
- performing related task;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

**Examples of the occupations classified here:**

**13451 *Manager, production and operation/education***

**13452 *Dean / Headmaster / Principal, university / Chancellor, university***

#### **1346 FINANCIAL AND INSURANCE SERVICES BRANCH MANAGERS**

Financial and insurance services branch managers plan, direct and coordinate private of public banks, insurance companies or one or more of their branches or department under the broad guidance of directors and chief executive.

**Tasks include:**

- planning, directing and coordinating the activities of workers in branches, offices, or departments of such establishments as branch banks, brokerage firms, risk and insurance departments, or credit departments;
- overseeing the flow of cash and financial instrument;
- networking within communities to find and attract new business;

- approving or rejecting, or coordinating with the approval and rejection of, lines of credit and commercial, real estate, and personal loans;
- preparing financial and regulatory reports required by laws, regulations, and boards of directors;
- establish procedures for custody, and control of assets, records, loan, collateral and securities in order to ensure safekeeping;
- managing and formulating policy of financial institution such as banks, trust company, saving and loan associations, insurance companies and related financial institution;
- examining, evaluating and processing loan applications;
- preparing operational in risk report for management analysis;
- evaluating financial reporting systems, accounting and collection procedures, and investment activities and make recommendation for change to procedures, operating systems, budgets, and other financial control functions;
- submit delinquent accounts to attorneys or outside agencies for collection;
- directing insurance negotiations, select insurance brokers and carriers, and place insurance;
- performing related task;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

**Examples of the occupations classified here:**

**13461 *Manager, financial and insurance branch***

#### **1349 PROFESSIONAL SERVICES MANAGERS NOT ELSEWHERE CLASSIFIED**

This unit group covers professional services managers not elsewhere classified in minor group 134: Professional Services Managers.

**Tasks include:**

- planning and implementing policies;
- making budgetary estimates;
- negotiating with suppliers, customers and other organizations;
- planning and controlling the use of human resources and hiring workers;
- managing daily operations;
- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

**Examples of the occupations classified here:**

**13491 *Manager, production and operation/extra territorial organization***

**13492 *Manager, design***

**13493 *Manager, electricity, water and sanitary / Manager, garbage systems***

#### **14 HOSPITALITY, RETAIL AND OTHER SERVICES MANAGERS**

Hospitality, retail and other services managers plan, direct and coordinate hotel and restaurant services, retail and wholesale trade under the broad guidance of directors and chief executives.

**This sub-major group consists of the following minor groups:**

**141 HOTEL AND RESTAURANT MANAGERS**

**142 RETAIL AND WHOLESALE TRADE MANAGERS**

## **143 OTHER SERVICES MANAGERS**

### **141 HOTEL AND RESTAURANT MANAGERS**

Hotel and restaurant managers plan, direct and coordinate hotel and restaurant services, including front-of-house (reception, concierge, and reservations), food and beverage operations and housekeeping under the broad guidance of directors and chief executives.

#### **1411 HOTEL MANAGERS**

Hotel managers plan, direct and coordinate all hotel services, including front-of-house (reception, concierge, and reservations), food and beverage operations and housekeeping under the broad guidance of directors and chief executives. In larger hotels, managers often have a specific remit (guest services, accounting, and marketing) and make up a general management team.

#### **Tasks include:**

- planning and organizing accommodation, catering and other hotel services;
- promoting and marketing the business;
- managing budgets and financial plans and controlling expenditure;
- maintaining statistical and financial records;
- setting and achieving sales and profit targets;
- recruiting, training and monitoring staff;
- planning work schedules for individuals and teams;
- meeting and greeting customers;
- dealing with customer complaints and comments;
- addressing problems and troubleshooting;
- ensuring events and conferences run smoothly;
- supervising maintenance, supplies, renovations and furnishings;
- dealing with contractors and suppliers;
- ensuring security is effective;
- carrying out inspections of property and services;
- ensuring compliance with licensing laws, health and safety and other statutory regulations;
- reporting to owners, if any;
- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

#### **Examples of the occupations classified here:**

**14111 *Manager, production and operation/hotel / Manager, guest-house***

**14112 *Manager, lodging-house***

**14113 *Manager, front desk / Manager, front office hotel***

**14114 *Manager, food and beverage services***

**14115 *Manager, hostel N41***

**14116 *Assistant manager, hostel N27***

#### **1412 RESTAURANT MANAGERS**

Restaurant managers plan, direct and coordinate restaurant services, including front-of-house (reception, concierge and reservations), food and beverage operations and housekeeping under the broad guidance of directors and chief executives.

**Tasks include:**

- analyzing and planning restaurant sales levels and profitability;
- organizing marketing activities, such as promotional events and discount schemes;
- preparing reports at the end of the shift/week, including staff control, food control and sales;
- setting budgets and/or agreeing them with senior management;
- planning and coordinating menus;
- coordinating the entire operation of the restaurant during scheduled shifts;
- managing staff throughout their shift and providing them with feedback;
- responding to customer complaints;
- ensuring that all employees adhere to the company's uniform standards;
- meeting and greeting customers and organizing table reservations;
- advising customers on menu and drink choice;
- recruiting, training and motivating staff;
- organizing and supervising the shifts of kitchen, waiting and cleaning staff;
- maintaining high standards of quality control, hygiene, and health and safety;
- checking stock levels and ordering supplies;
- preparing cash drawers and providing petty cash as required;
- helping in any area of the restaurant when circumstances dictate;
- planning and implementing policies;
- making budgetary estimates;
- planning and controlling the use of resources and hiring workers;
- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

**Examples of the occupations classified here:**

- 14121** *Manager, production and operation/restaurant / Barkeeper / Manager, catering*
- 14122** *Manager, discotheque*
- 14123** *Manager, refreshment-room*

**142     RETAIL AND WHOLESALE TRADE MANAGERS**

Retail and wholesale trade plan, direct and coordinate activities concerning trade under the broad guidance of directors and chief executives.

**1420     RETAIL AND WHOLESALE TRADE MANAGERS**

Retail and wholesale trade managers plan, direct and coordinate activities concerning trade under the broad guidance of directors and chief executives.

**Tasks include:**

- planning, directing and coordinating activities concerning trade carried out by the enterprise;
- ensuring the efficient use of resources and the fulfillment of trade quotas;
- planning and directing daily operations;
- controlling expenditure;
- establishing and directing operational and administrative procedures;
- overseeing the application of work safety and related procedures;
- overseeing the selection, training and performance of staff;
- representing the department in its dealings with other parts of the enterprise or with outside bodies;

- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

**Examples of the occupations classified here:**

**14201 *Manager, production and operation/retail trade***

**14202 *Manager, production and operation wholesale/trade***

### **143 OTHER SERVICES MANAGERS**

Other services managers classified those who plan, direct and coordinate activities concerning sporting events, recreational, and cultural, personal care, cleaning and related services operation, and legal terminology within government agency, corporate business, or organization under the broad guidance of directors and chief executives.

#### **1431 SPORTS, RECREATION AND CULTURAL CENTRE MANAGERS**

Sport, recreation and cultural centre managers plan, direct and coordinate activities concerning sporting events, recreational, and cultural operation within government agency, corporate business, or organization under the broad guidance of directors and chief executives.

**Tasks include:**

- planning, directing and coordinating activities concerning recreational, cultural and sporting operations and events;
- ensuring the efficient use of resources and the fulfillment of the schedules;
- planning and directing daily operations;
- controlling expenditure;
- establishing and directing operational and administrative procedures;
- overseeing the application of work safety and related procedures;
- overseeing the selection, training and performance of staff;
- representing the department in its dealings with other parts of the enterprise or with outside bodies;
- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

**Examples of the occupations classified here:**

**14311 *Manager, production and operation/sporting activities***

**14312 *Manager, production and operation/cultural activities***

**14313 *Manager, production and operation/travel agency***

**14314 *Manager, production and operation/stage***

**14315 *Manager, park/estate G41***

**14316 *Assistant manager, park/estate G27***

#### **1432 PERSONAL CARE, CLEANING AND RELATED SERVICES MANAGERS**

Personal care, cleaning and related services managers plan, direct and coordinate activities concerning personal care, cleaning and related services operation within government agency, corporate business, or organization under the broad guidance of directors and chief executives.

**Tasks include:**

- planning, directing and coordinating activities concerning personal care, cleaning and related services operation;
- ensuring the efficient use of resources and the fulfillment of the schedules;
- planning and directing daily operations;
- controlling expenditure;
- establishing and directing operational and administrative procedures;
- overseeing the application of work safety and related procedures;
- overseeing the selection, training and performance of staff;
- representing the department in its dealings with other parts of the enterprise or with outside bodies;
- planning and implementing policies;
- making budgetary estimates;
- negotiating with suppliers, customers and other organizations;
- planning and controlling the use of resources and hiring workers;
- reporting to owners, if any;
- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

**Examples of the occupations classified here:**

**14321 Manager, production and operation/cleaning**

**14322 Manager, production and operation/personal care services**

**1433 LEGAL MANAGERS**

Legal managers plan, direct and coordinate activities concerning legal terminology, procedures, and documents within government agency, corporate business, or organization under the broad guidance of directors and chief executives.

**Tasks include:**

- planning, analyzing and advising on the compliance of the company's business operations with relevant statutory and regulatory requirements and the company's rights;
- managing external legal support, if required;
- staying abreast of legal developments affecting the company, its clients, and industries and synthesize the information to incorporate it into company's transactional practices;
- educating company executives in regard to legal and risk management issues;
- representing company's interests and interface directly with client counsel and negotiating teams;
- drafting, reviewing and negotiating a broad range of contracts for medium to complex engagements;
- strategizing with company executives prior to client negotiations;
- helping develop, and understand, risk mitigation strategies for contractual risks;
- developing internal guidelines, toolkits, and packaged knowledge on various legal and business issues;
- developing subject matter expertise in one of more areas that benefit the Legal Group and/or our business (e.g., corporation law, competition law, employment law, data privacy and service line expertise);
- supporting, promoting and implementing initiatives as part of Legal Team;
- planning and implementing policies;
- making budgetary estimates;
- reporting to owners, if any;



- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

**Examples of the occupations classified here:**

**14331 *Manager, legal and risk management***

#### **1434 PROPERTY MANAGERS**

Property managers charged with operating a real estate property for a fee maintain and increase the value of real estate investments by handling the logistics of running a property and oversee the performance of income-producing commercial or residential properties to ensure that real estate investments achieve their expected revenues.

**Tasks include:**

- handling the financial operations of the property, ensuring that rent is collected and that mortgages, taxes, insurance premiums, payroll, and maintenance bills are paid on time;
- supervising the preparation of financial statements and periodically report to the owners on the status of the property, occupancy rates, expiration dates of leases, and other matters;
- negotiating contracts for janitorial, security, grounds keeping, trash removal, and other services;
- monitoring the performance of contractors, and investigate and resolve complaints from residents and tenants when services are not properly provided;
- purchasing supplies and equipment for the property, and make arrangements with specialists for repairs that cannot be handled by regular property maintenance staff;
- must understand and comply with relevant legislation, ensure that their renting and advertising practices are not discriminatory, and that the property itself complies with all of the local, state, and federal regulations and building code;
- making budgetary estimates;
- planning and controlling the use of resources and hiring workers;
- reporting to owners, if any;
- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

**Examples of the occupations classified here:**

**14341 *Manager, maintenance***

**14342 *Manager, property***

#### **1435 SAFETY AND SECURITY MANAGERS**

Safety and security managers plan, direct and coordinate operation concerning safety and security within government agency, corporate business, or organization under the broad guidance of directors and chief executives.

**Tasks include:**

- planning, formulating and enforcing security policies and regulations;
- identifying variances and take corrective action to improvise the security aspects of the company;
- overseeing the overall security surveillances;

- responsible for the overall management of In-House security personnel;
- reviewing any procedures or instructions that involves security aspect to ensure all staff are fully trained to achieve maximum security;
- enforce strict discipline and carry out investigation in any disciplinary matter amongst staff;
- able to attend to and resolve safety and security issues promptly, effectively and independently;
- supporting, promoting and implementing initiatives as part of Legal Team;
- negotiating with suppliers, customers and other organizations;
- planning and controlling the use of resources and hiring workers;
- reporting to owners, if any;
- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.

**Examples of the occupations classified here:**

**14351** *Manager, occupational safety*

**14352** *Manager, security*

#### **1439 SERVICES MANAGERS NOT ELSEWHERE CLASSIFIED**

This unit group covers general managers not elsewhere classified in Minor Group 143: Other Services Managers.

**Tasks include:**

- planning and implementing policies;
- making budgetary estimates;
- negotiating with suppliers, customers and other organizations;
- planning and controlling the use of resources and hiring workers;
- managing daily operations;
- reporting to owners, if any;
- performing related tasks;
- managing, dictating, planning, scheduling and monitoring tasks of other workers.



**MAJOR GROUP**



**PROFESSIONALS**

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**2008**

**2<sup>nd</sup> Edition**

# Major Group 2:

## PROFESSIONALS

Professionals increase the existing stock of knowledge, apply scientific or artistic concepts and theories, teach about the foregoing in a systematic manner, or engage in any combination of these three activities. Most occupations in this major group require skills at the fourth skill level.

**This major group consists of the following sub-major groups:**

- 21 SCIENCE AND ENGINEERING PROFESSIONALS**
- 22 HEALTH PROFESSIONALS**
- 23 TEACHING PROFESSIONALS**
- 24 BUSINESS AND ADMINISTRATION PROFESSIONALS**
- 25 INFORMATION AND COMMUNICATIONS TECHNOLOGY PROFESSIONALS**
- 26 LEGAL, SOCIAL AND CULTURAL PROFESSIONALS**
- 27 HOSPITALITY, RETAIL AND SERVICES PROFESSIONALS**

### **21 SCIENCE AND ENGINEERING PROFESSIONALS**

Science and engineering professionals conduct research, improve or develop concepts, theories and operational methods, or apply scientific knowledge relating to fields such as physics, astronomy, meteorology, chemistry, geophysics, geology, mathematics, statistics, electro technology, architecture, engineering and technology.

**This sub-major group consists of the following minor groups:**

- 211 PHYSICISTS, CHEMISTS AND RELATED PROFESSIONALS**
- 212 MATHEMATICIANS, ACTUARIES AND STATISTICIANS**
- 213 LIFE SCIENCE PROFESSIONALS**
- 214 ENGINEERING PROFESSIONALS (EXCLUDING ELECTRO TECHNOLOGY)**
- 215 ELECTROTECHNOLOGY ENGINEERS**
- 216 ARCHITECTS, PLANNER, SURVEYORS AND DESIGNER**
- 217 SHIP, AIRCRAFT AND TRAIN/LOCOMOTIVE CONTROLLERS**
- 218 MINING, MANUFACTURING AND CONSTRUCTION PROFESSIONALS**

### **211 PHYSICISTS, CHEMISTS AND RELATED PROFESSIONALS**

Physicists, chemists and related professionals conduct research, improve or develop concepts, theories and operational methods, or apply scientific knowledge relating to physics, astronomy, meteorology, chemistry, geology and geophysics.

#### **2111 PHYSICISTS AND ASTRONOMERS**

Physicists and astronomers conduct research, improve or develop concepts, theories and operational methods, or apply scientific knowledge relating to physics and astronomy in industrial, medical, military or other fields.

**Tasks include:**

- conducting research and improving or developing concepts, theories and operational methods related to physics and astronomy;

- conducting experiments, tests and analyzes in fields such as mechanics, thermodynamics, optics, sonic, electricity, magnetism, electronics and nuclear physics, or astronomy;
- conducting experiments, tests and analyzes of the structure and properties of matter in solid state and its behavior under temperature, pressure, stress and other conditions;
- evaluating results of investigations and experiments and expressing conclusions, mainly using mathematical techniques and models;
- developing or improving industrial, medical, military and other practical applications of the principles and techniques of physics or astronomy;
- observing, analyzing and interpreting celestial phenomena and developing methods and techniques to be used in fields such as navigation or space exploration;
- preparing scientific papers and reports;
- enhancing knowledge and coordinating the work performance;
- performing related tasks.

**Examples of the occupations classified here:**

- 21111 *Physicist / Physicist, theoretical***
- 21112 *Aerodynamicist / Physicist, mechanics / Thermodynamics***
- 21113 *Physicist, medical / Physicist, sound / Physicist, light***
- 21114 *Physicist, electricity and magnetism***
- 21115 *Physicist, electronics***
- 21116 *Physicist, nuclear/atomic/molecular***
- 21117 *Astronomer / Astrophysicist / Physicist, astronomer***
- 21118 *Cosmologist***

## **2112 METEOROLOGISTS AND SEISMOLOGISTS**

Meteorologists and seismologists conduct research, improve or develop concepts, theories and operational methods related to the composition, structure and dynamics of the atmosphere and prepare detailed or long-term weather forecasts used in aviation, shipping, agriculture and other areas and for the information of the general public as well as monitoring earthquake activity and issuing tsunami warning.

**Tasks include:**

- conducting research and improving or developing concepts, theories and operational methods related to the composition, structure and dynamics of the atmosphere;
- investigating direction and speed of air movements, pressures, temperatures, humidity and other phenomena such as cloud formation and precipitation, electrical disturbances or solar radiation;
- analyzing and interpreting satellite photographs, remote sensing and other atmospheric phenomena and preparing weather maps and forecasts used in aviation, shipping, agriculture and other areas and for the information of the general public;
- preparing warnings relating to atmospheric phenomena such as storms or other hazards to life and property;
- studying climatic data and using statistical methods to determine and interpret climatic trends and predicting changes;
- reviewing observational networks and the dissemination of information;
- conducting experiments in haze dispersal, rain-making and other types of weather control;
- preparing scientific papers and reports;
- preparing data, information and advice services regarding tsunami and seismology;

- issuing early warning information regarding tremors earthquake and tsunami;
- supervising the work of technicians and meteorological observers;
- performing related tasks.

**Examples of the occupations classified here:**

**21121 Meteorologist / Officer, meteorological**  
**21122 Climatologist / Meteorologist-climatology**  
**21123 Forecaster-weather / Seismologist**  
**21124 Officer, meteorology C41**  
**21125 Agrometeorologist**  
**21126 Meteorologist, marine**  
**21127 Meteorologist, environmental**  
**21128 Meteorologist, Numerical Weather Prediction Modeling (NWP)**

## **2113 CHEMISTS**

Chemists conduct research, improve or develop concepts, theories and operational methods, or apply scientific knowledge relating to chemistry, mainly to test, develop and improve materials, and industrial products and processes.

**Tasks include:**

- conducting research and improving or developing concepts, theories and operational methods related to chemistry;
- conducting experiments, tests and analyzes to investigate chemical composition and energy and chemical changes in various natural, artificial or synthetic substances, materials and products;
- evaluating results of investigations and experiments and deriving conclusions;
- managing and directing chemical quality control laboratories and chemical quality control or assurance, procedures and practices;
- managing and directing chemical laboratories, including verification, classification, assay and certification of products, process standards or specifications;
- developing practical applications of experimental and research findings;
- developing or improving pharmaceutical and other industrial materials, products and processes;
- developing and monitoring quality control procedures for manufacturers or users;
- preparing laboratory reports and scientific papers;
- enhancing knowledge, coordinating and training laboratory technician;
- performing related tasks.

**Examples of the occupations classified here:**

**21131 Chemist**  
**21132 Chemist, rubber**  
**21133 Chemist, corrosion / Chemist, glass / Chemist, plastics / Chemist, inorganic**  
**21134 Chemist, physical**  
**21135 Chemist, analytical**  
**21136 Chemist, water purification**  
**21137 Chemist, detergent / Chemist, food / Chemist, textile / Chemist, quality control**  
**21138 Officer, geochemist C41**

## **2114 GEOLOGISTS AND GEOPHYSICISTS**

Geologists and geophysicists conduct research, improve or develop concepts, theories and operational methods, or apply scientific knowledge relating to geology and geophysics in such fields as oil, gas and mineral exploitation, water conservation, civil engineering, telecommunications and navigation.

### **Tasks include:**

- conducting research and improving or developing concepts, theories and operational methods related to geology and geophysics;
- studying composition and structure of the earth's crust, examining rocks, minerals, fossil remains, etc. to determine processes affecting the development of the earth, trace evolution and establish nature and chronology of geological formations;
- interpreting research data and preparing geological reports, maps, charts and diagrams;
- applying results of research to assess development potential of mineral, gas and oil deposits and underground water resources;
- applying geological knowledge to problems encountered in civil engineering projects such as the construction of dams, bridges, tunnels and large buildings;
- investigating and measuring seismic, gravitational, electrical, thermal and magnetic forces affecting the earth;
- investigating and measuring optical and acoustic phenomena in the atmosphere;
- charting the earth's magnetic field and applying this and other collected data for purposes of broadcasting and navigation;
- studying and measuring physical properties of seas and atmosphere and their inter-relationship such as the exchange of thermal energy;
- locating and determining the nature and extent of oil, gas and mineral deposits and of ground water resources, using seismological, gravimetric, magnetic, electrical or radiometric methods;
- preparing laboratory reports and scientific papers;
- enhancing knowledge and coordinating the work performance;
- performing related tasks.

### **Examples of the occupations classified here:**

**21141 Geologist / Geophysicist**

**21142 Geologist, engineering**

**21143 Geologist, mining / Mineralogist**

**21144 Geologist, oil / Petrologist / Geologist, petroleum**

**21145 Geologist, marine / Oceanographer, geophysical**

**21146 Geodesist / Geomagnetician / Geophysicist, seismology**

**21147 Geophysicist, hydrology / Hydrogeologist**

**21148 Officer, geophysics/geology C41**

## **212 MATHEMATICIANS, ACTUARIES AND STATISTICIANS**

Mathematicians, actuaries and statisticians conduct research, improve or develop mathematical, actuarial and statistical concepts, theories and operational models and techniques and apply this knowledge to a wide range of tasks in such fields as engineering, business and social and other sciences.



## **2120 MATHEMATICIANS, ACTUARIES AND STATISTICIANS**

Mathematicians, actuaries and statisticians conduct research and improve or develop mathematical, actuarial and statistical concepts, theories and operational methods and techniques and advise on or engage in their practical application in such fields as engineering, business and social and other sciences.

### **Tasks include:**

- studying, improving and developing mathematical, actuarial and statistical theories and techniques;
- advising on or applying mathematical principles, models and techniques to a wide range of tasks in the fields of engineering, natural, social or life sciences;
- conducting logical analyses of management problems, especially in terms of input-output effectiveness, and formulating mathematical models of each problem usually for programming and solution by computer;
- designing and putting into operation pension schemes and life, health, social and other types of insurance systems;
- applying mathematics, statistics, probability and risk theory to assess potential financial impacts of future events;
- planning and organizing surveys and other statistical collections, and designing questionnaires;
- evaluating, processing, analyzing, and interpreting statistical data and preparing them for publication;
- advising on or applying various data collection methods and statistical methods and techniques, and determining reliability of findings, especially in such fields as business or medicine as well as in other areas of natural, social or life sciences;
- preparing scientific papers and reports;
- supervising the work of mathematical, actuarial and statistical assistants and statistical clerks;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

### **Examples of the occupations classified here:**

**21201 Mathematician**

**21202 Officer, actuary W41**

**21203 Officer, statistical / Statistician**

**21204 Statistician E41**

**21205 Biometrician / Statistician, health**

**21206 Statistician, business and economics / Statistician, finance**

**21207 Statistician, education / Statistician, social science**

**21208 Statistician, engineering / Statistician, physical science**

## **213 LIFE SCIENCE PROFESSIONALS**

Life science professionals apply knowledge gained from research into human, animal and plant life and their interactions with each other and the environment to develop new knowledge, improve agricultural and forestry production, and solve human health and environmental problems.

## **2131 BIOLOGISTS, BOTANISTS, ZOOLOGISTS AND RELATED PROFESSIONALS**

Biologists, botanists, zoologists and related professionals study living organisms and their interactions with each other and with the environment, and apply this knowledge to solve

human health and environmental problems. They work in diverse fields such as botany, zoology, ecology, marine biology, genetics, immunology, pharmacology, toxicology, physiology, bacteriology and virology.

**Tasks include:**

- conducting research, improving or developing concepts, theories and operational methods in their respective fields;
- conducting field and laboratory experiments concerning all forms of life by identifying and classifying human, animal, insect or plant specimens, and studying their origin, development, chemical and physical form, structure, composition, and life and reproductive processes;
- studying and conducting experiments concerning the structure, development and characteristics of micro-organisms such as bacteria or viruses;
- studying all forms of plant/animal life and developing practical applications in fields such as agriculture and medicine;
- studying and conducting experiments concerning the structure and functions of living cells and the influence of physical and chemical factors upon normal and abnormal cells;
- studying inter-relationships of animal and plant life and the environmental factors involved and giving professional advice to related disciplines;
- developing industrial, medical and other applications of knowledge in their respective fields;
- preparing laboratory reports and scientific papers;
- enhancing knowledge, coordinating and training laboratory technician;
- performing related tasks.

**Examples of the occupations classified here:**

**21311 Taxonomist / Biologist / Hydrobiologist / Biotechnologist**

**21312 Botanist / Cytologist, plant / Mycologist / Taxonomist, plant**

**21313 Cystologist, animal / Fish culturist / Parasitologist / Ichthyologist / Zoologist**

**21314 Entomologist**

**21315 Botanist, ecology / Ecologist, animal**

**21316 Bacteriologist / Engineer, genetics / Microbiologist / Immunologist**

**2132 FARMING, FORESTRY AND FISHERIES ADVISERS**

Farming, forestry and fisheries advisers provide technical assistance and advice on farming, forestry and fishery methods and problems.

**Tasks include:**

- keeping abreast of advances in farming or forestry and fishery methods and techniques;
- advising on ways of raising quality of output, increasing yield and measures to increase efficiency of operations and to conserve natural assets and the environment;
- visiting farms and advising on measures to deal with problems such as soil erosion or pest infestation;
- collecting data and estimating quantities and costs of materials and labour required for projects;
- organizing demonstrations, giving lectures, writing and distributing materials to promote adoption of improved practices and techniques;

- applying knowledge of scientific principles and practices in order to identify and solve problems arising in the course of their work;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**21321 Adviser, agricultural / Officer, agricultural / Farm, demonstrator**  
**21322 Adviser, forestry / Officer, forestry**  
**21323 Officer, fishery G41**  
**21324 Conservationist, forestry G41**  
**21325 Officer, agricultural G41**

### **2133 ENVIRONMENTAL PROTECTION PROFESSIONALS**

Environmental protection professionals study and assess the effects on the environment of human activity such as air, water and noise pollution, soil contamination, climate change, toxic waste and depletion and degradation of natural resources. They develop plans and solutions to protect, conserve, restore, minimize and prevent further damage to the environment.

**Tasks include:**

- undertaking research in laboratories and in the field to increase scientific knowledge of living organisms; to discover new information; to test hypotheses; to solve problems in areas such as the environment, agriculture and health; and to develop new products, processes and techniques for pharmaceutical, agricultural and environmental use;
- designing and conducting experiments and tests;
- gathering human, animal, insect and plant specimens and data, and studying their origin, development, chemical and physical form, structure, composition, and life and reproductive processes;
- examining living organisms using a variety of specialized equipment, instruments, technologies and techniques such as electron microscopes, telemetry, global positioning systems, biotechnology, satellite imaging, genetic engineering, digital imaging analysis, polymerase chain reaction and computer modelling;
- identifying, classifying, recording and monitoring living organisms and maintaining databases;
- writing scientific papers and reports detailing research and any new findings which are then made available to the scientific community in scientific journals or at conferences for scrutiny and further debate;
- designing and carrying out environmental impact assessments to identify changes caused by natural or human factors;
- providing advice to governments, organizations and businesses in areas such as conservation, management of natural resources, the effects of climate change and pollution.
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**21331 Agronomist**  
**21332 Scientist, agricultural**  
**21333 Floriculturist / Horticultural / Pomologist / Olericulturist**  
**21334 Arboriculturist / Scientist, forestry / Wood analyst**

- 21335** *Scientist, animal*
- 21336** *Scientist, environmental research*
- 21337** *Officer, wild life G41*
- 21338** *Officer, environment control C41*

#### **2134 PHARMACOLOGISTS, PATHOLOGISTS AND RELATED PROFESSIONALS**

Pharmacologists, pathologists and related professionals conduct research, improve or develop concepts, theories and operational methods, and apply scientific knowledge relating to anatomy, biochemistry, biophysics, physiology, pathology or pharmacology in such fields as medicine, agriculture or industry.

##### **Tasks include:**

- conducting research, improving or developing concepts, theories and operational methods in their respective fields;
- studying and conducting concerning the form, structure and other anatomical characteristics of living organism;
- studying and conducting experiments concerning the chemical composition and processes of living organisms;
- studying and conducting experiments concerning the life processes and functions of human, animal or plant organs, tissues, cells, glands and systems under normal and abnormal or exceptional conditions;
- studying and conducting experiments concerning the structure, development and characteristics of micro-organisms such as bacteria or viruses;
- studying and conducting experiments concerning the nature, causes and development of human, animal or plant diseases and disorders;
- studying and conducting experiments concerning the effects of drugs and other substances on the tissues, organs and physiological processes of human beings and animals, and improving existing or developing new drugs;
- developing industrial, medical and other applications of knowledge in their respective fields;
- preparing laboratory reports and scientific papers;
- enhancing knowledge, coordinating and training laboratory technician;
- performing related tasks.

##### **Examples of the occupations classified here:**

- 21341** *Anatomist*
- 21342** *Biochemist / Chemist, biological / Biochemist, enzymes*
- 21343** *Biophysicist*
- 21344** *Endocrinologists*
- 21345** *Physiologists / Physiologist, neurology / Physiologist, endocrinology*
- 21346** *Pharmacologists / Toxicologist*
- 21347** *Histopathologist / Neuropathologist / Pathologist*
- 21348** *Epidemiologist*

#### **214 ENGINEERING PROFESSIONALS (EXCLUDING ELECTROTECHNOLOGY)**

Engineering Professional (Excluding Electrotechnology) conduct research and improve or develop concepts, theories and operational methods, or apply existing knowledge in such fields as engineering, technological or economic efficiency of production processes.

## **2141 INDUSTRIAL AND PRODUCTION ENGINEERS**

Industrial and production engineers plan, design, organize and supervise the operation of industrial production.

### **Tasks include:**

- consulting with management and supervisory personnel and advising on planning and production methods;
- developing sophisticated factory automation and mechanization projects and recommending long-term automation strategies;
- advising on methods to promote efficient, safe and economic utilisation of personnel, materials and equipment;
- making recommendations regarding methods of work and sequence of operations;
- making recommendations and supervising time and motion aspects of work organization;
- advising on most efficient layout of plant or establishment;
- identifying potential hazards and introducing safety procedures and devices;
- preparing and monitoring cost estimates and bills of quantities for architectural and construction projects;
- studying and advising on technological aspects of manufacturing processes relating to glass, ceramics, textiles, leather products, wood and printing;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

### **Examples of the occupations classified here:**

**21411** *Engineer, automation / Engineer, robotics*

**21412** *Engineer, industrial*

**21413** *Analyst, communication/except computer / Engineer, planning*

**21414** *Engineer, cost evaluation / Engineer, industrial efficiency*

**21415** *Engineer, industrial health and safety / Engineer, industrial safety*

**21416** *Engineer, production / Technologist, glass / Technologist, printing*

**21417** *Technologist, wood*

## **2142 CIVIL ENGINEERS**

Civil engineers plan, design, organize and supervise the construction and operation of civil engineering works.

### **Tasks include:**

- conducting research and developing new or improved theories and methods related to civil engineering;
- advising on and designing structures such as bridges, dams, docks, roads, airports, railways, pipelines, waste-disposal and flood-control systems, and industrial and other large buildings;
- determining and specifying construction methods, materials and quality standards, and directing construction work;
- establishing control systems to ensure efficient functioning of structures as well as safety and environmental protection;
- organizing and directing site labour and the delivery of construction materials, plant and equipment needed for construction projects;
- administering contracts and verifying and certifying satisfactory completion;

- studying and advising on technological aspects of particular materials/processes or systems related to civil engineering works;
- maintaining technical liaison and consultancy with other relevant specialists;
- supervising the testing and commissioning of completed works;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**21421** *Engineer, civil*

**21422** *Engineer, resident/civil engineering / Technologist, building materials*

**21423** *Engineer, civil/highways and road / Engineer, civil/road construction*

**21424** *Engineer, civil J41*

**21425** *Engineer, civil/geotechnic / Engineer, civil/bridge construction*

**21426** *Engineer, civil/dredging / Engineer, civil/irrigation*

**21427** *Engineer, civil/hydraulics / Engineer, civil/hydrology*

**21428** *Engineer, civil/public health / Engineer, civil/sanitary*

## **2143 ENVIRONMENTAL ENGINEERS**

Environmental engineers plan, design, organize and supervise the application of science and engineering principles to improve the environment (air, water, and/or land resources), to provide healthy water, air, and land for human habitation and for other organisms, and to remediate polluted sites.

**Tasks include:**

- studying on the environmental impact of proposed construction projects;
- conducting hazardous-waste management studies to evaluate the significance of such hazards, advise on treatment and containment, and develop regulations to prevent mishaps;
- designing municipal water supply and industrial wastewater treatment systems as well as being concerned with local and worldwide environmental issues such as the effects of acid rain, ozone depletion, water pollution and air pollution from automobile exhausts and industrial sources;
- studying the effects on animal and plant life of such factors as terrain, altitude, climatic conditions, sources of nutrition and predators;
- investigating the structure of communities of organisms and predicting the effects of disturbances by human or environmental changes;
- managing forest resources to maximize their long-term commercial, recreational and environmental benefits for the community;
- researching into field crops and grasses and developing new or improved cultivation methods;
- researching into horticultural crops and developing new or improved cultivation methods;
- researching into and developing new or improved methods for economic exploitation of grazing lands;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**21431** *Engineer, environment*

## **2144 MECHANICAL ENGINEERS**

Mechanical engineers conduct research and advice on, design, and direct production of machines, machinery and industrial plant, equipment and systems, and advise on and direct their functioning, maintenance and repairs, or study and advice on technological aspects of particular materials, products or processes.

### **Tasks include:**

- advising on and designing machinery and tools for manufacturing, mining, construction, agricultural work and other industrial purposes;
- advising on and designing steam, internal combustion and other non-electric motors and engines used for propulsion of railway locomotives, road vehicles or aircraft, or for driving industrial or other machinery;
- advising on and designing ships propulsion systems, power plant, heating and ventilation systems, steering gear, pumps and other mechanical equipment;
- advising on and designing hulls and superstructures of ships and other vessels;
- advising on and designing airframes, undercarriages and other equipment for aircraft;
- advising on and designing road vehicle bodies, suspension systems, brakes and other components;
- advising on and designing heating, ventilation and refrigeration systems and equipment;
- advising on and designing mechanical plant and equipment for the release, control and utilisation of nuclear energy;
- advising on and designing non-electrical parts of apparatus or products such as word processors, computers, precision instruments, cameras and projectors, etc.;
- establishing control standards and procedures to ensure efficient functioning and safety of machines, machinery, tools, motors, engines, and industrial plant, equipment or systems;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

### **Examples of the occupations classified here:**

**21441** *Engineer, mechanical / Technologist, engineering/mechanical*

**21442** *Engineer, industrial machinery and tools*

**21443** *Engineer, cryogenic*

**21444** *Engineer, heating, ventilation, air-conditioning and refrigeration*

**21445** *Designer, motor-car*

**21446** *Engineer, mechanical J41*

## **2145 CHEMICAL ENGINEERS**

Chemical engineers conduct research and develop, design and advise on and direct commercial-scale chemical processes and production of various substances and items such as crude oil, petroleum derivatives, food and drink products, medicaments, or synthetic materials, and direct maintenance and repair of industrial plant, or study and advise on technological aspects of particular materials, products or processes.

### **Tasks include:**

- conducting research and advising on, and developing and designing commercial-scale chemical processes and equipment to refine crude oil and other liquids or



gases, and to produce substances and items such as petroleum derivatives, explosives, food and drink products, medicament or synthetic materials;

- specifying relevant aspects of the construction of chemical manufacturing plant;
- specifying production methods, materials and quality standards and ensuring that they conform to specifications;
- establishing control standards and procedures to ensure safety, environmental protection and efficiency in manufacturing operations and processes;
- locating and correcting malfunctions;
- organizing and advising on maintenance and repair of existing equipment;
- studying and advising on technological aspects of particular materials, products or processes;
- maintaining technical liaison and consultancy with other relevant specialists;
- preparing analytical reports;
- performing related tasks;
- supervisory other workers.

**Examples of the occupations classified here:**

- 21451** *Engineer, chemical*
- 21452** *Engineer, chemical/petroleum and gas*
- 21453** *Engineer, chemical/paints and varnish*
- 21454** *Engineer, chemical/fertilizer*
- 21455** *Engineer, chemical/pharmaceutical products*
- 21456** *Technologist, food and drinks*
- 21457** *Technologist, fibre*
- 21458** *Technologist, rubber*

**2146 MINING ENGINEERS, METALLURGISTS AND RELATED PROFESSIONALS**

Mining engineers, metallurgists and related professionals conduct research, design and develop and maintain commercial-scale methods of extracting metals from their ores, or minerals, water, oil or gas from the earth and of developing new alloys, ceramic and other materials, or study and advise on technological aspects of particular materials, products or processes.

**Tasks include:**

- conducting research and advising on, designing and developing new or improved methods to deal with engineering aspects of mining and oil, gas or water extraction;
- determining the most suitable methods of efficient mining and extraction, types of machinery to be used, planning layout and directing construction of shafts and tunnels;
- determining drilling site and devising methods of controlling the flow of water, oil or gas from wells;
- planning and directing storage, initial treatment and transportation of water, oil or gas;
- establishing safety standards and procedures and first-aid facilities, especially underground;
- conducting research, developing methods of extracting metals from their ores and advising on their application;
- investigating properties of metals and alloys, developing new alloys and advising on and supervising technical aspects of metal and alloy manufacture and processing;
- studying and advising on technological aspects of particular materials or processes;
- maintaining technical liaison and consultancy with other relevant specialists in particular with geologists and geophysicists;



- preparing cost budget of operations to evaluate the economic feasibility of production processes;
- performing related tasks.

**Examples of the occupations classified here:**

**21461 Engineer, mining**  
**21462 Assayer**  
**21463 Engineer, mining/coal**  
**21464 Engineer, mining/petroleum and natural gas**  
**21465 Engineer, metal testing**  
**21466 Metallurgist, physics**

#### **2149 ENGINEERING PROFESSIONALS NOT ELSEWHERE CLASSIFIED**

This unit group covers Engineering Professional (Excluding Electrotechnology) not classified elsewhere in Minor Group 214: Engineering Professional (Excluding Electrotechnology). For instance, here should be classified those who engaged in conducting research, advising on or developing industrial efficiency of production, quality control, and those who study and advise on technological aspects of particular materials, products and manufacturing processes.

**Tasks include:**

- consulting with management and supervisory personnel and advising on planning and production methods;
- developing sophisticated factory automation and mechanization projects and recommending long-term automation strategies;
- advising on methods to promote efficient, safe and economic utilisation of personnel, materials and equipment;
- making recommendations regarding methods of work and sequence of operations;
- making recommendations and supervising time and motion aspects of work organization;
- advising on most efficient layout of plant or establishment;
- identifying potential hazards and introducing safety procedures and devices;
- preparing and monitoring cost estimates and bills of quantities for architectural and construction projects;
- studying and advising on technological aspects of manufacturing processes relating to glass, ceramics, textiles, leather products, wood and printing;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**21491 Engineer, process**  
**21492 Engineer, quality control**  
**21493 Adviser, technical service**  
**21494 Engineer, research**  
**21495 Engineering executive, store**

## **215     ELECTROTECHNOLOGY ENGINEERS**

Electrotechnology engineers conduct research and improve or develop concepts, theories and operational methods, or apply existing knowledge in such fields as electrical and electronic efficiency of production processes.

### **2151    ELECTRICAL ENGINEERS**

Electrical engineers conduct research and advise on, design, develop and supervise the manufacture, installation, operation and maintenance of equipment, machines and systems for the generation, distribution, utilisation and control of electric power.

#### **Tasks include:**

- planning and designing the manufacture and installation of electric power equipment and facilities;
- determining the type and arrangement of circuits, transformers, circuit-breakers, transmission lines and other equipment;
- advising on and designing systems for electrical motors, electrical traction and other equipment or domestic electrical appliances;
- interpreting specifications, standards and regulations relating to electric power equipment and use;
- organizing and managing resources used in the supply of electrical components, machines, appliances and equipment;
- establishing delivery and installation schedules for machines, switchgear, cables and fittings;
- supervising the operation and maintenance of power stations, transmission and distribution systems and industrial plants;
- establishing control standards and procedures to ensure efficient functioning and safety of electrical generating and distribution systems, motors and equipment;
- locating and correcting malfunctions;
- maintaining technical liaison and consultancy with other relevant specialists;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

#### **Examples of the occupations classified here:**

**21511    *Engineer, electrical***

**21512    *Engineer, electrical/electric power generation***

**21513    *Engineer, electrical/electric power distribution***

**21514    *Engineer, electrical illumination***

**21515    *Engineer, electrical/electromechanical equipment***

**21516    *Engineer, electrical J41***

### **2152    ELECTRONIC ENGINEERS**

Electronics engineers design, develop, adapt, test and maintain electronic components, circuits and systems used for computer systems, communications systems and industrial applications.

#### **Tasks include:**

- advising on and designing electronic devices, circuits and systems used for computers, communications and control systems and other industrial applications;
- designing software especially embedded software to be used within such systems;

- developing apparatus and procedures to test electronic components, circuits and systems;
- supervising installation and commissioning of computer and telecommunications systems and ensuring proper control and protection methods;
- establishing control standards and procedures to ensure efficient functioning and safety of electronic systems, motors and equipment;
- locating and correcting malfunctions;
- organizing and directing maintenance and repair of existing electronic systems, motors and equipment;
- studying and advising on technological aspects of particular materials, products or processes;
- maintaining technical liaison and consultancy with other relevant specialists;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**21521 Engineer, electronics**  
**21522 Engineer, signal/railway**  
**21523 Engineer, computer**  
**21524 Engineer, audio and video equipment**  
**21525 Engineer, electronics/semiconductors**  
**21526 Engineer, electronics/instrumentation**  
**21527 Engineer, electronics J41**

## **2153 TELECOMMUNICATIONS ENGINEERS**

Telecommunications engineers design, develop, adapt, test and maintain electronic components, circuits and systems used for communications systems and industrial applications.

**Tasks include:**

- advising on and designing electronic devices, circuits and systems used for computers, communications and control systems and other industrial applications;
- designing software especially embedded software to be used within such systems;
- developing apparatus and procedures to test electronic components, circuits and systems;
- supervising installation and commissioning of computer and telecommunications systems and ensuring proper control and protection methods;
- establishing control standards and procedures to ensure efficient functioning and safety of electronic systems, motors and equipment;
- locating and correcting malfunctions;
- organizing and directing maintenance and repair of existing electronic systems, motors and equipment;
- studying and advising on technological aspects of particular materials, products or processes;
- maintaining technical liaison and consultancy with other relevant specialists;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**21531 Engineer, telecommunications/signal systems**  
**21532 Technologist, engineering, telecommunications**

**216 ARCHITECTS, PLANNERS, SURVEYORS AND DESIGNERS**

Architects, planners, surveyors and designers conduct research and improve or develop concepts, theories and operational methods, or apply existing knowledge in such fields as architecture, planning, surveyors and designers efficiency of production processes

**2161 BUILDING ARCHITECTS**

Building architects conduct research, advice on, design of recreational, institutional, residential, commercial and industrial buildings, plan, monitor their construction, maintenance, and repair.

**Tasks include:**

- developing new or improved architectural theories and methods;
- consulting with clients and making recommendations regarding type, style, size and other aspects of construction;
- designing buildings, preparing detailed drawings and plans for their construction, maintenance and repair and making necessary contacts to ensure feasibility of projects in respect of style, cost and timing, compliance with regulations, etc.;
- identifying and finding best solutions for problems regarding function and quality of interior environments of buildings and making necessary designs, drawings and plans;
- inspecting construction work in progress to ensure compliance with plans, specification and quality standards;
- planning layout and coordinating development of urban areas;
- planning and designing the development of land areas for projects such as parks, schools, institutions, airports, roadways and related projects, and for commercial, industrial and residential sites;
- preparing reports, site plans, working drawings, specifications and cost estimates for land development, showing location and details of proposals, including ground modelling, structures and vegetation;
- maintaining technical liaison and consultancy with other relevant specialists;
- supervising the testing and commissioning of completed works;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**21611 Architect J41**

**21612 Architect, interior**

**21613 Architect, building**

**2162 LANDSCAPE ARCHITECTS**

Landscape architects conduct research and advise on and design of recreational, layout of towns and landscapes, and plan and monitor their construction, maintenance and repair.

**Tasks include:**

- developing new or improved architectural theories and methods;
- compiling and analyzing site and community data on geographical aspects, ecology of area, land forms, soils, vegetation, site hydrology, visual characteristics and

human-made structures to formulate land use and development recommendations for the preparation of environmental impact statements;

- consulting with clients and making recommendations regarding type, style, size and other aspects of construction;
- inspecting construction work in progress to ensure compliance with plans, specification and quality standards;
- planning layout and coordinating development of urban areas;
- planning and designing the development of land areas for projects such as parks, schools, institutions, airports, roadways and related projects, and for commercial, industrial and residential sites;
- preparing reports, site plans, working drawings, specifications and cost estimates for land development, showing location and details of proposals, including ground modeling, structures and vegetation;
- maintaining technical liaison and consultancy with other relevant specialists;
- supervising the testing and commissioning of completed works;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**21621** *Architect, landscape*

**21622** *Architect, landscape J41*

## **2163 PRODUCT AND GARMENT DESIGNERS**

Product and garment designers apply artistic techniques to product and garment design and sales promotion.

**Tasks include:**

- determining the objectives of the design by consulting with clients, undertaking research and analyzing functional requirements or studying layouts;
- designing industrial and commercial products, including new types and styles of clothing and accessories and endeavoring to harmonies aesthetic considerations with technical and other requirements;
- supervising the production of sample products or design illustrations, instructing other workers making models or patterns of products, or instructing finishing or layout artists assembling artwork for printing;
- designing and painting stage scenery;
- creating and executing artistic effects for use in show windows and other display/promotional areas;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**21631** *Designer, commercial products*

**21632** *Designer, cloth*

## **2164 TOWN AND TRAFFIC PLANNERS**

Town and traffic planners conduct research and advise on and design of recreational, institutional, residential, layout of towns, landscapes and traffic systems, and plan and monitor their construction, maintenance and repair.

**Tasks include:**

- developing new or improved architectural theories and methods;
- compiling and analyzing site and community data on geographical aspects, ecology of area, land forms, soils, vegetation, site hydrology, visual characteristics and human-made structures to formulate land use and development recommendations for the preparation of environmental impact statements;
- consulting with clients and making recommendations regarding type, style, size and other aspects of construction;
- inspecting construction work in progress to ensure compliance with plans, specification and quality standards;
- planning layout and coordinating development of urban areas;
- planning and designing the development of land areas for projects such as parks, schools, institutions, airports, roadways and related projects, and for commercial, industrial and residential sites;
- planning and advising on routing and control of road and other traffic for efficiency and safety;
- preparing reports, site plans, working drawings, specifications and cost estimates for land development, showing location and details of proposals, including ground modeling, structures and vegetation;
- maintaining technical liaison and consultancy with other relevant specialists;
- supervising the testing and commissioning of completed works;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**21641 Planner, town**

**21642 Planner, traffic**

**21643 Officer, land planning G41**

**21644 Officer, urban and rural planning J41**

**2165 CARTOGRAPHERS AND SURVEYORS**

Cartographers and surveyors apply surveying methods and techniques to determine the exact position of natural and constructed features and boundaries of land, seas, underground areas and celestial bodies, and prepare or revise digital, graphic and pictorial representations of maps and charts or plans.

**Tasks include:**

- surveying, measuring and describing land surfaces for various purposes, including mapmaking, construction work or establishment of property boundaries;
- surveying mines, delineating underground surfaces, noting exact position of various features and making charts and maps with a view to controlling direction and extent of mining;
- surveying seas, rivers and lake beds, delineating underwater surfaces, noting exact position of various features and making charts and maps to be used in particular in determining navigable waters and channels and in planning construction of marine structures;
- analyzing aerial and other photographs, satellite imagery and surveying data to prepare and revise topographic maps and charts, utility maps and other thematic maps;
- studying and advising on technical, aesthetic and economic aspects of map production;

- supervising the preparation of plans, maps, charts and drawing to give pictorial representations and managing automated information systems;
- undertaking research and development of surveying and photogrammetric measurement systems, cadastral (land tenure) systems and land information systems;
- planning and designing land sub-division projects and negotiating details with local governments and other authorities;
- supervising and coordinating the works of associate surveyors;
- maintaining technical liaison and consultancy with other relevant specialists;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**21651** *Cartographer*

**21652** *Surveyor*

**21653** *Surveyor, land*

**21654** *Cartographer J41*

**21655** *Surveyor J41*

**21656** *Surveyor, quantity J41*

**21657** *Surveyor, building J41*

**21658** *Surveyor, aerial*

## **2166 GRAPHIC AND MULTIMEDIA DESIGNERS**

Graphic and multimedia designers conduct research, improve or develop graphic computing concepts and operational methods, and advise on or engage in their practical application.

**Tasks include:**

- researching into the principles and operational methods of computers and computer-based systems for information communication and processing, planning, design, process control and production, development and maintenance of computer software, as well as data structures and databases, algorithms, artificial intelligence and robotics;
- developing and maintaining data dictionary and management systems of databases to ensure validity and safety of data;
- contributing to and keeping up with technical developments of computers, peripherals, computing methods and software, their potential and limitations;
- analyzing computer users' requirements, by consultation, to determine hardware and software configurations and development needs and preparing cost-benefit analyzes;
- writing programming specifications and preparing technical reports and instruction manuals specifying methods of operation and maintenance of the computer hardware and software configurations;
- designing, writing, maintaining and updating software which controls the overall functioning of computers and which links hardware and computer applications software;
- designing and implementing communication networks between different computer installations;
- developing improved methods and instruments, including computer languages, for writing, documenting and maintaining computer software;
- developing and implementing data processing procedures;
- preparing technical papers and reports;
- performing related tasks;

- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**21661 Designer B41**  
**21662 Designer, web**  
**21663 Specialist graphics and sound/computer**  
**21664 Designer, systems/computer**  
**21665 Designer, graphic**

## **217 SHIP, AIRCRAFT AND TRAIN/LOCOMOTIVE CONTROLLERS**

Ship, aircraft and train/locomotive controllers conduct research and improve or develop concepts, theories and operational methods, or perform technical functions to ensure safe and efficient movement and operations, and develop electrical, electromechanical, and computerized air control systems.

### **2171 SHIPS ENGINEERS**

Ship's engineers control and participate in the operation, maintenance and repair of mechanical, electrical and electronic equipment and machinery on board ship, or perform related supporting functions on shore.

**Tasks include:**

- controlling and participating in the operation, maintenance and repair of mechanical, electrical and electronic equipment and machinery on board ship;
- ordering fuel and other engine room department stores and maintaining record of operations;
- performing technical supervision of the installation, maintenance and repair of ship's machinery and equipment to ensure compliance with specifications and regulations;
- coordinating tests on equipment and diagnosing faults;
- applying knowledge of principles and practices relating to ship's machinery and equipment in order to identify and solve problems arising in the course of their work;
- inspecting and conducting maintenance and emergency repairs to engines, machinery and auxiliary equipment;
- standing engine room watch, monitoring and noting performance of engines, machinery and auxiliary equipment;
- maintaining records of operation of engineering department;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**21711 Engineer, chief/ship**  
**21712 Engineer, marine**  
**21713 Marine superintendent, technical**  
**21714 Architect, marine**

### **2172 SHIPS DECK OFFICERS AND PILOTS**

Ships deck officers and pilots command and navigate ships and direct marine services on shore for vessels arriving in port.



**Tasks include:**

- commanding and navigating ship, seagoing or inland waterway vessels by supervising the ship's course and speed according to passage plan and safety;
- planning, supervising and coordinating deck and bridge-watch activities on vessels;
- navigating vessels into and out of ports and through straits and other waters where special knowledge and skill are required;
- ensuring safe and efficient loading and unloading of cargo and observance of safety regulations and procedures by crew and passengers;
- performing technical supervision of maintenance and repair of ship to ensure compliance with specifications and regulations;
- directing or arranging supply of ships stores and equipment, recruitment of crews and provision of other services (except food) for vessels arriving in port;
- managing and maintaining inventory, records and documentation;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**21721 Ship captain/master**

**21722 Pilot, hovercraft**

**21723 Harbour master**

**21724 Officer, ship/deck**

**21725 Ferry captain**

**21726 Marine superintendent (deck)**

**21727 Officer, marine A41**

**2173 AIRCRAFT PILOTS AND RELATED PROFESSIONALS**

Aircraft pilots and related professionals control the operation of mechanical, electrical and electronic equipment in order to navigate aircraft for transporting passengers, mail and freight and perform related pre-flight and in-flight tasks.

**Tasks include:**

- flying and navigating aircraft in accordance with established control and operating procedures;
- preparing and submitting flight plan or examining standard flight plan;
- flying aircraft in accordance with established air traffic control and aircraft operating procedures;
- giving in-flight instruction, supervising solo flights, accompanying students on training flights and demonstrating techniques for controlling aircraft;
- controlling the operation of mechanical, electrical and electronic equipment and ensuring that all instruments and controls work properly;
- applying knowledge of principles and practices of flying in order to identify and solve problems arising in the course of their work;
- examining maintenance records and conducting inspections to ensure that aircraft are mechanically sound, maintenance has been performed and that all equipment is operational;
- signing necessary certificates and maintaining official records of flight;
- obtaining briefings and clearances before flights and maintaining contact with air traffic or flight control during flight;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**21731 Pilot A41**  
**21732 Pilot, aircraft/airline**  
**21733 Navigator, flight**  
**21734 Instructor, flight**  
**21735 Astronaut**  
**21736 Inspector, aircraft A41**  
**21737 Engineer, flight**  
**21738 Examiner, pilot A41**

## **2174 AIR TRAFFIC CONTROLLERS**

Air traffic controllers direct aircraft movements in airspace and on the ground, using radio, radar and lighting systems, and provide information relevant to the operation of aircraft.

### **Tasks include:**

- directing and controlling aircraft approaching and leaving airport and their movement on the ground/aerodromes by issuing runway clearances and directing taxiing, take offs and landings;
- directing and controlling aircraft movements in the air using radar or non-radar procedures and directing aircraft by radio;
- checking flight plans, position reports, flight levels, estimated arrival times at reporting points or destinations and authorizing changes of flight levels and altitudes;
- informing flight crew and operations staff about weather conditions, operational facilities, flight plans and air traffic;
- controlling the operation of airport lighting systems such as runway and approach lights and aerodrome beacons;
- applying knowledge of principles and practices of air traffic control in order to identify and solve problems arising in the course of their work;
- initiating and organizing emergency, search and rescue services when aircraft are in distress;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

### **Examples of the occupations classified here:**

**21741 Controller, air traffic**  
**21742 Officer, air traffic control A41**  
**21743 Officer, air cargo**

## **2175 TRAIN/LOCOMOTIVE CONTROLLERS**

Train/locomotive controllers direct train/locomotive movements on the ground, using radio, radar and lighting systems, and provide information relevant to the operation of train/locomotive.

### **Tasks include:**

- directing and controlling train/locomotive movements using radar or non-radar procedures and directing train/locomotive by radio;

- applying knowledge of principles and practices of train/locomotive traffic control in order to identify and solve problems arising in the course of their work;
- initiating and organizing emergency, search and rescue services when aircraft are in distress;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**21751 Officer/controller, LRT/ ERL/monorail operation**

**21752 Permanent-way inspector, railways**

## **2179 TRANSPORT CONTROLLERS NOT ELSEWHERE CLASSIFIED**

This unit group covers transport controllers outside the scope of unit group 2171 – 2175.

**Tasks include:**

- receiving and dispatching cargo and mail;
- supervising and distributing weights;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**21791 Officer, load sheet**

**21792 Executive, shipping**

## **218 MINING, MANUFACTURING AND CONSTRUCTION PROFESSIONALS**

Mining, manufacturing and construction professionals conduct research and improve or develop concepts, theories and operational methods, or apply existing knowledge in such fields as mining, manufacturing and construction of production processes.

### **2181 MINING PROFESSIONALS**

Mining professionals conduct research and improve or develop concepts, theories and operational methods, or apply existing knowledge concerning the mining activities such as extracting coal, ore, stone, clay and other solid minerals from the earth.

**Tasks include:**

- conducting research, developing method and coordinating activities concerning the extraction of minerals from mine and stone, or slate and clay from quarries;
- ensuring the efficient use of resources and the fulfillment of production quotas;
- studying and advising on technological aspects of particular material or processes;
- controlling expenditure;
- establishing and supervising operational and administrative procedures;
- overseeing the application of work safety and related procedures;
- overseeing the selection, training and performance of staff;
- representing the department in its dealings with other parts of the enterprise or with outside bodies;
- performing related tasks;

- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**21811 Officer, mining C41**

## **2182 MANUFACTURING PROFESSIONALS**

Manufacturing professionals conduct research and improve or develop concepts, theories and operational methods, or apply existing knowledge concerning the production of food, paper, sawmill, warehouse as well as quality assurance.

**Tasks include:**

- studying and advising on technological aspects of particular material or processes;
- establishing and supervising operational and administrative procedures;
- overseeing the application of work safety and related procedures;
- overseeing the selection, training and performance of staff;
- negotiating with suppliers, customers and other organizations;
- representing the department in its dealings with other parts of the enterprise or with outside bodies;
- ensuring all production processes fall within the manufacturing specification and product characteristics are following Company's standard document;
- implementing production plan through subordinate, ensure that utilization of manpower, machine and equipment are optimized;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**21821 Executive, manufacturing**  
**21822 Executive, quality assurance**  
**21823 Executive, production**  
**21824 Executive, warehouse**  
**21825 Executive, maintenance**  
**21826 Officer, logs**  
**21827 Superintendent, boiler**

## **2183 CONSTRUCTION PROFESSIONALS**

Construction professionals conduct research and improve or develop concepts, theories and operational methods, or apply existing knowledge concerning the construction projects.

**Tasks include:**

- conducting research, developing method and coordinating activities concerning the construction of buildings, dams, highways, pipelines and related construction projects;
- studying procedures for construction on basis of starting and completion times and staffing requirements for each phase of constructions, based on knowledge of available tools and equipment and various building methods;
- studying and advising on technological aspects of particular material or processes;
- establishing and supervising operational and administrative procedures;
- overseeing the application of work safety and related procedures;

- overseeing the selection, training and performance of staff;
- representing the department in its dealings with other parts of the enterprise or with outside bodies;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**21831** *Executive, contract*

**21832** *Executive, project*

**21833** *Executive, property*

## **22** **HEALTH PROFESSIONALS**

Health professionals conduct research, improve or develop concepts, theories and operational methods, or apply scientific knowledge relating to fields such as medical, nursing and midwifery, traditional and complementary medicine, veterinary and other health professionals.

**This sub-major group consists of the following minor groups:**

**221** **MEDICAL DOCTORS**

**222** **NURSING AND MIDWIFERY PROFESSIONALS**

**223** **TRADITIONAL AND COMPLEMENTARY MEDICINE PROFESSIONALS**

**224** **PARAMEDICAL PRACTITIONERS**

**225** **VETERINARIANS**

**226** **OTHER HEALTH PROFESSIONALS**

### **221** **MEDICAL DOCTORS**

Medical doctors conduct research and improve or develop concepts, theories and operational methods, or apply existing knowledge in such fields as generalist and specialist medical practitioners efficiency to the prevention, diagnosis and treatment of human illnesses.

#### **2211** **GENERALIST MEDICAL PRACTITIONERS**

Generalist medical practitioners apply scientific medical knowledge to the prevention, diagnosis and treatment of human illnesses.

**Tasks include:**

- examining the patients to determine the nature of diseases or illnesses;
- conducting medical examinations and making diagnoses;
- prescribing and giving treatment for diagnosed illnesses, disorders or injuries;
- giving advice on and applying preventive medicine methods and treatments;
- participating in the development and implementation of public health laws and regulations for safeguarding and promoting the health of a community;
- teaching medical students and other health sciences students, physicians and other health professionals;
- preparing scientific papers and reports;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

- 22111 Doctor, medical**
- 22112 Officer, medical UD41**
- 22113 Officer, medical rehabilitation U41**

## **2212 SPECIALIST MEDICAL PRACTITIONERS**

Specialist medical practitioners apply special medical knowledge to the prevention, diagnosis and treatment of human illnesses.

### **Tasks include:**

- specializing in diagnostic evaluation, habilitative and rehabilitative services and research related to hearing;
- assisting patients under medical direction, to overcome or minimize the effects or defects and disorders of speech;
- treating orientation of the blind;
- fixing all kind of orthotic devices (readily available devices);
- making of splints with thermoplastic materials;
- examining the patients to determine the nature of diseases or illnesses;
- writing specifications for artificial limbs or other appliances and helping to fit them and explaining their use;
- conducting medical examinations and making diagnoses;
- prescribing and giving treatment for diagnosed illnesses, disorders or injuries;
- giving specialized medical or surgical treatment for particular types of illnesses, disorders or injuries;
- giving advice on and applying preventive medicine methods and treatments;
- participating in the development and implementation of public health laws and regulations for safeguarding and promoting the health of a community;
- teaching medical students and other health sciences students, physicians and other health professionals;
- preparing scientific papers and reports;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

### **Examples of the occupations classified here:**

- 22121 Specialist ear, nose and throat**
- 22122 Anaesthetist**
- 22123 Oncologist, medical**
- 22124 Psychiatrist**
- 22125 Ophthalmologist**
- 22126 Cardiologist**
- 22127 Gynaecologist**
- 22128 Officer, science C41**

## **222 NURSING AND MIDWIFERY PROFESSIONALS**

Nursing and midwifery professionals conduct research and improve or develop concepts, theories and operational methods, or apply existing knowledge in such fields as nursing and midwifery efficiency to the prevention, diagnosis and treatment of human illnesses.

## **2221 NURSING PROFESSIONALS**

Nursing professionals conducting and applying nursing knowledge to the prevention, diagnosis and treatment of human illnesses.

### **Tasks include:**

- providing nursing care, treatment and advice to the ill, injured, disabled and others in need of such cares;
  - examining the patients to determine the nature of diseases or illnesses;
  - conducting medical examinations and making diagnoses;
  - prescribing and giving treatment for diagnosed illnesses, disorders or injuries;
  - giving specialized medical or surgical treatment for particular types of illnesses, disorders or injuries;
  - giving advice on and applying preventive medicine methods and treatments;
  - participating in the development and implementation of public health laws and regulations for safeguarding and promoting the health of a community;
  - teaching medical students and other health sciences students, physicians and other health professionals;
  - preparing scientific papers and reports;
  - performing related tasks;
  - enhancing knowledge and coordinating the work performance.
- **Examples of the occupations classified here:**

### **22211 Nurse, professional**

## **2222 MIDWIFERY PROFESSIONALS**

Midwifery professionals conducting the delivery of babies, provide ante-natal and post-natal care and advise parents in baby care.

### **Tasks include:**

- advising expectant mothers on appropriate diet, exercises and behavior to ease pregnancy and childbirth, and noting their general health and progress;
- delivering babies, or, more often, assisting doctors in deliveries;
- attending mothers in the post-natal period to supervise their recovery, to check on babies' progress and to advise parents in baby care;
- conducting health education classes and seminars to promote the health of mothers and infants;
- advising on and administering birth control methods;
- giving specialized medical or surgical treatment for particular types of illnesses, disorders or injuries;
- giving advice on and applying preventive medicine methods and treatments;
- participating in the development and implementation of public health laws and regulations for safeguarding and promoting the health of a community;
- teaching medical students and other health sciences students, physicians and other health professionals;
- preparing scientific papers and reports;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

### **Examples of the occupations classified here:**

## **22221 Midwife, professional**

### **223 TRADITIONAL AND COMPLEMENTARY MEDICINE PROFESSIONALS**

Traditional and complementary medicine professionals conduct research and improve or develop concepts, theories and operational methods, or apply existing knowledge in traditional medicine field efficiency to the prevention, diagnosis and treatment of human illnesses.

#### **2230 TRADITIONAL AND COMPLEMENTARY MEDICINE PROFESSIONALS**

Traditional and complementary medicine professionals apply traditional medicine knowledge to the prevention, diagnosis and treatment of human illnesses.

##### **Tasks include:**

- prescribing and giving treatment for diagnosed illnesses, disorders or injuries;
- examining patients, making diagnoses and treating sickness and injuries using herbs, medicinal plants and other traditional techniques used in the community;
- advising community and individuals on proper diet and behavior to preserve or improve health and well-being;
- participating in the development and implementation of public health laws and regulations for safeguarding and promoting the health of a community;
- teaching medical students and other health sciences students, physicians and other health professionals;
- preparing scientific papers and reports;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

### **224 PARAMEDICAL PRACTITIONERS**

Paramedical practitioners conduct research and improve or develop concepts, theories and operational methods, or apply knowledge in emergency medical service efficiency to the prevention, diagnosis and treatment of human illnesses.

#### **2240 PARAMEDICAL PRACTITIONERS**

Paramedical practitioners apply emergency medical service knowledge to the prevention, diagnosis and treatment of human illnesses.

##### **Tasks include:**

- providing emergent on-scene treatment, crisis intervention, life-saving stabilization and when appropriate, transport of ill or injured patients to definitive emergency medical and surgical treatment facilities, such as a hospitals and trauma centre;
- prescribing and giving treatment for diagnosed illnesses, disorders or injuries;
- advising community and individuals on proper diet and behavior to preserve or improve health and well-being;
- participating in the development and implementation of public health laws and regulations for safeguarding and promoting the health of a community;
- teaching medical students and other health sciences students, physicians and other health professionals;
- preparing scientific papers and reports;



- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**22401 Paramedic, emergency**

## **225 VETERINARIANS**

Veterinarians conduct research and improve or develop concepts, theories and operational methods, or apply existing knowledge in veterinary practitioners efficiency to the prevention, diagnosis and treatment of human illnesses.

### **2250 VETERINARIANS**

Veterinarians diagnose and prescribe medical or surgical treatment of diseases and injuries to animals.

**Tasks include:**

- conducting examinations and diagnosing diseases or injuries of animals;
- administering surgical or medical veterinary treatment;
- rendering obstetric services to animals;
- testing dairy and other herds and inoculating animals against diseases;
- advising on hygiene, feeding, breeding and care of animals;
- inspecting quality, purity and safety of food made wholly or partly from raw materials of animal origin intended for human consumption;
- assisting in epidemiological, radiological and other surveillance of animal health;
- performing autopsies to determine the cause of death;
- preparing scientific papers and reports;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**22501 Veterinarian**

**22502 Surgeon, veterinary**

**22503 Veterinarian, public health**

**22504 Officer, veterinary G41**

## **226 OTHER HEALTH PROFESSIONALS**

Other health professionals conduct research, improve or develop concepts, theories and operational methods, and apply scientific knowledge relating to medicine, dentistry, pharmacy, psychiatry, occupational health, therapy, physiotherapy, optician, dietitian and promotion of health.

### **2261 DENTISTS**

Dentists diagnose and treat dental disorders, injuries and malformation of teeth, gums and related oral structures and prescribe and administer preventive actions.

**Tasks include:**

- examining teeth, gums, jaws and other oral tissues using dental and x-ray equipment;
- making diagnoses, advising on and giving necessary dental treatment;
- cleaning and filling cavities and extracting decayed or deformed teeth;
- constructing inlays and artificial crowns to replace teeth;
- designing, constructing and fitting complete and partial dentures, orthodontic and other appliances and performing bridge work;
- giving surgical, medical and other forms of treatment for particular types of dental and oral diseases and disorders;
- participating in public action to maintain or improve standards of oral health and dental care;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**22611 Dentist**

**22612 Dentist, pedodontistry**

**22613 Dentist, orthodontistry**

**22614 Dentist, prosthodontistry**

**22615 Periodontist**

**22616 Surgeon, oral/dentistry**

**22617 Officer, dental U41**

**2262 PHARMACISTS**

Pharmacists apply pharmaceutical concepts and theories in the preparation and dispensing or selling medicaments and drugs, and conduct research on production, storage, quality control and distribution of drugs and related supplies.

**Tasks include:**

- preparing or directing the preparation of medicaments according to prescriptions of medical, dental and veterinary practitioners or established formula;
- checking prescriptions to ensure that recommended dosages are not exceeded, and that instructions are understood by patient, and advising on possible drug incompatibility and contra-indications;
- dispensing medicaments and drugs in hospitals or selling them in pharmacies;
- maintaining prescription files and recording issue of narcotics, poisons and habit-forming drugs;
- advising patients on generic equivalent and lowest cost of drugs;
- developing standards for drug used in pharmaceuticals;
- testing of drugs to determine identity, purity, strength and safety;
- conducting research to develop or improve pharmaceuticals, cosmetics and related chemical products;
- determining the most suitable packaging for medical substances to avoid deterioration and facilitating storage and distribution;
- selling non-prescription drugs, sickroom supplies, toiletries, cosmetics and other commercial products;
- preparing scientific papers and reports;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

- 22621** *Pharmacist*
- 22622** *Pharmacist, industrial*
- 22623** *Pharmacist, retail*
- 22624** *Pharmacist, hospital*
- 22625** *Officer, pharmacy U41*

## **2263 ENVIRONMENTAL AND OCCUPATIONAL HEALTH AND HYGIENE PROFESSIONALS**

Environmental and occupational health and hygiene professionals inspect environment, private and public buildings and properties to ensure the maintenance of health and hygiene standards.

### **Tasks include:**

- inspecting business and residential premises and public areas to detect unsanitary conditions and health hazards;
- giving advise on environment sanitary problems and techniques;
- collecting samples of water to test for contamination and of food for adulteration and deviation from standards;
- promoting preventive and corrective measures such as control of disease carrying organisms and of harmful substances in the air, hygienic food handling, proper disposal of waste and cleaning of public places;
- organizing campaigns, giving lectures and distributing material to promote adoption of improved practices and techniques;
- applying knowledge of hygiene and sanitation principles and practices in order to identify and solve problems arising in the course of their work;
- preparing and submitting reports;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

### **Examples of the occupations classified here:**

- 22631** *Sanitarian*
- 22632** *Officer, environmental U41*
- 22633** *Inspector, factory and machinery J41*

## **2264 PHYSIOTHERAPISTS**

Physiotherapists provide special medical therapeutic services to rehabilitate injured and mentally and physically disabled persons.

### **Tasks include:**

- advising communities and individuals on correct body postures to avoid injuries to strengthen muscles;
- conducting examinations to make diagnoses of disorders of bones, muscles and parts of the circulatory or the nervous system to determine proper treatment;
- massaging client to improve blood circulation, soothe or stimulate nerves, facilitate elimination of waste matter, stretch contracted tendons and produce other therapeutic effects;
- applying physiotherapy and related techniques as part of the treatment of the physically or mentally disabled persons;

- establishing an appropriate treatment or management plan for the patient;
- performing adjustments of the joints of the spine and extremities using hands or specialist equipment;
- performing soft tissue therapies, such as massage;
- educating and advising patients on rehabilitation exercises to aid long-term recovery, and techniques to ensure health is maintain;
- giving specialized medical or surgical treatment for particular types of illnesses, disorders or injuries;
- giving advice on and applying preventive medicine methods and treatments;
- participating in the development and implementation of public health laws and regulations for safeguarding and promoting the health of a community;
- teaching medical students and other health sciences students, physicians and other health professionals;
- preparing scientific papers and reports;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**22641 *Physiotherapist***

**22642 *Therapist, physical***

**22643 *Chiropractor***

## **2265 DIETICIANS AND NUTRITIONISTS**

Dieticians and nutritionists plan and supervise the preparation of diets for individuals or groups, supervise and evaluate health programmes and assist in appraising the various factors related to nutrition and food problems in the community.

**Tasks include:**

- providing nutrition assessments, management, education, research and training;
- collecting, organizing and assessing data relating to health and nutritional status of individuals and groups;
- monitoring food intake and quality to provide nutritional care;
- planning and directing the preparation of therapeutic and other diets/menus for individuals or groups in hospitals, institutions and other establishments;
- participating in programmes of nutrition education and in nutrition rehabilitation activities;
- advising on nutrition aspects of community food issues and health programmes;
- keeping up with knowledge in related fields and maintaining contacts with appropriate professionals;
- preparing educational materials and giving talks and lectures on diet and nutrition;
- preparing scientific papers and reports;
- participating in the development and implementation of public health laws and regulations for safeguarding and promoting the health of a community;
- teaching medical students and other health sciences students;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**22651 *Dietician***

**22652 *Nutritionist***

**22653 *Consultant, dietetic/food processing***

**22654 Officer, food technology C41**

**22655 Officer, health**

**22656 Officer, dietetic U41**

## **2266 AUDIOLOGISTS AND SPEECH THERAPISTS**

Audiologist and speech therapist apply scientific principles to assess, diagnose and manage patients who have hearing, balance and tinnitus problems. They ensure that evidenced assessment techniques are used, and develop and assess new techniques.

### **Tasks include:**

- administering auditory tests for babies, children and adults;
- interpreting and reporting on test results;
- developing and improving test techniques;
- communicating with a wide variety of patients;
- advising on the selection, fitting and evaluation of hearing aids;
- researching new advances in hearing aid technology, such as digital hearing aids;
- testing and maintaining implanted devices, such as cochlear implants;
- operating audiometric equipment;
- conducting research into disorders affecting hearing and balance;
- managing audiology services, including monitoring and improving the quality of service provided;
- supervising support staff;
- participating in the development and implementation of public health laws and regulations for safeguarding and promoting the health of a community;
- teaching medical students and other health sciences students, physicians and other health professionals;
- preparing scientific papers and reports;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

### **Examples of the occupations classified here:**

**22661 Audiologists**

**22662 Therapist, orientation of the blind**

**22663 Orthoepist**

## **2267 OPTOMETRISTS AND OPHTHALMIC OPTICIANS**

Optometrists and ophthalmic opticians examine eyes, prescribe and fit lenses for spectacles and advise on their use or the use of other visual aids.

### **Tasks include:**

- examining eyes and performing vision tests to determine the nature and extent of vision problems and abnormalities;
- prescribing spectacles or other treatment to improve vision;
- advising on the proper use and care of spectacles, appropriate lighting for work or reading and other visual aids;
- fitting prescribed lenses into frames and fitting frames or contact lenses to customers;
- referring clients with ocular disease symptoms to a physician;
- performing related tasks;

- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**22671 Optometrists**  
**22672 Optician**  
**22673 Optometrists U41**

## **2268 OCCUPATIONAL THERAPISTS**

An occupational therapist helps people of all ages who have physical, mental health or social problems to adapt to any aspect of their life with more independence, confidence and control. Problems may result from birth, an accident, an operation, illness, negative behaviour patterns or ageing.

**Tasks include:**

- liaising with a wide variety of other professionals, such as doctors, physiotherapists, social workers, voluntary workers and equipment suppliers, as well as patients' families, careers and employers;
- attending multidisciplinary case conferences to plan and review ongoing treatment;
- organizing support and rehabilitation groups for careers and clients;
- training students and supervising the work of occupational therapy assistants;
- completing client and patient records, budgetary records, equipment reviews and other administrative tasks;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**22681 Therapist, occupational**

## **2269 HEALTH PROFESSIONALS NOT ELSEWHERE CLASSIFIED**

This unit group covers health professionals not elsewhere classified in Minor Group 226: Other Health Professionals.

## **23 TEACHING PROFESSIONALS**

Teaching professionals teach the theory and practice of one or more disciplines at different educational levels, conduct research and improve or develop concepts, theories and operational methods pertaining to their particular discipline, and prepare scholarly papers and books.

**This sub-major group consists of the following minor groups:**

**231 UNIVERSITY AND HIGHER EDUCATION TEACHERS**  
**232 VOCATIONAL EDUCATION TEACHERS**  
**233 SECONDARY EDUCATION TEACHERS**  
**234 PRIMARY SCHOOL AND EARLY CHILDHOOD TEACHERS**  
**235 MUSIC, ARTS AND PERFORMING ARTS TEACHERS**  
**236 LANGUAGE TEACHERS**  
**237 RELIGIOUS TEACHERS**

**238 SKILL TECHNOLOGY AND TECHNICAL TRAINERS**  
**239 OTHER TEACHING PROFESSIONALS**

**231 UNIVERSITY AND HIGHER EDUCATION TEACHERS**

University and higher education teachers teach their subjects at different levels after the termination of secondary education, conduct research and improve or develop concepts, theories and operational methods pertaining to their particular discipline, and prepare scholarly papers and books.

**2310 UNIVERSITY AND HIGHER EDUCATION TEACHERS**

University and higher education teachers teach their subjects at some or all levels after the termination of secondary education, conduct research and improve or develop concepts, theories and operational methods, and prepare scholarly papers and books.

**Tasks include:**

- designing and modifying curricula and preparing courses of study in accordance with requirements;
- delivering lectures and conducting tutorials, seminars and laboratory sessions;
- stimulating discussion and independent thought among students;
- supervising, where appropriate, experimental and practical work undertaken by students;
- administering, evaluating and marking assignments and examination papers;
- directing research of post-graduate students or other members of department;
- researching into and developing concepts, theories and operational methods for application in industrial and other fields;
- preparing scholarly books, papers or articles;
- attending conferences and seminars;
- assisting with extra-curricular activities;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

- 23101 Lecturer, college**
- 23102 Lecturer, university**
- 23103 Professor, university/college**
- 23104 Tutor, university**
- 23105 Lecturer, university DS45**
- 23106 Lecturer, medical DU45**
- 23107 Lecturer, UiTM DM41**
- 23108 Assistant lecturer, UiTM DM29**
- 23109 Lecturer, dental DUG45**

**232 VOCATIONAL EDUCATION TEACHERS**

Vocational education teachers teach one or more subjects, for educational or vocational purposes, at some or all levels between the termination of primary education and the beginning of studies at colleges or universities.

## **2320 VOCATIONAL EDUCATION TEACHERS**

Vocational education teachers teach one or more subjects, for educational or vocational purposes, at some or all levels between the termination of primary education and the beginning of studies at colleges or universities.

### **Tasks include:**

- planning and preparing lessons in accordance with the prescribed/recommended curriculum;
- giving lessons in their subjects and supervising students class work and discipline;
- preparing, assigning and correcting exercises, assignments and tests to evaluate students progress;
- preparing reports about students work and conferring with other teachers and parents;
- participating in staff meetings and educational conferences and workshops;
- organizing or assisting with extracurricular activities;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

### **Examples of the occupations classified here:**

**23201** *Teacher, vocational*

**23202** *Teacher, commercial*

## **233 SECONDARY EDUCATION TEACHERS**

Secondary education teachers teach one or more subjects, for educational purpose, at some or all levels between the termination of primary education and the beginning of studies at colleges or universities.

## **2330 SECONDARY EDUCATION TEACHERS**

Secondary education teachers teach one or more subjects, for educational purpose, at some or all levels between the termination of primary education and the beginning of studies at colleges or universities.

### **Tasks include:**

- planning and preparing lessons in accordance with the prescribed/recommended curriculum;
- giving lessons in their subjects and supervising students class work and discipline;
- preparing, assigning and correcting exercises, assignments and tests to evaluate students progress;
- preparing reports about students work and conferring with other teachers and parents;
- participating in staff meetings and educational conferences and workshops;
- organizing or assisting with extracurricular activities;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

### **Examples of the occupations classified here:**

**23301** *Teacher, secondary education*

**23302** *Teacher, pre-university*



### **23303 Officer, education graduate services DG41**

## **234 PRIMARY SCHOOL AND EARLY CHILDHOOD TEACHERS**

Primary school and early childhood teachers teach a range of subjects at the primary education level and organize educational activities.

### **2341 PRIMARY SCHOOL TEACHERS**

Primary school teachers teach a range of subjects at the primary education level.

#### **Tasks include:**

- preparing programme of learning and giving instruction in several school subjects such as reading, writing and arithmetic, among others, within prescribed or recommended curriculum;
- preparing, administering and marking tests, projects and assignments to train pupils and to evaluate their progress, and giving remedial instruction if necessary;
- organizing and supervising pupils extra-curricular activities;
- encouraging personal development of pupils and discussing their progress with parents;
- maintaining attendance records and school discipline;
- participating in staff meetings and educational conferences and workshops;
- performing extra-curricular tasks such as assisting with sports, school concerts, excursions and special interest programmes;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

#### **Examples of the occupations classified here:**

**23411 Teacher, primary education**

**23412 Officer, non-graduate teacher DGA29**

### **2342 EARLY CHILDHOOD EDUCATORS**

Early childhood educators organize group and individual play and educational activities to support and promote physical, mental and social development of children below primary school age.

#### **Tasks include:**

- planning and organizing activities designed to facilitate the children's development of physical and social skills;
- promoting language development through story telling, role play, songs, rhymes and informal conversations and discussions;
- observing children in order to evaluate and discuss progress and possible problems with parents;
- supervising children's activities to ensure safety and resolve conflicts;
- attending staff meeting, educational conferences and workshops;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

#### **Examples of the occupations classified here:**

**23421 Teacher, kindergarten**

**235 MUSIC, ARTS AND PERFORMING ARTS TEACHERS**

Music, arts and performing arts teachers teach courses in music, arts and performing arts and organize educational activities.

**2351 MUSIC TEACHERS**

Music teachers teach course in music and organize educational activities.

**Tasks include:**

- preparing and delivering lessons to student on topic of fundamentals of music;
- organizing performance groups and directing their rehearsals;
- planning and preparing lessons in accordance with the prescribed/recommended curriculum;
- giving lessons in their subjects and supervising students class work and discipline;
- preparing, assigning and correcting exercises, assignments and tests to evaluate students progress;
- preparing reports about students work and conferring with other teachers and parents;
- participating in staff meetings and educational conferences and workshops;
- organizing or assisting with extracurricular activities;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**23511 Teacher, music**

**2352 ARTS TEACHERS**

Arts teachers teach course in arts, including fine and applied art, such as painting and sculpture, or design and crafts.

**Tasks include:**

- preparing and delivering lessons to student on topic of fundamentals of arts;
- explaining and demonstrating artistic techniques;
- planning and preparing lessons in accordance with the prescribed/recommended curriculum;
- giving lessons in their subjects and supervising students class work and discipline;
- preparing, assigning and correcting exercises, assignments and tests to evaluate students progress;
- preparing reports about students work and conferring with other teachers and parents;
- participating in staff meetings and educational conferences and workshops;
- organizing or assisting with extracurricular activities;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**23521 Teacher, fine arts**

**2353 PERFORMING ARTS TEACHERS**

Performing arts teachers teach courses in performing arts, including acting and modeling.

**Tasks include:**

- preparing and delivering lessons to student on topic of performing arts;
- explaining and demonstrating artistic techniques;
- planning and preparing lessons in accordance with the prescribed/recommended curriculum;
- giving lessons in their subjects and supervising students class work and discipline;
- preparing, assigning and correcting exercises, assignments and tests to evaluate students progress;
- preparing reports about students work and conferring with other teachers and parents;
- participating in staff meetings and educational conferences and workshops;
- organizing or assisting with extracurricular activities;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**23531 Teacher, modeling**

**236 LANGUAGE TEACHERS**

Language teachers plan, prepare and arrange activities of language programmes.

**2360 LANGUAGE TEACHERS**

Language teachers plan, prepare and arrange activities of language programmes.

**Tasks include:**

- planning and preparing and delivering lessons to arrange of classes and age groups;
- marking/providing appropriate feedback on oral and written work;
- devising and writing new materials;
- getting involved in social and cultural activities;
- participating in marketing even for the school;
- carrying out freelance teaching on a one-to-one basis;
- running specialist courses for adults or business people, which may require knowledge of scientific, technical, or commercial terms;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**23601 Teacher, language**

**23602 Teacher, remedial/professional**

## **237     RELIGIOUS TEACHERS**

Religious teachers teach course in religion and theology.

### **2370     RELIGIOUS TEACHERS**

Religious teachers teach course in religion and theology.

#### **Tasks include:**

- preparing and delivering lessons to student on topic of ethics, logic and contemporary religious thought;
- planning and preparing lessons in accordance with the prescribed/recommended curriculum;
- giving lessons in their subjects and supervising students class work and discipline;
- preparing, assigning and correcting exercises, assignments and tests to evaluate students progress;
- preparing reports about students work and conferring with other teachers and parents;
- participating in staff meetings and educational conferences and workshops;
- organizing or assisting with extracurricular activities;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

#### **Examples of the occupations classified here:**

**23701     *Teacher, Islamic religion***

## **238     SKILL TECHNOLOGY AND TECHNICAL TRAINERS**

Skill technology and technical trainers trained school leavers and existing industry workforce for employment purposes, leading to Malaysian Skills Certificate (SKM) Level 1-3, Malaysian Skills Diploma (DKM) Level-4 and Malaysian Skills Advanced Diploma (DLKM) Level-5 and above. More than 70 percent of training is hands-on and some of the training conducted at the work place through apprenticeship or National Dual Training System.

### **2380     VOCATIONAL TRAINING OFFICERS**

Vocational training officers develop National Occupational Skill Standards (NOSS), curriculum and training material, and trained or coach one or more subjects, for employment purposes such as petrochemical; pharmaceutical; wood-based product; rubber and rubber-based product; oil palm-based industries; food processing; electrical and electronic; medical devices; textiles and apparel; machinery and equipments; metals; transportation equipment; business and professionals services; integrated logistics services; ICT services; distribute trade; construction services; education and training; health services; tourism services; and etc.

#### **Tasks include:**

- ensuring the product of the national skills training system can fulfill the industry requirement;
- facilitating the share of knowledge between industries and skills training centers and subsequently contribute towards a more market-driven R&D;
- giving instructions and lessons both hands-on and theoretical in their field or expertise and supervising trainees at the workshop and shop floor;

- identifying factors that cause the imbalance in skilled human resource and competency;
- planning and preparing effective promotion on the skills training program to upgrade worker's aptitude level and productivity;
- introducing strategy, policy and program for development of human capital skills and competency through curriculum development; collaboration between industry and learning centers in industrial training; better facilities for experts in the institution and industry fields;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**23801** *Officer, vocational training J41*  
**23802** *Assistant officer, vocational training J29*  
**23803** *Sub assistant, vocational training J17*  
**23804** *Officer, training E41*  
**23805** *Trainer, skill training*  
**23806** *Sub assistant, training officer J17*

## **239    OTHER TEACHING PROFESSIONALS**

This minor group covers teaching professionals outside Minor Groups 231-238.

### **2391    EDUCATION METHODS SPECIALISTS**

Education methods specialists conducting services in the areas of special concern, individually or in-group.

**Tasks include:**

- conducting classes for adults to read and write in rural areas to eradicate illiteracy;
- giving private lessons or training to children or adults;
- compiling lessons and conducting correspondence course in accordance with prescribed syllabus for students taking various examinations;
- teaching the basic principles of good carriage, balance, behavior and grooming to improve their appearance;
- conducting classes in training institutions to teach basic home economics;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**23911** *Inspector, school*  
**23912** *Teacher, home economics*  
**23913** *Teacher, correspondence*  
**23914** *Teacher, adult education*  
**23915** *Specialist, teaching aids*

### **2392    SPECIAL NEEDS TEACHERS**

Special needs teachers teach physically or mentally handicapped children, young persons or adults, or those with learning difficulties, at a given level of education.

**Tasks include:**

- designing or modifying curricula and preparing lessons and activities in accordance with requirements;
- giving instruction using techniques or special aids such as Braille or lip-reading appropriate to pupil's handicap and level and supervising work in class;
- encouraging pupils to have confidence, helping them to discover and adopt methods which would compensate for limitations imposed by their handicap, and giving them a feeling of achievement;
- administering tests, evaluating and noting progress of each pupil and discussing it with parents, teachers, therapists, social workers, etc.;
- may work with parents on a variety of learning and follow-up programmes;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**23921 Teacher, special education/for the deaf**

**23922 Teacher, special education/for the dumb**

**23923 Teacher, special education/for the blind**

**23924 Teacher, special education/for the mentally handicapped**

**23925 Teacher, special education/for the physically handicapped**

**2393 INFORMATION TECHNOLOGY TRAINERS**

Information technology trainers design and deliver training courses in information and communications technology including desktop applications, company-specific software and some more technical-based training to software engineers, technicians, website designers or programmers.

**Tasks include:**

- carrying out training needs analyzes;
- designing course materials and other documents such as handouts, manuals and exercises;
- organizing and marketing courses to meet the needs of learners and demands of business;
- preparing the learning environment and resources, including setting up IT equipment;
- delivering training programmes to clients either in a group classroom setting, online through an e-learning or Virtual Learning Environment (VLE), or on a one-to-one basis;
- supporting and coaching learners using self-learning packages;
- evaluating the effectiveness of the training and course outcomes;
- liaising with other bodies, such as external course providers, employers, clients, examining bodies and software companies;
- taking responsibility for maintenance of hardware and software used for training purposes and recommending repairs and upgrades to management where appropriate;
- keeping up to date with relevant systems, software and online training technology;
- dealing with administrative records;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**23931    *Satellite-instruction facilitator***

#### **2399    TEACHING PROFESSIONALS NOT ELSEWHERE CLASSIFIED**

This minor group covers teaching professionals not classified elsewhere in Minor Group 239: Teaching Professionals Not Elsewhere Classified.

**Tasks include:**

- coordinating and directing college or university registration activities;
- monitoring training programmes transmitted by communication satellite from colleges and universities to remote educational institutions, activating audio-visual receiver and monitoring classroom viewing of live or recorded courses transmitted by communication satellite and monitoring live seminar transmissions and stimulating classroom discussion after broadcast;
- teaching exceptionally intelligent and problem students;
- teaching juvenile delinquents remanded to establishments for corrective training;
- assisting school children who have scholastic, behavioral or personality problems and working out with children and parents and teachers ways for overcoming difficulties;
- planning, organizing and implementing special programmes to provide remedial or advanced tuition;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**23991    *Evaluator and researcher, education systems***

**23992    *Adviser, education methods***

**23993    *Curricula developer***

**23994    *Officer, higher learning education services DH41***

## **24    BUSINESS AND ADMINISTRATION PROFESSIONALS**

Business and administration professionals perform analytical, conceptual and practical tasks to provide services in financial matters, human resource development, public relations and marketing, sales in the technical, medical, information and communication technology areas and conduct reviews of organizational structures, methods and systems as well as quantitative analyzes of information affecting investment programs.

**This sub-major group consists of the following minor groups:**

**241    FINANCE PROFESSIONALS**

**242    ADMINISTRATION PROFESSIONALS**

**243    SALES, MARKETING AND PUBLIC RELATIONS PROFESSIONALS**

**244    REGULATORY GOVERNMENT PROFESSIONALS**

### **241    FINANCE PROFESSIONALS**

Finance professionals plan and perform accounting services, advice on accountancy matters, plan and conduct financial audits of accounts for government departments, statutory, business and industrial establishments.

## **2411 ACCOUNTANTS**

Accountant plan, organize and administer accounting systems for individuals establishment. Some occupations classified here examine and analyze the accounting and financial records of individuals establishments to ensure accuracy and compliance with established accounting standards and procedures.

### **Tasks include:**

- advising on, planning and implementing budgetary, accounts controlling and other accounting policies and systems;
- preparing and certifying financial statements for presentation to management, shareholders and statutory or other bodies;
- preparing tax returns, advising on taxation problems and contesting disputed claims before tax officials;
- preparing or reporting on profit forecasts and budgets;
- preparing project costing and risk analysis;
- identifying areas of cost reduction and recommending cost-saving/control measures;
- conducting financial investigations, undertaking audits, preparing reports and advising on such matters as suspected fraud, insolvency, bankruptcy, merger, capital financing and the purchase and sales of businesses;
- acting as liquidation agent in matters relating to bankruptcy and taxation;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

### **Examples of the occupations classified here:**

**24111 Accountant**

**24112 Accountant W41**

**24113 Auditor**

**24114 Tax consultant**

**24115 Liquidator**

**24116 Accountant, chartered**

**24117 Auditor W41**

## **2412 FINANCIAL AND INVESTMENT ADVISERS**

Financial and investment advisers develop financial plans for individuals organizations and invest and manage funds on their behalf.

### **Tasks include:**

- analyzing the financial profile of companies for the purpose of making investment recommendations;
- building and maintaining a client base;
- interviewing clients to determine financial status and objectives, risk tolerance and other information needed to develop financial plans and investment strategies;
- investing funds on behalf of an investment organizations client in the money and capital markets;
- overseeing and coordinating treasury activities such as foreign exchange, money market and bond transactions;
- arranging to buy and sell stocks and bonds for clients;
- monitoring investment performance and reviewing and revising investment plans based on modified needs and changes in markets;



- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**24121 *Planner, financial***

**24122 *Adviser, E-Commerce***

### **2413 FINANCIAL ANALYSTS**

Financial analysts conduct quantitative analyses of information affecting investment programs of public or private institutions.

**Tasks include:**

- analyzing the financial profile of companies for the purpose of making investment recommendations;
- investing funds on behalf of an investment organizations client in the money and capital markets;
- overseeing and coordinating treasury activities such as foreign exchange, money market and bond transactions;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**24131 *Financial analyst***

**24132 *Executive, finance***

**24133 *Officer, finance W41***

### **242 ADMINISTRATION PROFESSIONALS**

Administration professionals apply various concepts and theories related to improving the effectiveness of organizations and the individuals within the organization.

### **2421 MANAGEMENT AND ORGANIZATION ANALYSTS**

Management and organization analysts assist organizations to achieve greater efficiency and solve organizational problems. They study organizational structures, methods, systems and procedures.

**Tasks include:**

- assisting and encouraging the development of objectives, strategies and plans aimed at achieving customer satisfaction and the efficient use of organizations' resources;
- analysing and evaluating current systems and structures;
- discussing current systems with staff and observing systems at all levels of organization;
- directing clients towards more efficient organization and developing solutions to organizational problems;
- undertaking and reviewing work studies by analysing existing and proposed methods and procedures such as administrative and clerical procedures;
- recording and analysing organizations' work flow charts, records, reports, manuals and job descriptions;

- preparing and recommending proposals to revise methods and procedures, alter work flows, redefine job functions and resolve organizational problems;
- assisting in implementing approved recommendations, issuing revised instructions and procedure manuals, and drafting other documentation;
- reviewing operating procedures and advising of departures from procedures and standards;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**24211 Analyst, market research/business**

**24212 Officer, press**

**24213 Officer, information S41**

**24214 Officer, evaluation W41**

**24215 Officer, appraiser W41**

**24216 Officer, research Q41**

**24217 Officer, tourist**

## **2422 POLICY ADMINISTRATION PROFESSIONALS**

Policy administration professionals develop and analyze policies guiding the design, implementation and modification of government and commercial operations and programs.

**Tasks include:**

- liaising and consulting with program administrators and other interested parties to identify policy needs;
- reviewing existing policies and legislation to identify anomalies and out-of-date provisions;
- researching social, economic and industrial trends, and client expectations of programs and services provided;
- formulating and analysing policy options, preparing briefing papers and recommendations for policy changes, and advising on preferred options;
- assessing impacts, financial implications, interactions with other programs and political and administrative feasibility of policies;
- conducting threat and risk assessments and developing responses;
- reviewing operations and programs to ensure consistency with policies of the organization;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**24221 Media planner**

**24222 Patent agent**

**24223 Analyst, policy**

## **2423 PERSONNEL AND CAREERS PROFESSIONALS**

Personnel and careers professionals provide professional business services related to personnel policies such as employee recruitment or development, occupational analyses and vocational guidance.

**Tasks include:**

- advising on and performing personnel functions relating to recruitment, placement, training, staff performance, promotion, compensation and employee-management relations;
- maintaining personnel records and associated human resource information systems;
- studying and analyzing jobs performed in an establishment, conducting interviews with workers, supervisors and management, and writing detailed post, job and occupation descriptions from data obtained;
- preparing occupational information booklets/pamphlets and occupational classification systems;
- advising and working on the foregoing and other aspects of job and occupation analyzes in such fields as personnel administration, manpower research and planning, training, or occupational information and vocational guidance;
- studying and advising individuals on employment opportunities, career choices and further education;
- providing guidance to students, parents and teachers over a wide range of matters, including students personal problems, learning difficulties and special requirements;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**24231** *Officer, personnel*

**24232** *Analyst, occupational*

**24233** *Adviser, career*

**24234** *Consultant, personnel*

**2424 TRAINING AND STAFF DEVELOPMENT PROFESSIONALS**

Training and staff development professionals plan, develop, implement and evaluate training and development programs to ensure that management and staff acquire the skills and develop the competencies required by organizations to meet organizational objectives.

**Tasks include:**

- identifying training needs and requirements of individuals and organizations;
- setting human resource development objectives and evaluating learning outcomes;
- preparing and developing instructional training material and aids such as handbooks, visual aids, online tutorials, demonstration models, and supporting training reference documentation;
- designing, coordinating, scheduling and conducting training and development programs that can be delivered in the form of individual and group instruction, and facilitating workshops, meetings, demonstrations and conferences;
- liaising with external training providers to arrange delivery of specific training and development programs;
- promoting internal and external training and development, and evaluating these promotional activities;
- monitoring and performing ongoing evaluation and assessment of internal and external training quality and effectiveness, and reviewing and modifying training objectives, methods and course deliverables;
- gathering, investigating and researching background materials to gain an understanding of various subject matters and systems;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**24241** *Officer, staff training*

#### **2425 ADMINISTRATIVE PROFESSIONALS**

Administrative professionals improve, advice and apply operational methods relating to administrative aspects.

**Tasks include:**

- organizing/maintaining handling/filing all internal and external correspondence;
- arranging appointments, organize meetings/conference;
- coordinating travel arrangements for staff on work matters;
- following up with staff and /or clients on reports;
- assisting in preparing reports;
- assisting/attending to all incoming calls for the department;
- assisting in updating timesheets and handling of claims;
- taking department meeting minutes;
- conducting research and maintenance of clients profiles and proposal database;
- coordinating all the training courses and maintain a staff training records;
- maintaining scheduling record;
- handling stationary requisition, printing, binding and general logistics support;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**24251** *Executive, administrative*

**24252** *Registrar, college or university*

#### **243 SALES, MARKETING AND PUBLIC RELATIONS PROFESSIONALS**

Sales, marketing and public relations professionals evaluate and propose various aspects of business undertaking such as advertising, public relations and marketing including information and communications technology and medical sales and/or other office support services to improve their structure, efficiency, and/or profits.

#### **2431 ADVERTISING AND MARKETING PROFESSIONALS**

Advertising and marketing professionals improve, advice or apply operational methods relating to marketing strategy, sales, advertising, promotion and pricing activities.

**Tasks include:**

- planning, implementation and control of a mix of business activities intended to bring together buyers and sellers for the mutually advantageous exchange or transfer of products;
- reporting customers reactions and requirements to manufacturers;
- developing and devising creative ideas for an advertising campaign for a brand or business;
- advising clients on how, when and where to spend their advertising budgets;

- providing direct, creative and strategic communication with the target audience, e.g. direct mail and direct response radio advertising;
- interacting with the media;
- writing and editing;
- planning, research and evaluation;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**24311** *Executive account, advertising*

## **2432 PUBLIC RELATIONS PROFESSIONALS**

Public relations professionals improve, advice or apply operational methods to build, maintain and manage the communications between an organization and its publics.

**Tasks include:**

- researching and analyzing followed by continuous evaluation of an organization or campaign strategy by: conducting focus groups and coordinating surveys;
- initiating and planning PR campaigns: defining goals; analyzing problems and opportunities;
- writing and editing press releases, in-house newsletters, speeches, articles and annual reports;
- maintaining and updating information on an organizations website;
- preparing and supervising the production of publicity brochures, handouts, direct mail leaflets, promotional videos, photographs, films and multimedia programmes;
- answering enquiries from individuals, journalists and other organizations;
- speaking in public at presentations, press conferences, radio and TV interviews, and meetings;
- developing and maintaining good working relations with the media, including local and national newspapers, magazines, radio and television;
- organizing special events, such as press conferences, exhibitions, open days, tours, competitions and sponsorship;
- fostering community relations through events such as open days and through involvement in community initiatives;
- focusing on the improvement of the well-being of individuals, families and the community.
- planning research and evaluation;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**24321** *Officer, industrial relations*

**24322** *Publicity agent*

**24323** *Executive, corporate communication*

**24324** *Officer, industrial relations S41*

## **2433 TECHNICAL AND MEDICAL SALES PROFESSIONALS (EXCLUDING ICT)**

Technical and medical sales professionals (excluding ICT) improve, advice or apply operational methods specialized in selling medical and healthcare product including

installations, equipment and technical products and related services, and provide specialized information as required.

**Tasks include:**

- arranging appointments with doctors, pharmacists and hospital medical teams, which may include pre-arranged appointments or regular 'cold' calling;
- making presentations to doctors, practice staff and nurses in GP surgeries, hospital doctors, and pharmacists in the retail sector;
- organizing conferences for doctors and other medical staff;
- building and maintaining positive working relationships with medical staff and supporting administration staff e.g. receptionists;
- managing budgets (for catering, outside speakers, conferences, hospitality, etc);
- keeping detailed records of all contacts, which may involve database management;
- regularly attending company meetings, technical data presentations and briefings;
- keeping up with the latest clinical data supplied by the company and interpreting, presenting and discussing this data with health professionals during presentations;
- monitoring competitor activity and competitors' products;
- keeping informed of new developments in The National Health Service (NHS), anticipating potential negative and positive impacts on the business and adapting strategy accordingly;
- developing strategies for increasing opportunities to meet and talk to contacts in the medical and healthcare sector;
- staying informed about the activities of health services in a particular area;
- working with team managers to plan how to approach contacts and creating effective business plans for making sales in a particular area;
- planning, research and evaluation;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**24331 Sales representatives, medical**

**24332 Sales representatives, hospital hardware**

**24333 Sales representatives, active implantable devices**

**24334 Sales representatives, anaesthetic and respiratory devices**

**24335 Sales representatives, dental devices**

**24336 Sales representatives, electromechanical medical devices**

**24337 Sales representatives, ophthalmic and optical devices**

**2434 INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) SALES PROFESSIONALS**

Information and communications technology (ICT) sales professionals sell, a range of computer hardware, software and other information and communications technology goods and services including installations and provide specialized information as required.

**Tasks include:**

- soliciting orders and selling goods to retail, industrial, wholesale and other establishments;
- selling technical equipment, supplies and related services to business establishments or individuals;
- discussing the needs of new and existing customers and providing specialized information about how particular equipment, supplies and services meet those

- needs;
- quoting and negotiating prices and credit terms, and completing contracts and recording orders;
- updating customer records and preparing sales reports;
- arranging delivery of goods, installation of equipment and the provision of services;
- reporting customers' reactions and requirements to manufacturers.

**Examples of the occupations classified here:**

**24341 Salesperson, information and communications technology (ICT)**

**24342 Salesperson, computer**

## **244 REGULATORY GOVERNMENT PROFESSIONALS**

Regulatory government professionals conduct, prevent and investigate operation of customs, tax, social benefit, licenses and civil by enforcing their policies and regulation.

### **2441 CUSTOMS, BORDER AND IMMIGRATION INSPECTOR PROFESSIONALS**

Customs, border and immigration inspector professionals supervise, enforce and coordinate investigation and inspection of persons, common carriers, goods and merchandise arriving in or departing or moving between states to detect violations of immigration and customs law and regulations.

**Tasks include:**

- detaining persons found to be in violation of customs or immigration laws and arrange for legal action such as deportation;
- checking, approving and producing travel pass and document;
- locating and seizing contraband or undeclared merchandise and vehicles, aircraft, or boats;
- interpreting and explaining laws and regulations to travelers, prospective shippers and manufacturers;
- inspecting cargo, baggage and personal articles entering or leaving states;
- investigate applications for duty refunds and petition for remission or mitigation of penalties when warranted.

**Examples of the occupations classified here:**

**24411 Superintendent, customs W41**

**24412 Superintendent, immigration KP41**

### **2442 TAXATION AND EXCISE OFFICIALS PROFESSIONALS**

Taxation and excise officials professionals supervise, and investigate operation of tax and excise by enforcing their procedures and regulations.

**Tasks include:**

- strengthening frontier protection;
- investigate the accuracy of tax returns and accounts submitted to HM Revenue & Customs (HMRC);
- applying tax legislation to companies, partnerships, organizations and individuals;
- examining accounts and researching background material;

- investigating fraud;
- giving expert advice on taxation matters to companies, partnerships, organizations and individuals;
- negotiating tax settlements with taxpayers and/or accountants;
- representing HMRC at independent appeal tribunals in disputed cases;
- looking into the finances of a business to find out exactly how it operates;
- examining the records kept and taking into account the lifestyle of the proprietor or directors;
- visiting business premises and meeting people face to face during the investigation;
- reviewing in detail aspects of the business accounts to ensure that tax law has been applied correctly;
- presenting a case in correspondence, and in person, with the taxpayer or their professional advisers, accountants or lawyers;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

#### **2443 GOVERNMENT SOCIAL BENEFITS OFFICIALS PROFESSIONALS**

Government social benefits officials professionals supervise and investigate operation of social benefit by enforcing their procedures and regulations.

##### **Tasks include:**

- interpreting and explaining related procedures regulation and laws to social organization;
- providing social security protection by social insurance for individual, family and society for their human right and their safety;
- enforcing the procedures regulations and laws;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

#### **2444 GOVERNMENT LICENSING OFFICIALS PROFESSIONALS**

Government licensing officials professionals supervise and investigate operation of licenses by enforcing their procedures and regulations.

##### **Tasks include:**

- interpreting and explaining related procedures regulation and laws;
- investigating fraud;
- enforcing the procedures regulations and laws;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

#### **2445 POLICE INSPECTORS AND DETECTIVES PROFESSIONALS**

Police inspectors and detectives professionals conduct, supervise and coordinate investigations to prevent crimes or solve criminal cases.

##### **Tasks include:**

- securing deceased body and obtain evidence from it, preventing bystanders from tampering with it prior to medical examiners arrival;



- analyzing completed police report to determine what additional information and investigative work is needed;
- obtaining facts or statements from complaints, witnesses and accused persons and record interviews, using recording device;
- obtaining summary of incident from officer in charge at crime scene, taking care to avoid disturbing evidence;
- examining record and governmental agency files to find identifying data about suspects;
- preparing and serve search and arrest warrants;
- summon medical help for injured individuals and alert medical personnel to take statements from them;
- providing information to lab personnel concerning the sources of an item of evidence and test to be performed;
- monitoring conditions of victims who are unconscious so that arrangements can be made to take statements if consciousness is regained;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**24451 Superintendent, police**

**24452 Senior officer, police (inspector) YY11**

**2446 CIVIL OFFICIALS PROFESSIONALS**

Civil officials professionals supervise and investigate cases of civil by enforcing their procedures and regulations.

**Tasks include:**

- interpreting and explaining related procedures regulation and laws;
- investigating fraud;
- enforcing the procedures regulations and laws;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**24461 Officer, Kesatria S41**

**24462 Officer, civil defence**

**24463 Officer, civil defence KP41**

**2449 REGULATORY GOVERNMENT PROFESSIONALS NOT ELSEWHERE CLASSIFIED**

This unit group covers other regulatory government professionals engaged in regulation activities outside the scope of those classified in unit group 2441 – 2446, including fire rescue, prison, security and maritime enforcement.

**Tasks include:**

- interpreting and explaining related procedures regulation and laws;
- investigating fraud;
- enforcing the procedures regulations and laws;

- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**24491 Superintendent, fireman KB41**  
**24492 Officer, security KP41**  
**24493 Superintendent, prison KX41**  
**24494 Officer, enforcement N41**  
**24495 Inspector, patent Q41**  
**24496 Superintendent officer, maritime X13**  
**24497 Officer, registration KP41**

## **25 INFORMATION AND COMMUNICATIONS TECHNOLOGY PROFESSIONALS**

Information and communications technology professionals conduct research, plan, design, write, test, provide advice and improve information technology systems, hardware, software and related concepts for specific applications; develop associated documentation including principles, policies and procedures; and design, develop, control, maintain and support databases and other information systems to ensure optimal performance and data integrity and security.

**This sub-major group consists of the following minor groups:**

**251 SOFTWARE AND APPLICATIONS DEVELOPERS AND ANALYSTS**  
**252 DATABASE AND NETWORK PROFESSIONALS**

### **251 SOFTWARE AND APPLICATIONS DEVELOPERS AND ANALYSTS**

Software and applications developers and analysts conduct research, plan, design, write, test, advice on and improve information technology systems, such as hardware, software and other applications to meet specific requirements.

#### **2511 SYSTEMS ANALYSTS**

Systems analysts conduct research, analyze and evaluate client information technology requirements, procedures or problems, and develop and implement proposals, recommendations, and plans to improve current or future information systems.

**Tasks include:**

- consulting with users to formulate and document requirements and with management to ensure agreement on systems principles;
- identifying and analysing business processes, procedures and work practices;
- identifying and evaluating inefficiencies and recommending optimal business practices, and system functionality and behavior;
- taking responsibility for deploying functional solutions, such as creating, adopting and implementing system test plans;
- developing functional specifications for use by systems developers;
- expanding or modifying systems to improve work flow or serve new purposes;
- coordinating and linking the computer systems within an organization to increase compatibility;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**25111 *Analyst, systems/computer***

**25112 *Analyst, business (information technology)***

## **2512 SOFTWARE DEVELOPERS**

Software developers research, analyze and evaluate requirements for existing or new software applications and operating systems, and design, develop, test and maintain software solutions to meet the requirements.

**Tasks include:**

- researching, analyzing and evaluating requirements for software applications and operating systems;
- researching, designing, and developing computer software systems;
- consulting with engineering staff to evaluate interface between hardware and software;
- developing and directing software testing and validation procedures;
- modifying existing software to correct errors, to adapt it to new hardware or to upgrade interfaces and improve performance;
- directing software programming and development of documentation;
- assessing, developing, upgrading and documenting maintenance procedures for operating systems, communications environments and applications software;
- consulting with customers concerning maintenance of software system;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**25121 *Multi-media software developer***

**25122 *Analyst, programmer***

**25123 *Designer, software***

## **2513 WEB AND MULTIMEDIA DEVELOPERS**

Web and multimedia developers professionals combine design and technical knowledge to research, analyze, evaluate, design, programme and modify websites, and applications that draw together text, graphics, animations, imaging, audio and video displays, and other interactive media.

**Tasks include:**

- analysing, designing and developing Internet sites applying a mixture of artistry and creativity with software programming and scripting languages and interfacing with operating environments;
- designing and developing digital animations, imaging, presentations, games, audio and video clips, and Internet applications using multimedia software, tools and utilities, interactive graphics and programming languages;
- communicating with network specialists regarding web-related issues, such as security and hosting web sites, to control and enforce Internet and web server security, space allocation, user access, business continuity, web site backup and disaster recovery planning;

- designing, developing and integrating computer code with other specialized inputs, such as image files, audio files and scripting languages, to produce, maintain and support web sites;
- assisting in analysing, specifying and developing Internet strategies, web-based methodologies and development plans;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**25131 Developer, web site/Internet/Intranet**

**25132 Architect, website**

**25133 Programmer, animation/computer games/multimedia**

#### **2514 APPLICATIONS PROGRAMMERS**

Applications programmers write and maintain programmable code outlined in technical instructions and specifications for software applications and operating systems.

**Tasks include:**

- writing and maintaining program code outlined in instructions and specifications in accordance with quality accredited standards;
- revising, repairing or expanding existing programs to increase operating efficiency or adapt to new requirements;
- conducting trial runs of programs and software applications to confirm that they will produce the desired information;
- compiling and writing documentation of program development;
- identifying and communicating technical problems, processes and solutions;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**25141 Programmer, computer**

**25142 Programmer, communication**

**25143 Programmer, data-base**

**25144 Programmer, systems**

**25145 Programmer, analyst**

**25146 Programmer, multimedia**

**25147 Researcher, information technology**

#### **2519 SOFTWARE AND APPLICATIONS DEVELOPERS AND ANALYSTS NOT ELSEWHERE CLASSIFIED**

This unit group covers professionals not classified elsewhere in minor group 251, Software and Applications Developers and Analysts. For instance, here should be classified those professionals specializing in quality assurance including software testing.

**Tasks include:**

- developing and documenting software testing plans;

- installing software and hardware and configuring operating system software in preparation for testing;
- verifying that programmes function according to user requirements and established guidelines;
- executing, analyzing and documenting results of software application tests and information and telecommunication systems tests;
- developing and implementing software and information system testing policies, procedures and scripts;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**25191 Analyst, quality assurance**

**25192 Tester, software**

**25193 Tester, systems**

## **252 DATABASE AND NETWORK PROFESSIONALS**

Database and network professionals design, develop, control, maintain and support the optimal performance and security of information technology systems and infrastructure, including database, hardware and software, networks and operating systems.

### **2521 DATABASE DESIGNERS AND ADMINISTRATORS**

Database designers and administrators design, develop, control, maintain and support the optimal performance and security of databases.

**Tasks include:**

- designing and developing database architecture, data structures, tables, dictionaries and naming conventions for information systems projects;
- designing, constructing, modifying, integrating, implementing and testing database management systems;
- conducting research and providing advice on the selection, application and implementation of database management tools;
- developing and implementing data administration policy, documentation, standards and models;
- developing policies and procedures for database access and usage and for the backup and recovery of data;
- performing the operational establishment and preventive maintenance of backups, recovery procedures, and enforcing security and integrity controls;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**25211 Designer, database**

**25212 Auditor computer**

**25213 Administrator, electronic data processing (PDE)**

### **2522 SYSTEMS ADMINISTRATORS**

Systems administrators develop, control, maintain and support the optimal performance and

security of information technology systems.

**Tasks include:**

- maintaining and administering computer networks and related computing environments including computer hardware, systems software, applications software and all configurations;
- analysing, developing, interpreting and evaluating complex system design and architecture specifications, data models and diagrams in the development, configuration and integration of computer systems;
- recommending changes to improve systems and network configurations, and determining hardware or software requirements related to such changes;
- diagnosing hardware and software problems;
- performing data backups and disaster recovery operations;
- operating master consoles to monitor the performance of computer systems and networks, and to coordinate computer network access and use;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**25221 Administrator, systems**

**25222 Officer, information technology F41**

**2523 COMPUTER NETWORK PROFESSIONALS**

Computer network professionals research, analyse and recommend strategies for network architecture and development, Implement, manage, maintain and configure network hardware and software, and monitor, troubleshoot and optimize performance.

**Tasks include:**

- researching, analysing, evaluating and monitoring network infrastructure to ensure networks are configured to operate at optimal performance;
- assessing and recommending improvements to network operations and integrated hardware, software, communications and operating systems;
- providing specialist skills in supporting and troubleshooting network problems and emergencies;
- installing, configuring, testing, maintaining and administering new and upgraded networks, software database applications, servers and workstations;
- preparing and maintaining procedures and documentation for network inventory, and recording diagnosis and resolution of network faults, enhancements and modifications to networks, and maintenance instructions;
- monitoring network traffic, and activity, capacity and usage to ensure continued integrity and optimal network performance;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**2529 DATABASE AND NETWORK PROFESSIONALS NOT ELSEWHERE CLASSIFIED**

This unit group covers database and networking professionals not elsewhere classified in Minor Group 252: Database and Network Professionals.

**Tasks include:**

- developing plans to safeguard computer files against accidental or unauthorized modification, destruction, or disclosure and to meet emergency data processing needs;
- training users and promoting security awareness to ensure system security and to improve server and network efficiency;
- conferring with users to discuss issues such as computer data access needs, security violations, and programming changes;
- monitoring current reports of computer viruses to determine when to update virus protection systems;
- modifying computer security files to incorporate new software, correct errors, or change individual access status;
- monitoring use of data files and regulate access to safeguard information in computer files;
- performing risk assessments and executing tests of data processing system to ensure functioning of data processing activities and security measures;
- encrypting data transmissions and erecting firewalls to conceal confidential information as it is being transmitted and to keep out tainted digital transfers;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**25291    *Security specialist, ICT***

## **26    LEGAL, SOCIAL AND CULTURAL PROFESSIONALS**

Legal, social and cultural professionals conduct research, improve or develop concepts, theories and operational methods, or apply scientific knowledge relating to fields such as laws and regulations, librarian, social and religious, journalists and artist.

**This sub-major group consists of the following minor group:**

- 261    LEGAL PROFESSIONALS**
- 262    LIBRARIANS, ARCHIVISTS AND CURATORS**
- 263    SOCIAL AND RELIGIOUS PROFESSIONALS**
- 264    AUTHORS, JOURNALISTS AND LINGUISTS**
- 265    CREATIVE AND PERFORMING ARTISTS**

### **261    LEGAL PROFESSIONALS**

Legal professionals conduct research on legal problems, draft laws and regulations, advise clients on legal aspects of problems, and plead cases or conduct prosecutions in courts of justice, or preside over judicial proceedings and pronounce judgement in courts of justice.

#### **2611    LAWYERS**

Lawyers give clients legal advice on a wide variety of subjects and plead cases or conduct prosecutions in courts of justice, or instruct barristers or advocates to plead in higher courts of justice.

**Tasks include:**

- conducting research on legal theories and principles and their relationship to specific laws or court judgments;

- drafting legislation and preparing government regulations based on existing laws;
- giving clients (including the government) legal advice on a wide variety of subjects and undertaking legal business on clients' behalf;
- assisting clients to negotiate settlements in matters which involve legal disputes;
- examining the circumstances of disputes or reported crimes to ascertain facts and their legal implications;
- preparing pleadings or cases for plaintiff or defendant and conducting them in court;
- representing clients in the lower court or instructing barristers or advocates to plead in higher courts of justice;
- accepting briefs and pleading in the higher court;
- acting as prosecutor on behalf of the government in criminal cases;
- drawing up legal documents, wills, affidavits, contracts and administering oaths;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**26111** *Lawyer*  
**26112** *Prosecutor L41*  
**26113** *Solicitor L41*  
**26114** *Adviser, legal L41*  
**26115** *Legal drafter L41*  
**26116** *Legal officer, legal aid bureau L41*  
**26117** *Advocate L41*

## **2612 JUDGES**

Judges, presidents, magistrates and related judicial officers hear and judge cases in courts of justice or pronounce judgment.

**Tasks include:**

- hearing and weighing arguments and evidence;
- establishing rules of procedure on questions for which no standard procedures already exist;
- determining the rights and obligations of the parties involved;
- pronouncing judgment;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**26121** *Judge, federal court*  
**26122** *Officer, Syariah LS41*  
**26123** *Magistrate*  
**26124** *President/Chairman industrial court*  
**26125** *Magistrate L41*  
**26126** *Officer, Islamic affair S41*

## **2619 LEGAL PROFESSIONALS NOT ELSEWHERE CLASSIFIED**

This unit group covers legal professionals not classified elsewhere in Minor Group 261: Legal Professionals such as those who perform legal functions other than pleading or prosecuting cases or presiding over judicial proceedings.



**Tasks include:**

- drawing up legal documents and affirming and administering oaths and statutory declarations;
- implementing legal policy and regulation;
- performing administration work in courts of law;
- administering the estates of deceased persons or other trusts;
- taking charge and administering estates of insolvents (bankrupts) or properties and assets of companies;
- determining, by inquest, the causes of any death not obviously due to natural causes;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**26191** *Commissioner for oaths*  
**26192** *Registrar of court*  
**26193** *Public trustee*  
**26194** *Officer, anti-drug S41*  
**26195** *Officials assignee (high court)*  
**26196** *Officer, bankruptcy*  
**26197** *Coroner*  
**26198** *Drafter, parliamentary*

**262     LIBRARIANS, ARCHIVISTS AND CURATORS**

Librarians, archivists and curators develop and maintain the collection of libraries, archives, museums, art galleries and similar establishments.

**2621    ARCHIVISTS AND CURATORS**

Archivists and curators organize, develop and maintain archives, museums and art galleries.

**Tasks include:**

- researching into, appraising, developing, organizing and preserving historically significant and valuable documents;
- directing or carrying out the preparation of indexes, bibliographies, microfilm copies and other reference aids to the collected materials and making them available to users;
- researching into the origin, distribution and use of materials and objects of cultural and historical interest;
- organizing, developing and maintaining collections of artistic, cultural, scientific or historically significant items in museums or art galleries;
- cataloguing of museum and art gallery collections and organizing exhibitions;
- maintaining records;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**26211** *Archivist*

**26212** *Curator, museum*  
**26213** *Curator, art gallery*  
**26214** *Officer, archivist S41*  
**26215** *Curator S41*

## **2622 LIBRARIANS AND RELATED INFORMATION PROFESSIONALS**

Librarians and related information professionals organize, develop and maintain systematic collection of books and other recorded materials and motion picture films and make them available to library users.

### **Tasks include:**

- classifying or supervising classification, indexing, cataloguing, circulation of library material and maintaining records;
- selecting and recommending acquisitions of books and other printed or audio-visually recorded materials;
- assisting inquirers and retrieving information from manual files or computerized data bases;
- supervising the maintenance of books and other materials;
- managing interlibrary loan systems and information networks;
- maintaining liaison with other libraries and library associations;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

### **Examples of the occupations classified here:**

**26221** *Librarian*  
**26222** *Librarian, children's*  
**26223** *Librarian, film*  
**26224** *Bibliographer*  
**26225** *Cataloguer*  
**26226** *Information scientist, business services*  
**26227** *Librarian S41*

## **263 SOCIAL AND RELIGIOUS PROFESSIONALS**

Social and religious professionals conduct research, improve or develop concepts, theories and operational methods, or apply knowledge relating to philosophy, politics, economics, sociology, anthropology, history, philology, languages, psychology, religious faith and other social sciences, or they provide social services to meet the needs of individuals and families in a community.

## **2631 ECONOMISTS**

Economists conduct research to improve or develop economic concepts, theories and operational methods used to understand and describe the behavior of national and international markets for goods, services and labors, and advise on or apply the knowledge to draw up economic policies and to formulate solutions to present or projected economic problems.

### **Tasks include:**

- studying, advising on, or dealing with various economic aspects such as production and marketing methods, national and international trade trends, monetary, fiscal and pricing policies, employment, income, productivity and consumption;
- compiling, analyzing and interpreting economic and statistical data;
- preparing reports of research findings;
- advising on economic policy and course of action to be followed in the light of analyzes of past, present and projected economic factors;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**26311 *Econometrician***

**26312 *Officer, economy affairs E41***

## **2632 SOCIOLOGISTS, ANTHROPOLOGISTS AND RELATED PROFESSIONALS**

Sociologists, anthropologists and related professionals investigate and describe the social structure of societies, the origin and evolution of humanity, and the interdependence between environmental conditions and human activities.

**Tasks include:**

- conducting research on the origin, development, structure, social patterns, organizations and inter-relationships of human society;
- tracing the origin and evolution of humanity through the study of changing characteristics and cultural and social institutions;
- tracing the development of humanity through the material remains of its past such as dwellings, temples, tools, pottery, coins, weapons or sculpture;
- studying physical and climatic aspects of areas and regions and correlating these findings with the economic, social and cultural activities;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**26321 *Social ecologist***

**26322 *Anthropologist***

**26323 *Archaeologist***

**26324 *Geographer***

**26325 *Criminologist***

**26326 *Ethnologist***

**26327 *Officer, social research N41***

## **2633 PHILOSOPHERS, HISTORIANS AND POLITICAL SCIENTISTS**

Philosophers, historians and political scientists conduct research and describe past events and activities, including the development of social and economic structures, or cultural and political institutions and movements.

**Tasks include:**

- researching mostly by reasoning, into the general causes, principles and meaning of the world, human actions, experience and existence, and interpreting and developing philosophical concepts and theories;

- consulting and comparing primary sources such as original contemporary records of past, events, and secondary sources such as archaeological or anthropological findings;
- extracting relevant material, checking its authenticity, and researching into and describing the history of a particular period, country or region, or a particular facet (for example economic, social or political) of its history;
- conducting research in such fields as political philosophy, or past and present theory and practice of political systems, institutions or behavior;
- observing contemporary political institutions and collecting data on them from various sources, including interviews with government and political party officials and other relevant persons;
- presenting findings and conclusions for publication or use by government, political parties or other organizations and interested persons;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**26331 *Philosopher***

**26332 *Historian***

**26333 *Political scientist***

## **2634 PSYCHOLOGISTS**

Psychologists research into and study mental processes and behavior of human beings and apply this knowledge to promote personal, social, educational or occupational adjustment and development.

**Tasks include:**

- planning and carrying out tests to measure mental, physical and other characteristics such as intelligence, abilities, attitudes, potentialities, etc., interpreting and evaluating results and providing advice;
- analyzing the effect of heredity, social, occupational and other factors on individual thought and behavior;
- conducting counseling or therapeutic interviews and providing follow-up services;
- maintaining required contacts such as those with family members, educational authorities or employers, and recommending possible solutions to and treatment of problems;
- studying psychological factors in the diagnosis, treatment and prevention of mental illnesses and emotional or personality disorders, and conferring with related professionals;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**26341 *Psychologists***

**26342 *Psychologists S41***

## **2635 SOCIAL WORK AND COUNSELING PROFESSIONALS**

Social work and counseling professionals provide guidance to clients in social and related matters to enable them to find and use resources to overcome difficulties and achieve required goals.

**Tasks include:**

- helping individuals and families with personal and social problems;
- collecting information relevant to clients needs and advising them on their rights and obligations;
- analyzing the clients situation and presenting alternative approaches to resolving problems;
- preparing and compiling case records or reports for courts and other legal proceedings;
- planning, evaluating, improving and developing welfare services;
- providing guidance to potential delinquents and rehabilitation delinquents by organizing and supervising social, educational and recreational activities in youth clubs, community centre and similar organizations;
- helping physically or mentally handicapped persons to obtain adequate treatment and improve their ability to function in society;
- planning, organizing or providing home-help services;
- monitoring the progress of clients by maintaining contact;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**26351 Social worker, professional**

**26352 Officer, cultural B41**

**26353 Officer, social development S41**

**26354 Officer, youth and sport S41**

**2636 RELIGIOUS PROFESSIONALS**

Religious professionals function as perpetrators of the sacred traditions, practices and beliefs and celebrate or administer at the rituals of initiation, preside over ritual re-enactments of creative, redemptive or salvatory events, and offer sacrifices to Gods or to one God.

**Tasks include:**

- perpetuating sacred traditions, practices and beliefs;
- conducting religious services, rites and ceremonies;
- undertaking various administrative and social duties, including attending committees and meetings of religious organizations;
- providing spiritual and moral guidance in accordance with the religion professed;
- propagating religious doctrines;
- preparing and delivering religious sermons and preaching;
- conducting classes of religious instruction and supervising prayer and discussion groups, retreats and seminars;
- keeping records as required by the local law;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**26361 Officer, religious**

**26362 Mufti**

**26363 Imam**

- 26364** *Kadhi*  
**26365** *Priest, church*  
**26366** *Priest, temple*

## **264** **AUTHORS, JOURNALISTS AND LINGUISTS**

Authors, journalists and linguists conceive and create or perform literary works, edit news, stories and commentaries or other works of art.

### **2641** **AUTHORS AND RELATED WRITERS**

Authors and related writers write literary works for publication or dramatic presentation and of artistic production and, appraise merits of literary and other works of art.

#### **Tasks include:**

- writing literary works for publication or dramatic presentation;
- writing scripts and continuities and preparing programmes for stage, film, radio and television productions;
- appraising and writing about merits of literary, musical and other works of art, and about artistic performances;
- interviewing politicians and other public figures at press conferences and on other occasions, including individual interviews recorded for radio or television;
- writing editorials and selecting, revising, arranging and editing submitted articles for publication broadcasting;
- appraising manuscripts submitted for publication in book form, making recommendations thereon and editing or supervising editing of the material;
- writing advertising copy promoting particular products or services;
- selecting, assembling and preparing publicity materials about business or other organizations for issue through press, radio, television and other media;
- designing and writing brochures, handbooks and similar technical publications;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

#### **Examples of the occupations classified here:**

- 26411** *Author*  
**26412** *Critic*  
**26413** *Copywriter, advertising*  
**26414** *Lyricist*  
**26415** *Editor*  
**26416** *Proofreader*

### **2642** **JOURNALISTS**

Journalists write literary works for publication or dramatic presentation and of artistic production and, appraise merits of literary and other works of art or write and edit news, stories and commentaries.

#### **Tasks include:**

- writing literary works for publication or dramatic presentation;
- writing scripts and continuities and preparing programmes for stage, film, radio and television productions;

- appraising and writing about merits of literary, musical and other works of art, and about artistic performances;
- collecting, reporting and commenting on news and current affairs for publication in newspapers and periodicals or for broadcasting by radio or television;
- interviewing politicians and other public figures at press conferences and on other occasions, including individual interviews recorded for radio or television;
- writing editorials and selecting, revising, arranging and editing submitted articles for publication broadcasting;
- appraising manuscripts submitted for publication in book form, making recommendations thereon and editing or supervising editing of the material;
- writing advertising copy promoting particular products or services;
- selecting, assembling and preparing publicity materials about business or other organizations for issue through press, radio, television and other media;
- designing and writing brochures, handbooks and similar technical publications;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**26421** *Columnist*

**26422** *Political editor*

**26423** *Journalist S41*

## **2643 TRANSLATORS, INTERPRETERS AND OTHER LINGUISTS**

Translators, interpreters and other linguists study the origin, development and structure of languages and translate or interpret from one language into another.

**Tasks include:**

- studying the relationships between ancient parent languages and modern language groups, tracing the origin and evolution of words, grammar and language forms and presenting findings;
- advising on or preparing language classification systems, grammars, dictionaries and similar interests;
- translating from one language into another and ensuring that the correct meaning of the original is retained, that legal, technical or scientific works are correctly rendered and that the phraseology and terminology of the spirit and style of literary works are conveyed as far as possible;
- interpreting from one language into another, in particular at conferences, meetings and similar occasions, and ensuring that the correct meaning, and as far as possible the spirit, of the original are transmitted;
- may specialize in one or more languages and subject areas;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**26431** *Translator*

**26432** *Interpreter*

**26433** *Philologist*

**26434** *Officer, language planner S41*

**26435** *Interpreter L17*

**26436** *Simultaneous linguist N41*

**26437** *Assistant officer, language planner S27*

## **265 CREATIVE AND PERFORMING ARTISTS**

Creative and performing artists conduct research, improve or develop concepts, theories and operational methods, or apply knowledge relating to visual artists, musicians, singers and composers, dancers and choreographers, film, stage and related directors and producers, actors, announcers on radio, television and other media, clowns, magicians, acrobats and related professionals, animal/bird keepers and trainers.

### **2651 VISUAL ARTISTS**

Visual artists create and execute artistic works by sculpting, painting, drawing, creating cartoons, engraving or using related techniques.

#### **Tasks include:**

- planning, developing and providing services in the form of teaching, talks, seminars, courses, meetings, demonstrations, and other activities;
- remaining conversant with new developments in visual arts' education, practice and process ensuring that Visual Artists maintains standards of quality and performance, achieves targets and implements the identified Education Policy;
- creating representational or abstract three-dimensional or relief forms by shaping and combining materials such as wood, wax, stone, clay or metal;
- creating representational or abstract drawings and paintings using pencils, ink, oil paints, water colours or through the application of other techniques;
- creating draws and engraving or etching them on metal, wood or other materials;
- creating cartoons to depict persons and events, often in caricature;
- creating and executing designs and illustrations for books, magazines, advertising and similar purposes;
- restoring damaged, soiled and faded paintings and other art objects;
- painting miniatures;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

#### **Examples of the occupations classified here:**

**26511 Sculptor**

**26512 Cartoonist**

**26513 Animator**

**26514 Engraver-etcher, artistic**

**26515 Artist**

**26516 Artist, tattoo**

### **2652 MUSICIANS, SINGERS AND COMPOSERS**

Musicians, singers, and composers compose and adapt musical works and conduct or participate in performances.

#### **Tasks include:**

- auditioning and selecting musicians and singers and selecting music for performance;
- conceiving and writing musical compositions;
- adapting or arranging music for instrumental groups, instruments or occasions;
- conducting instrumental or vocal groups;



- playing one or more musical instruments as a soloist or as a member of an orchestra;
- singing as soloists or members of vocal groups;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**26521 *Instrumentalist***

**26522 *Arranger, music***

**26523 *Conductor, band***

**26524 *Singer/vocalist***

**26525 *Musician B41***

## **2653 DANCERS AND CHOREOGRAPHERS**

Dancers and choreographers conceive and create or perform dances to entertain audiences.

**Tasks include:**

- conceiving and creating dances, which often convey a story, theme, idea or mood, by a pattern of steps, movements and gestures;
- arranging and directing dance performances for stage or film production;
- performing dances as a soloist, with a partner or as a member of a dancing group;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**26531 *Dancer***

**26532 *Choreographer***

**26533 *Director, dance***

**26534 *Arranger, dance***

## **2654 FILM, STAGE AND RELATED DIRECTORS AND PRODUCERS**

Film, stage and related directors and producers direct in motion pictures, television or radio productions and stage shows.

**Tasks include:**

- studying scripts to determine artistic interpretation, instructing actors on acting methods and directing all aspects of dramatic productions on stage, television, radio or in motion pictures;
- including choice of actors, and final decisions concerning costumes, set designs, sound or lighting effects;
- telling stories or reading literary works aloud to educate or entertain listeners;
- viewing processed film or video tape to evaluate and select scenes and determine which scenes need to be re-shot;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

**26541 *Director, motion picture***

**26542** *Editor, film and video*  
**26543** *Producer, television*  
**26544** *Officer, publication N41*  
**26545** *Officer, film laboratory C41*  
**26546** *Producer B41*

## **2655 ACTORS**

Actors act in motion pictures, television or radio productions and stage shows.

### **Tasks include:**

- studying scripts to determine artistic interpretation;
- learning lines and cues and playing parts in dramatic productions on stage, television, radio or in motion pictures;
- telling stories or reading literary works aloud to educate or entertain listeners;
- viewing processed film or video tape to evaluate and select scenes and determine which scenes need to be re-shot;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

### **Examples of the occupations classified here:**

**26551** *Actor*  
**26552** *Story teller*  
**26553** *Artist, cultural B27*

## **2656 ANNOUNCERS ON RADIO, TELEVISION AND OTHER MEDIA**

Announcers on radio, television and other media read news bulletins, conduct interviews, and make other announcements or introductions on radio, television or in theatres and other establishments.

### **Tasks include:**

- reading news bulletins, making other announcements and providing commentary for sports and other events on radio or television;
- introducing performing artists or persons being interviewed, and making related announcements on radio and television or in theatres, clubs and other establishments;
- interviewing persons in public, especially on radio and television;
- presenting opinions on sports, politics, social or economic matters;
- researching, investigating and compiling stories and program packages;
- monitoring incoming information and liaising with network editors, journalists, media producers and directors, graphic designers, other program departments and outside news and program sources;
- selecting and organizing materials for broadcast;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

### **Examples of the occupations classified here:**

**26561** *Announcers, radio and television*

**26562 Interviewer, media**

**26563 Presentation support assistant**

## **2657 CLOWNS, MAGICIANS, ACROBATS AND RELATED PROFESSIONALS**

Clowns, magicians, acrobats and related associate professionals entertain audiences in circuses and other places by performing a variety of acts.

### **Tasks include:**

- performing amusing antics and telling funny stories to amuse audiences;
- performing feats requiring abnormal bodily contortions;
- performing tricks of illusion and sleight of hand, and feats of hypnotism;
- performing difficult and spectacular acrobatics, and gymnastic or juggling feats;
- training and performing with animals;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

### **Examples of the occupations classified here:**

**26571 Acrobat**

**26572 Contortionist**

**26573 Magician**

**26574 Clown**

**26575 Snake charmer**

## **2658 ANIMAL KEEPERS AND TRAINERS**

Animal keepers and trainers care for animals, training, and performing with animals in zoological, bird and aquatic parks.

### **Tasks include:**

- caring for animals in zoological, bird and aquatic parks;
- training and performing with animals;
- performing related tasks;
- enhancing knowledge and coordinating the work performance.

### **Examples of the occupations classified here:**

**26581 Performer/trainer in zoological, bird and aquatic parks**

**26582 Performer/trainer in crocodile farm**

**26583 Trainer, dog**

**26584 Trainer, horse**

## **2659 CREATIVE AND PERFORMING ARTISTS NOT ELSEWHERE CLASSIFIED**

This unit group covers creative and performing artist not elsewhere classified in Minor Group 265: Creative and Performing Artist.

### **Examples of the occupations classified here:**

**26591 Creative and performing artists not elsewhere classified**

**27 HOSPITALITY, RETAIL AND OTHER SERVICES PROFESSIONALS.**

Hospitality, retail and other services professionals conduct research, improve or develop concepts, theories and operational methods, or apply technical knowledge relating to hotel and restaurant operation.

**This sub-major group consists of the following minor groups:**

**271 HOTEL AND RESTAURANT PROFESSIONALS**

**271 HOTEL, RESTAURANT, HOSPITALITY AND RELATED PROFESSIONALS**

Hotel, restaurant, hospitality and related professionals conduct research, plan, develop and improve hotel and restaurant management and related concepts, develop principles and operational methods to ensure integrity and security of data.

**2711 HOTEL, HOSPITALITY AND RELATED PROFESSIONALS**

Hotel professionals conduct research, plan, develop and improve hotel management and related concepts, develop principles and operational methods to improve hotel quality and integrity.

**Tasks include:**

- planning and improving hotel management operation;
- maximize the profit of margin and minimize the operation cost;
- performing related task;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

- 27111 Food and beverage administrator**
- 27112 Food and beverage guest services executive**
- 27113 Food and beverage personnel**
- 27114 Officer, guest service**
- 27115 Executive, hotel operations**
- 27116 Officer, food preparer C41**

**2712 RESTAURANT AND RELATED PROFESSIONALS**

Restaurant and related professionals conduct research, plan, develop and improve restaurant management and related concepts, develop principles and operational methods to ensure integrity and security of data.

**Tasks include:**

- planning and improving restaurant management operation;
- maximize the profit of margin and minimize the operation cost;
- performing related task;
- enhancing knowledge and coordinating the work performance.

**Examples of the occupations classified here:**

- 27121 Kitchen administrator**



**MAJOR GROUP**



**TECHNICIANS  
AND  
ASSOCIATED  
PROFESSIONALS**

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**2008**

**2<sup>nd</sup> Edition**

# Major Group 3:

## TECHNICIANS AND ASSOCIATE PROFESSIONALS

Technicians and associate professionals perform mostly technical and related tasks connected with research and the application of scientific or artistic concepts and operational methods, and government or business regulations, and teach at certain educational levels. Most occupations in this major group require skills at the third skill level.

This major group consists of the following sub-major groups:

- 31 SCIENCE AND ENGINEERING ASSOCIATE PROFESSIONALS
- 32 HEALTH ASSOCIATE PROFESSIONALS
- 33 BUSINESS AND ADMINISTRATIONS ASSOCIATE PROFESSIONALS
- 34 LEGAL, SOCIAL, CULTURAL AND RELATED ASSOCIATE PROFESSIONALS
- 35 INFORMATION AND COMMUNICATIONS TECHNICIANS

### 31 SCIENCE AND ENGINEERING ASSOCIATE PROFESSIONALS

Science and Engineering associate professionals perform technical tasks connected with research and the application of concepts and operational methods in the field of physical science as well as computing and engineering, or they control and operate technical equipment, fly aircraft, navigate ships, and investigate safety aspects of manufacturing and other processes and products.

This sub-major group consists of the following minor groups:

- 311 PHYSICAL AND ENGINEERING SCIENCE TECHNICIANS
- 312 MINING, MANUFACTURING AND CONSTRUCTION SUPERVISORS
- 313 PROCESS CONTROL TECHNICIANS
- 314 LIFE SCIENCE TECHNICIANS AND RELATED ASSOCIATE PROFESSIONALS
- 315 SHIP, AIRCRAFT AND TRAIN TECHNICIANS
- 316 SCIENCE NUCLEAR ASSOCIATE PROFESSIONALS

### 311 PHYSICAL AND ENGINEERING SCIENCE TECHNICIANS

Physical and engineering science technicians perform technical tasks related to research and the practical application of concepts, principles and operational methods connected with physical sciences including such areas as engineering, technical drawing or economic efficiency of production processes.

#### 3111 CHEMICAL AND PHYSICAL SCIENCE TECHNICIANS

Chemical and physical science technicians, usually under the direction and supervision of physicists, chemists, meteorologists, geologists and related scientists, perform technical tasks connected with research in chemistry, physics, geology, geophysics, meteorology and astronomy, as well as with the development of industrial, medical, military and other practical applications of research results.

Tasks include:

- collecting samples and preparing materials and equipment for experiments, tests and analyses;
- making weather observations, recording, coding and sending weather report and maintaining weather equipment;
- assisting with the design of and performing experiments, tests and analyses;
- making observations, calculations/measurements, recording and plotting information and may assist in preparing technical reports and documents for publication;
- compiling and maintaining relevant data;
- preparing estimates of quantities and costs of materials and labour required for specified projects;
- applying technical knowledge in order to identify and solve problems arising in the course of work;
- supervising or maintaining and repairing research equipment;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

- 31111 Technician, science physics**
- 31112 Assistant officer, meteorology C27**
- 31113 Sub assistant, meteorology C17**
- 31114 Technician, soil**
- 31115 Technician, meteorological**
- 31116 Laboratory assistant, geological**
- 31117 Conductor, laboratory research estate/plantation**
- 31118 Sub assistant, laboratory C17**

## **3112 CIVIL ENGINEERING TECHNICIANS**

Civil engineering technicians perform technical tasks in civil engineering research, design, construction, operation, maintenance and repair of buildings and other structures, such as water supply and wastewater treatment systems, bridges, roads, dams and airports.

**Tasks include:**

- performing or assisting with field and laboratory tests of soils and construction materials;
- providing technical assistance connected with the construction of buildings and other structures, and with surveys or the preparation of survey reports;
- ensuring compliance with design specifications, relevant legislation and regulations, and maintenance of desired standards of materials and work;
- applying technical knowledge of building and civil engineering principles and practices in order to identify and solve problems arising;
- assisting with the preparation of detailed estimates of quantities and costs of materials and labour required for projects, according to the specifications given;
- organizing maintenance and repairs;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

- 31121 Technician, engineering/civil**
- 31122 Sub technical assistant, architecture J29**



**31123 Sub technical assistant, civil J29**

**31124 Technician, civil J17**

**31125 Technician, architecture J17**

### **3113 ELECTRICAL ENGINEERING TECHNICIANS**

Electrical engineering technicians perform technical tasks under the direction and supervision of electrical engineers, contributory to the design, construction, installation, maintenance and repair of electrical systems and equipment.

#### **Tasks include:**

- assisting in research and development works concerning electrical systems, equipment and facilities and testing prototypes;
- assisting in design and layout of electrical installations and circuitry;
- preparing detailed estimates of quantities and costs of materials and labour required for manufacture and installation;
- assisting with technical supervision of the manufacture, installation, utilisation, maintenance and repair of electrical systems and equipment;
- applying technical knowledge of electrical engineering theory and practice to identify and solve problems arising in the course of their work;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

#### **Examples of the occupations classified here:**

**31131 Technician, engineering/electrical**

**31132 Engineering assistant, electrical (high voltage system)**

**31133 Technician, engineering/electrical (electric power transmission)**

**31134 Estimator, engineering/electrical**

**31135 Sub technical assistant, electrical J29**

**31136 Technician, electrical J17**

### **3114 ELECTRONICS ENGINEERING TECHNICIANS**

Electronics engineering technicians, normally under the direction and supervision of electronics engineers, perform technical tasks connected with electronic engineering research, as well as with the design, manufacture, assembly, construction, operation, maintenance and repair of electronic equipment and electromechanical systems.

#### **Tasks include:**

- assisting in research and development works concerning electronic equipment;
- assisting in design and layout of electronic circuitry;
- preparing detailed estimates of quantities and costs of materials and labour required for the manufacture and installation of electronic equipment;
- assisting with technical supervision of the manufacture, utilisation, maintenance and repair of electronic equipment systems to ensure satisfactory performance and compliance with specifications and regulations;
- applying technical knowledge of electronic and telecommunications engineering principles and practices in order to direct, locate and resolve defects or faults;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

- 31141** *Technician, engineering/electronics*
- 31142** *Estimator, engineering/electronics*
- 31143** *Sub technical assistant, electronics J29*
- 31144** *Technician, electronics J17*

#### **3115 MECHANICAL ENGINEERING TECHNICIANS**

Mechanical engineering technicians perform technical tasks, normally under the direction and supervision of mechanical engineers, contributory to design, development, manufacture, construction, installation, maintenance and repair of mechanically functioning plant and equipment.

**Tasks include:**

- assisting in research and development works concerning machine tools, engines vehicles, aeroplanes, heating and ventilating and refrigerating installations and other mechanically functioning plant and equipment;
- designing and preparing layouts of machines and mechanical installations;
- preparing detailed estimates of quantities and costs of materials and labour required for manufacture and installation;
- assisting with technical supervision of manufacture, utilisation, maintenance and repair of mechanical plant and engines;
- applying technical knowledge of machinery and mechanical engineering principles and practices in order to identify and solve problems arising in the course of their work;
- assisting in the development and monitoring the implementation of safety standards and procedures for marine survey work in relation to ships' hulls, equipment and cargoes;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

- 31151** *Technician, engineering/mechanical*
- 31152** *Sub technical assistant, mechanical J29*
- 31153** *Technician, mechanical J17*
- 31154** *Dockmaster, dry dock*
- 31155** *Engineering assistant, marine*
- 31156** *Technician, engineering/mechanical (ship construction)*
- 31157** *Sub technical assistant, aircraft A29*
- 31158** *Technician, hydraulic hose*

#### **3116 CHEMICAL ENGINEERING TECHNICIANS**

Chemical engineering technicians perform technical tasks, normally under the direction and supervision of chemical engineers, contributory to the development of processes, construction, operation, maintenance and repair of chemical plant.

**Tasks include:**

- assisting in research to develop new or improved processes and manufacturing plant for the chemical or physical transformation of substances on a commercial scale;
- designing and preparing layouts of chemical plant according to the specifications given;
- preparing detailed estimates of quantities and costs of materials and labour required for manufacture and installation of plant;
- providing technical supervision of the construction, installation, operation, maintenance and repair of chemical plant to ensure satisfactory performance and compliance with specifications and regulations;
- applying technical knowledge of chemical engineering principles and practices in order to identify and solve problems arising in the course of their work;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

- 31161 Technician, engineering/chemical**
- 31162 Engineering assistant, chemical (petroleum)**
- 31163 Core analyst (petroleum and natural gas)**
- 31164 Estimator, engineering/chemical**
- 31165 Assistant officer, geochemist C27**

### **3117 MINING AND METALLURGICAL TECHNICIANS**

Mining and metallurgical technicians perform technical tasks, normally under the direction and supervision of mining and metallurgical engineers, contributory to the improvement, development of and control of processes for the extraction of metallic and non-metallic minerals from the earth for further processing.

**Tasks include:**

- assisting in research and development works concerning properties of metal and new alloys, or of improved methods for the extraction of solid minerals, oil and natural gas, and for transporting and storing oil and natural gas, or testing prototypes;
- assisting in geological and topographical surveys, and in the design and layout of oil, natural gas and mineral ore extraction and transport systems, and processing and refining plant for minerals and metals;
- preparing estimates of quantities and costs of materials and labour required for mineral, oil and natural gas exploration, extraction and transport projects and plant, and for processing and refining minerals;
- assisting in technical supervision of the construction, installation, operation, maintenance and repair of mineral ore, oil and natural gas exploration, extraction, transport and storage installations and mineral processing plant to ensure satisfactory performance and compliance with specifications and regulations;
- applying knowledge of mining, of oil and natural gas extraction, transport and storage, and of metallurgical principles and practices in order to identify and solve problems arising in the course of their work;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

- 31171 Laboratory assistant, metallurgy**
- 31172 Metallurgy assistant, physics**

- 31173 Technician, engineering/mining**
- 31174 Technician, petroleum and natural gas extraction**
- 31175 Assistant officer, mining C27**
- 31176 Sub assistant, mining C17**

### **3118 DRAUGHTSPERSONS**

Draughtspersons prepare technical drawings, maps and illustrations from sketches, measurements and other data, and copy drawings and paintings onto printing plates.

#### **Tasks include:**

- preparing architects and designers working drawings from sketches and specifications for the manufacture and installation of machinery and equipment or for the construction of buildings, dams, bridges, roads and other civil engineering projects;
- operating computer-assisted drawing equipment to create, modify and generate hard-copy and digital representations of working drawings;
- operating digitizing table or similar equipment to transfer hard copy representation of working drawings, maps and other curves to digital form;
- capturing topographical data in analogue or digital form using stereo instruments to prepare and revise topographical, hydrographic, utility and other thematic maps;
- preparing and revising illustrations for reference works, brochures and technical manuals dealing with the assembly, installation, operation, maintenance and repair of machinery and other equipment;
- copying drawings and paintings onto stone or metal plates for printing;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

#### **Examples of the occupations classified here:**

- 31181 Draughtsperson**
- 31182 Draughtsperson J17**
- 31183 Technician, landscape J17**
- 31184 Assistant architect, landscape J29**
- 31185 Assistant officer, architecture J29**
- 31186 Assistant officer, land planning G27**
- 31187 Assistant officer, urban and rural planning J29**
- 31188 Technician, urban and rural planning J17**

### **3119 PHYSICAL AND ENGINEERING SCIENCE TECHNICIANS NOT ELSEWHERE CLASSIFIED**

This unit group covers physical and engineering science technicians not elsewhere classified in Minor Group 311: Physical and Engineering Science Technicians. For instance here should be classified those who assist engineers with production engineering matters, time and motion studies, or preparation of cost estimates and bills of quantities including mineral and geosciences activity.

#### **Tasks include:**

- collecting data and providing technical assistance regarding planning and production methods, efficient, safe and economic utilisation of personnel, material and equipment, methods of work and sequence of operations and supervision of

their implementation, time and motion aspects of work organization and efficient layout of plant or establishment;

- identifying potential hazards and introducing safety procedures and devices;
- collecting data and providing technical assistance regarding the preparation and monitoring of cost estimates and bills of quantities for construction and architectural projects;
- activating industrial robots, programming or reprogramming them for specific functions, controlling their operation and providing basic maintenance and on-the-job adjustments;
- translating architects working drawings from sketches and specifications for the manufacture and installation of machinery and equipment or for the construction of buildings, dams, bridges, roads and other civil engineering projects, to be worked out by draughtspersons;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**31191 Technician, CAD/CAM**

**31192 Assistant surveyor, quantity J29**

**31193 Sub technical assistant quantity, surveyor J29**

**31194 Sub assistant, geology C17**

**31195 Sub technical assistant, surveyor J29**

**31196 Sub technical assistant surveyor, building J29**

**31197 Technician, quantity surveyor J17**

**31198 Technician, surveyor J17**

**312 MINING, MANUFACTURING AND CONSTRUCTION SUPERVISORS**

Mining, manufacturing and construction supervisors engage in mining, manufacturing, and construction activities. Partly they are managing the production on a routine basis, without making strategic decisions; partly they are assisting the operators in case of emergencies and partly undertaking technical work. In this category only those occupations should not be coded as managers, since there is still at least one level between them and management, and that cannot be coded as operators, since at least one more level is between them and the operators.

**3121 MINING SUPERVISORS**

Mining supervisors conduct the production activities of workers engaged in various occupations in mining or quarrying on a routine basis without making strategic decisions. They ensure that directives of the management are carried out and deal with personnel and financial matters.

**Tasks include:**

- attending daily muster to verify attendance records and issues work instructions;
- receiving, recording and dispatching produce;
- inspecting, maintaining and keeping such records as required by management, relevant to his area of responsibility and ensuring that all works are performed according to instructions;
- making requisitions, issuing and recording materials necessary for operations;
- resolving workers' grievances;
- preparing monthly payroll or providing final figures for computing payroll and assisting in payment of advances and wages for workers;

- planning and estimating cost of production and submitting periodic progress reports;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**31211 Supervisor, mining**

### **3122 MANUFACTURING SUPERVISORS**

Manufacturing supervisor conduct the production activities of workers engaged in various occupations such as sawmill, food, maintenance and boiler on a routine basis without making strategic decisions. They ensure that directives of the management are carried out and deal with personnel and financial matters.

**Tasks include:**

- attending daily muster to verify attendance records and issues work instructions;
- receiving, recording and dispatching produce;
- inspecting, maintaining and keeping such records as required by management relevant to his area of responsibility and ensuring that all works are performed according to instruction;
- making requisitions, issuing and recording materials necessary for operations;
- resolving workers' grievances;
- preparing monthly payroll or providing final figures for computing payroll and assisting in payment of advances and wages for workers;
- planning and estimating cost of production and submitting periodic progress reports;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**31221 Supervisor, compounding**

**31222 Supervisor, cutter**

**31223 Technician, maintenance**

**31224 Technician, warehouse**

**31225 Supervisor, sawmill**

**31226 Supervisor, chief hookman**

**31227 Supervisor, boiler**

**31228 Technician, quality control**

### **3123 CONSTRUCTION SUPERVISORS**

Construction supervisors, coordinate, supervise and schedule the activities of workers engaged in the construction and repair of buildings and structures.

**Tasks include:**

- reading specifications to determine construction requirements and planning procedures;
- organizing and coordinating the material and human resources required to complete jobs;
- examining and inspecting work progress;
- examining equipment and construction sites to ensure that health and safety requirements are met;

- supervising construction sites and coordinating work with other construction projects;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**31231 Supervisor, operation**

**31232 Supervisor, construction**

### **3129 OTHER SUPERVISOR NOT ELSEWHERE CLASSIFIED**

This unit group covers supervisor not elsewhere classified in Minor Group 312: Mining, Manufacturing and Construction Supervisor. For instance here should be classified those who supervise with general work, logistic, facility and environmental matters.

**Tasks include:**

- attending daily muster to verify attendance records and issues work instructions;
- receiving, recording and dispatching produce;
- inspecting, maintaining and keeping such records as required by management related to his area of responsibility and ensuring that all works are performed according to instructions;
- making requisitions, issuing and recording materials necessary for operations;
- resolving workers' grievances;
- preparing monthly payroll or providing final figures for computing payroll and assisting in payment of advances and wages for workers;
- planning and estimating cost of production and submitting periodic progress reports;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**31291 Supervisor, environmental**

**31292 Supervisor, facilities**

**31293 Supervisor, general**

**31294 Supervisor, logistic**

### **313 PROCESS CONTROL TECHNICIANS**

Process control technicians perform task associated with power production, water treatment, chemical processing, food processing and petroleum operations. This position will work closely with Process and Project Engineers and will assist in executing capital projects as well as developing methods and procedures to control or modify the manufacturing process to improve productivity, quality, and safety.

### **3131 POWER PRODUCTION PLANT OPERATORS**

Power production plant operators operate and monitor machinery and equipment which produce electric or other power and control its distribution.

**Tasks include:**

- operating and monitoring coal, oil or natural gas-fired steam-power generating plant;

- operating and monitoring hydroelectric-power generating stations;
- controlling power output and distribution of electricity from power stations;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

- 31311** *Load dispatcher, electric power*
- 31312** *Operator, electrical switchboard*
- 31313** *Operator, hydroelectric station*
- 31314** *Operator, power generating plant*
- 31315** *Operator, turbine*

### **3132 INCINERATOR AND WATER TREATMENT PLANT OPERATORS**

Incinerator and water treatment plant operators monitor various types of plant such as incinerators, water treatment plant, sewage plant, air and gas compressors, pumping stations, and refrigeration or heating and ventilation systems.

**Tasks include:**

- operating and monitoring incinerator machinery and equipment which burn garbage or other waste materials;
- operating and monitoring machinery and equipment which purify and clarify water for human consumption or use and later disposal into natural water systems;
- operating and monitoring machinery and equipment which regulate the treatment and disposal of sewage and wastes;
- operating and monitoring air and gas compressors;
- operating and monitoring pumping stations for transferring liquids, gases, semi-liquids and powdered substances from one location to another;
- operating and monitoring refrigeration systems for cool or cold storage, or industrial processes;
- operating and monitoring heating and ventilation systems;
- operating equipment to make ice-blocks;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

- 31321** *Operator, stationary engine*
- 31322** *Operator, compressor*
- 31323** *Operator, incinerator plant*
- 31324** *Operator, pumping station*
- 31325** *Operator, heating and ventilation equipment*
- 31326** *Operator, refrigeration system*
- 31327** *Operator, plant R3*
- 31328** *Operator, water treatment plant*

### **3133 CHEMICAL PROCESSING PLANT CONTROLLERS**

Chemical processing plant controllers operate and monitor chemical plants and adjust and maintain, processing units and equipment which distil, filter, separate, heat or refine chemicals.



**Tasks include:**

- operating electronic or computerized control panel from a central control room to monitor and optimize physical and chemical processes for several processing units;
- adjusting equipment, valves, pumps, controls and process equipment;
- controlling the preparation, measuring and feeding of raw materials and processing agents such as catalysts and filtering media into plant;
- controlling process start-up and shut-down, troubleshooting and monitoring outside process equipment;
- verifying equipment for malfunctions, carrying out routine operating tests and arranging for maintenance;
- analyzing sample products, performing tests, recording data and writing production logs;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**31331 Supervisor, plant**

**3134 PETROLEUM AND NATURAL GAS REFINING PLANT OPERATORS**

Petroleum and natural gas refining plant operators operate and monitor plant which refines, distills and treats petroleum, petroleum-based products and by-products, or natural gas.

**Tasks include:**

- operating and monitoring plant which removes sulphur from petroleum and petroleum-based products and byproducts;
- operating and monitoring equipment which processes carbide and water into acetylene gas;
- operating and monitoring equipment to liquefy and compress chlorine gas;
- operating and monitoring equipment to obtain oxygen and nitrogen from air to industrial and therapeutic use;
- operating and monitoring plant in which pressure distillate and non-condensable gases are treated;
- operating filter presses to separate oil of paraffin distillate from paraffin wax;
- operating and monitoring pumps which circulate petroleum products or water and chemical solutions through refinery;
- operating and monitoring control panels in petroleum refinery;
- operating and monitoring distillation apparatus which distil or refine petroleum products;
- operating and monitoring machines which blend petrol with chemicals and other additives;
- operating and monitoring machines which refine or otherwise treat natural gas;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**31341 Pumpman (petroleum refining)**

**31342 Stillman (petroleum refining)**

**31343 Controlman (petroleum refining)**

**31344 Desulphuriser operator, petroleum refining**

**31345 Operator, paraffin plant**

**31346 Blender (petroleum refining)**

**31347 Operator, treater/petroleum and natural gas refining**

**31348 Operator, pumping-station/petroleum and other natural gas**

**3135 METAL PRODUCTION PROCESS CONTROLLERS**

Metal production process controllers conduct and monitor activities of workers engaged in rolling mills to roll metal, or furnaces to melt or reheat metal, or machines to cast metal.

**Tasks include:**

- operating and monitoring furnaces to melt ferrous and non-ferrous metals for casting;
- operating and monitoring furnaces to reheat stock metal forms prior to forging, power-pressing, rolling and further processing;
- operating and monitoring rolling mills to shape hot or cold steel into shapes for further processing, or into final shapes;
- operating and monitoring rolling mills to reduce or form hot or cold non-ferrous metal to specified shapes, such as plate, sheet or foil;
- operating and monitoring rolls to form seamless tubes and pipes from billets which have been pierced longitudinally;
- pouring molten metal into moulds and operating and monitoring casting machines;
- operating continuous mills in which hot steel slabs are passed through a series of rolls (stands) to produce finished plates or sheets in one continuous operation;
- operating rolling mills to reduce or form hot or cold non-ferrous metal into plate, sheet, foil, wire or rod of specified dimensions;
- manipulating controls of rolling mills according to signals from rollers;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**31351 Manipulator, rolling-mill, metal**

**3139 PROCESS CONTROL TECHNICIANS NOT ELSEWHERE CLASSIFIED**

This unit group covers process control technicians outside the scope of Minor Group 313: Process Control Technicians.

**Tasks include:**

- attending daily muster to verify attendance records and issues work instructions;
- inspecting, maintaining and keeping such records as required by management, relevant to his area of responsibility and ensuring that all works are performed according to instructions;
- making requisitions, issuing and recording materials necessary for operations;
- planning and estimating cost of production and submitting periodic progress reports;
- performing related task;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**31391 Assistant officer, food technology C27**

**31392 Assistant officer, food preparer C27**

**31393 Technician, food processing**

## **314    LIFE SCIENCE TECHNICIANS AND RELATED ASSOCIATE PROFESSIONALS**

Life science technicians and related associate professionals perform a variety of technical tasks to support life science professionals with their research, development, management, conservation and protection work, in areas such as biology, botany, zoology, biotechnology and biochemistry, and in agriculture, fisheries and forestry.

### **3141    LIFE SCIENCE TECHNICIANS (EXCLUDING MEDICAL)**

Life science technicians (except medical) provide technical support to life science professionals undertaking research, analysis and testing of living organisms, and development and application of products and processes resulting from research in areas such as agriculture, natural resources management, environmental protection, plant and animal biology, microbiology, and cell and molecular biology.

#### **Tasks include:**

- assisting in designing, setting up and conducting experiments;
- setting up, calibrating, operating and maintaining laboratory instruments and equipment;
- collecting and preparing specimens and samples, chemical solutions and slides and growing cultures for use in experiments;
- performing routine field and laboratory tests;
- monitoring experiments to ensure adherence to correct laboratory quality control procedures and health and safety guidelines;
- making observations of tests, and analysing, calculating, recording and reporting test results using appropriate scientific methods;
- preserving, classifying and cataloguing specimens and samples;
- keeping detailed logs of work performed;
- using computers to develop models and analyse data;
- using complex and high-powered equipment to perform work;
- participating in the research, development and manufacture of products and processes;
- ordering and stocking laboratory supplies;
- maintaining relevant databases;
- supervising, scheduling and monitoring task of other workers.

#### **Examples of the occupations classified here:**

- 31411    Technician, biological**
- 31412    Technician, entomological**
- 31413    Technician, botanical**
- 31414    Technician, artificial breeding**
- 31415    Technician, zoological**
- 31416    Taxidermist**
- 31417    Assistant officer, wild life G27**

### **3142    AGRICULTURAL TECHNICIANS**

Agricultural technicians perform technical tasks related with research in agronomy, as well as with the development of agricultural applications of research results.

**Tasks include:**

- preparing and collecting specimens, materials and equipment for experiments, tests and analyses;
- organizing maintenance and repair of farm machinery and farm equipment;
- responsible for product quality;
- assisting with and performing experiments, tests, analyses and recording observation results and other relevant information using laboratory instruments and equipment;
- analyzing samples of seeds for quality, purity and germination rating;
- collecting data and estimating quantities and costs of materials and labour required for projects;
- organizing maintenance and repair of research equipment;
- applying knowledge of scientific principles and practices in order to identify and solve problems arising in the course of their work;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**31421 Technician, agronomy**

**31422 Technician, crop research**

**31423 Technician, soil science**

**31424 Technician, floriculture**

**31425 Conductor, field and factory/oil palm plantation**

**31426 Assistant officer, agricultural G27**

**3143 FORESTRY TECHNICIANS**

Forestry technicians perform technical tasks related with research in forestry, as well as with the development of forestry applications of research results.

**Tasks include:**

- preparing and collecting specimens, materials and equipment for experiments, tests and analyses;
- assisting with and performing experiments, tests, analyses and recording observation results and other relevant information using laboratory instruments and equipment;
- analyzing samples of seeds for quality, purity and germination rating;
- collecting data and estimating quantities and costs of materials and labour required for projects;
- organizing maintenance and repair of research equipment;
- applying knowledge of scientific principles and practices in order to identify and solve problems arising in the course of their work;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**31431 Technician, arboriculture**

**31432 Assistant conservation, forestry G27**

### **3144 FISHERY TECHNICIANS**

Fishery technicians perform technical tasks related with research in fisheries, as well as with the development of fishery applications of research results.

#### **Tasks include:**

- preparing and collecting specimens, materials and equipment for experiments, tests and analyses;
- assisting with and performing experiments, tests, analyses and recording observation results and other relevant information using laboratory instruments and equipment;
- analyzing samples of fish for quality;
- collecting data and estimating quantities and costs of materials and labour required for projects;
- organizing maintenance and repair of research equipment;
- applying knowledge of scientific principles and practices in order to identify and solve problems arising in the course of their work;
- assisting in preparing and loading jobs in addition to cleaning, inspecting, and refurbishing equipment;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

#### **Examples of the occupations classified here:**

**31441 Assistant officer, fishery G27**

**31442 Technician, hatchery/prawn**

### **315 SHIP, AIRCRAFT AND TRAIN TECHNICIANS**

Ship, aircraft and train technicians supervise land, air and waterborne transport service operation.

### **3151 AIR TRAFFIC TECHNICIANS**

Air traffic technicians repair and overhaul aircraft, examining, testing and servicing aircraft engines and other mechanical equipment of aircrafts at an airport.

#### **Tasks include:**

- servicing, repairing and overhauls aircraft engines, such as jet, turbo-prop and piston engines and other mechanical equipment of aircraft;
- testing engine, using testing equipment;
- examining engine for cracked cylinders, oil leaks and other defects;
- consulting manufacturers manuals and airlines maintenance manual for specifications and feasibility of repair or replaces defective parts;
- repairing, assembling and replacing parts;
- removing engine from aircraft for overhaul and installs replacement;
- inspecting, servicing and repairing pneumatic and hydraulic systems;
- performing other duties to service aircraft mechanisms, including flushing crank-case, cleaning screens, greasing moving parts and checking brakes;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**31511 Technician, air traffic safety**

**31512 Assistant officer, air traffic control A29**

### **3152 SHIP/MARINE TECHNICIANS**

Ship/marine technicians repair or service marine engine in workshops or on board vessels.

**Tasks include:**

- supervising or repairing and servicing steam engine, petrol, diesel and marine engine;
- examining engine to locate defects using various tools and instrument;
- dismantling engine partially or completely to remove or adjust faulty worn out parts;
- starting engine and observes performance noting different meter readings such as temperature, fuel level and oil pressure, and makes necessary adjustments for optimum performance;
- checking, adjusting and lubricating engine periodically to keep in good working order;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**31521 Berthing master**

**31522 Skipper, yacht**

**31523 Traffic supervisor (ships cargo)**

**31524 Assistant officer, marine A29**

**31525 Technician, engine (boat)**

### **3153 TRAIN/LOCOMOTIVE TECHNICIANS**

Train/locomotive technicians service and repair locomotive engine.

**Tasks include:**

- servicing or repairing petrol, diesel, and other types of locomotive engines;
- examining engine to locate defects using various tools and instrument;
- dismantling engine partially or completely to remove or adjust faulty worn out parts;
- checking, adjust and lubricates engine periodically to keep in good working order;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**31531 Supervisor, railway services**

**31532 Supervisor, LRT railway**

**31533 Inspector, railway**

### **3159 TRANSPORT TECHNICIANS NOT ELSEWHERE CLASSIFIED**

This unit group covers transport technicians outside the scope of Minor Group 315: Ship, Aircraft and Train Technicians.

**Tasks include:**

- supervising and coordinating one or more of the service activities of the traffic department;
- directing and supervising activities of bus conductors and drivers within a limited geographical area;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**31591 Station master**

**31592 Supervisor, road transport service**

**316 SCIENCE NUCLEAR ASSOCIATE PROFESSIONALS**

Science nuclear associate professionals assist scientist in both laboratory and production activities by performing technical tasks involving nuclear physics, primarily in operation, maintenance, production and quality control support activities.

**3160 NUCLEAR RESEARCH AND DEVELOPMENT ASSOCIATE PROFESSIONALS**

Nuclear research and development associate professionals collect and test samples to monitor results of nuclear experiments and contamination of humans, facilities and environment.

**Tasks include:**

- assisting scientist to conduct develop new concepts, technologies and strategies to improve nuclear technology;
- operating equipment used for the release, control and utilization of nuclear energy to assist scientists in laboratory and production activities;
- preparing and delivering written and verbal proposals and presentations;
- designing, coordinating and control technical aspects of projects;
- analyzing test results;
- writing project results reports and participate in technical societies through publication of technical papers and society meetings;
- washing, cleaning and dries apparatus and equipment after use and maintain them in proper working conditions;
- keeping required chemicals and solutions readily available and replenishes stock from stores;
- maintaining laboratory in clean and tidy condition;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**31601 Assistant officer, science C27**

**32 HEALTH ASSOCIATE PROFESSIONALS**

Health associate professionals perform technical tasks related to research and the practical application of concepts, principles and operational methods in the fields of medicine, veterinary medicine, dentistry, pharmacy, sanitation, nursing, midwifery, traditional medicine and faith healing care and related disciplines.

**This sub-major group consists of the following minor groups:**

- 321 MEDICAL AND PHARMACEUTICAL TECHNICIANS
- 322 NURSING AND MIDWIFERY ASSOCIATE PROFESSIONALS
- 323 TRADITIONAL AND COMPLEMENTARY MEDICINE ASSOCIATE PROFESSIONALS
- 324 VETERINARY TECHNICIANS AND ASSISTANTS
- 325 OTHER HEALTH ASSOCIATE PROFESSIONALS

### **321 MEDICAL AND PHARMACEUTICAL TECHNICIANS**

Medical and pharmaceutical technicians perform technical tasks usually under the direction and supervision of various physicians includes providing technical, medical and health services to assist physicians in diagnosing illness and giving treatment to patients; conducting routine laboratory; mixing to set formula or compounding pharmaceutical products according to set formula or instruction.

#### **3211 MEDICAL IMAGING AND THERAPEUTIC EQUIPMENT TECHNICIANS**

Medical imaging and therapeutic equipment technicians arrange and sets various instruments and apparatus in clinical laboratory.

#### **Tasks include:**

- operating radiographic equipment including x-ray photograph, perform radiological procedure using general x-ray equipment as well as MRI and CT scanning machines whether carried in wards, operation theaters and the casualty/accidents using mobile x-ray;
- preparing contrast media to be given to the patients whom involved in a special/screening radiology and manage patients during x-ray procedures were performed;
- monitoring and ensuring the quality of radiology services retain efficient and ensuring radiation protection procedures are implemented according to standard compliance;
- setting in position required apparatus and equipment and makes necessary electrical connections;
- maintaining laboratory in clean and tidy condition;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

#### **Examples of the occupations classified here:**

**32111 Technician, x-ray U29**

#### **3212 MEDICAL AND PATHOLOGY LABORATORY TECHNICIANS**

Medical and pathology laboratory technicians perform technical tasks, normally under the direction and supervision of medical pathologists, contributory to research scientific knowledge in the field of medical sciences to develop public health and other practical applications of research findings.

#### **Tasks include:**

- preparing and collecting specimens, materials and equipment and growing cultures of micro organism for tests, analyses and experiments;



- preparing and collecting specimens of body fluids and tissues of patients and evaluates results to determine nature, stage of development and possible sources of infection;
- assisting with and performing experiments, tests, analyses and recording observation results and other relevant information using laboratory instruments and equipment;
- collecting data and estimating quantities and costs of materials and labour required for projects;
- organizing maintenance and repair of research equipment;
- applying knowledge of scientific principles and practices in order to identify and solve problems arising in the course of their work;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

- 32121 Technician, anatomy**
- 32122 Technician, medical science**
- 32123 Assistant, parasitological**
- 32124 Technologist, medical laboratory U29**
- 32125 Technician, medical U19**
- 32126 Assistant officer, medical U29**

### **3213 PHARMACEUTICAL TECHNICIANS AND ASSISTANTS**

Pharmaceutical technicians and assistants dispense and prepare medicaments, lotions and mixtures under the guidance of pharmacists, in pharmacies, hospitals and dispensaries.

**Tasks include:**

- preparing medicaments and other pharmaceutical compounds under the guidance of pharmacists;
- dispensing medicines and drugs and giving written and oral instructions on their use, as prescribed by medical doctors, veterinarians or other authorized workers;
- cleaning and preparing equipment and containers used to prepare and dispense medicine and pharmaceutical compounds;
- conducting routine laboratory tests to determine characteristics of pharmaceutical products;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

- 32131 Assistant, pharmaceutical**
- 32132 Laboratory assistant, pharmaceutical**
- 32133 Sub assistant, pharmacist U29**

### **3214 MEDICAL AND DENTAL PROSTHETIC TECHNICIANS**

Medical and dental prosthetic technicians makes full or partial dentures, inlays, bridges and crowns of metal vulcanite or other composition plates from wax or plaster impression taken by dental surgeon.

**Tasks include:**

- making special impression trays as designated by dental surgeon and prepares plaster casts of upper and lower jaws from wax impression;
- shaping metal vulcanite or plastic plates for dentures and sets artificial teeth in plates;
- processing dentures in acrylic resin or metal and bridges according to impression taken;
- forming porcelain teeth and crowns and repairs or makes additions on existing dentures as directed;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**32141 *Technologist, dental U29***

**3215 ORTHOTIC AND PROSTHETIC TECHNICIANS**

Orthotic and prosthetic technician assist the disabled by fabricating the orthopedic and artificial limbs (protheses) necessary for their rehabilitation.

**Tasks include:**

- ensuring devices fit well and that patients have an acceptable range of movement;
- crafting prosthetic limbs from softer plastics;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**32151 *Osteopath, lay***

**32152 *Technician, orthopedic***

**322 NURSING AND MIDWIFERY ASSOCIATE PROFESSIONALS**

Nursing and midwifery associate professionals (except dental) apply medical concepts and principles relating to the delivery of babies and to nursing of the ill, injured or disabled, and of mothers and their new-born babies.

**3221 NURSING ASSOCIATE PROFESSIONALS (EXCEPT DENTAL)**

Nursing associate professionals (except dental) provide nursing care for the sick, injured and others in need of such care, and in the absence of medical doctors, deal with emergencies.

**Tasks include:**

- providing nursing care, treatment and advice to the ill, injured, disabled and others in need of such cares;
- assisting medical doctors in their tasks, administering medicine and drugs, applying surgical dressings and giving other forms of treatment under instructions from physicians;
- assisting in giving first-aid treatment in emergencies;

- assisting in preparations for physical and psychiatric treatment of mentally ill patients;
- assisting in preparations for social adjustment, development and education of mentally or physically handicapped patients;
- providing nursing care to patients in their homes;
- providing nursing services, care and advice within a community or at a workplace;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**32211 Nurse**

**32212 Nurse, orthopedic**

**32213 Nurse, industrial**

**32214 Nurse U29**

**3222 MIDWIFERY ASSOCIATE PROFESSIONALS**

Midwifery associate professionals deliver or assist doctors in the delivery of babies, provide ante-natal and post-natal care and advise parents in baby care.

**Tasks include:**

- advising expectant mothers on appropriate diet, exercises and behavior to ease pregnancy and childbirth, and noting their general health and progress;
- delivering babies, or, more often, assisting doctors in deliveries;
- attending mothers in the post-natal period to supervise their recovery, to check on babies' progress and to advise parents in baby care;
- conducting health education classes and seminars to promote the health of mothers and infants;
- advising on and administering birth control methods;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**32221 Midwife**

**32222 Nurse, community U19**

**323 TRADITIONAL AND COMPLEMENTARY MEDICINE ASSOCIATE PROFESSIONALS**

Traditional and complementary medicine associate professionals advise on methods to preserve or improve health and treat human mental and physical illness by traditional techniques used in the community or by power of faith and spiritual advice.

**3230 TRADITIONAL AND COMPLEMENTARY MEDICINE ASSOCIATE PROFESSIONALS**

Traditional and complementary medicine associate professionals treat human mental and physical sickness by herbs, medicinal plants and other traditional techniques used in the community and advise on methods to preserve or improve health and well-being of a person.

**Tasks include:**

- examining patients, making diagnoses and treating sickness and injuries using herbs, medicinal plants and other traditional techniques used in the community;
- advising community and individuals on proper diet and behavior to preserve or improve health and well-being;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**32301** *Practitioner, Malay traditional medicine*  
**32302** *Practitioner, Chinese traditional medicine*  
**32303** *Practitioner, Indian traditional medicine (ayurvedic)*  
**32304** *Practitioner, Indian traditional medicine (homeopathic)*  
**32305** *Acupuncturist*  
**32306** *Homeopath*  
**32307** *Village healer*  
**32308** *Faith healers*

**324     VETERINARY TECHNICIANS AND ASSISTANTS**

Veterinary technicians and assistants carry out advisory, diagnostic, preventive and curative veterinary tasks, more limited in scope and complexity than those carried out by veterinarians, and they assist veterinarians by preparing materials and getting animals ready for examination and treatment.

**3240     VETERINARY TECHNICIANS AND ASSISTANTS**

Veterinary assistants carry out advisory, diagnostic, preventive and curative veterinary tasks, more limited in scope and complexity than those carried out by veterinarians, and they assist veterinarians by preparing materials and getting animals ready for examination and treatment.

**Tasks include:**

- advising communities and individuals on the treatment of animals and their diseases and injuries;
- conducting examinations of animals to make diagnoses or refer more difficult cases to veterinarians when needed;
- treating ill or injured animals, especially for common diseases and disorders;
- preparing and taking care of instruments and materials used in the treatment of animals;
- carrying out technical tasks connected with artificial insemination of animals;
- getting animals ready for examination or treatment and holding them during treatment, when necessary;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**32401** *Assistant, veterinary*  
**32402** *Assistant, veterinary/artificial insemination*  
**32403** *Vaccinator, veterinary*  
**32404** *Assistant officer, veterinary G27*

**32405 Sub assistant, veterinary G17**

**325 OTHER HEALTH ASSOCIATE PROFESSIONALS**

This minor group covers other health associate professionals engaged in health activities outside the scope of those classified in minor group 321-324.

**3251 DENTAL ASSISTANTS AND THERAPISTS**

Dental assistants and therapists carry out advisory, diagnostic, preventive and curative dental tasks, more limited in scope and complexity than those carried out by dentists, and they assist dentists by preparing and taking care of instruments and other equipment, preparing materials and helping patients prepare for examination and treatment.

**Tasks include:**

- advising communities and individuals on dental hygiene, diet and other preventive dental measures;
- conducting dental examinations to make diagnoses and refer more difficult cases to dentists when needed;
- cleaning teeth, preparing cavities and placing fillings;
- extracting teeth under anesthetics;
- preparing and taking care of dental instruments and equipment;
- preparing dental materials;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**32511 Nurse, dental**

**32512 Assistant, dental**

**32513 Nurse, dental U29**

**3252 MEDICAL RECORDS AND HEALTH INFORMATION TECHNICIANS**

Medical records and health information technicians organize and evaluate the results of examinations, reports of x-rays and laboratory tests, diagnoses, and treatment plans for completeness and accuracy.

**Tasks include:**

- ensuring that patients initial medical charts are complete, that all forms are completed and properly identified and authenticated, and that all necessary information is in the computer;
- using computer programs to tabulate and analyze data to improve patient care, enhance control cost, provide documentation for use in legal actions, or use in research studies;
- supervising health information clerks and transcriptionists;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**32521 Technician, medical record**

**3253 COMMUNITY HEALTH WORKERS**

Community health workers carry out advisory, diagnostic, preventive and curative medical tasks, more limited in scope and complexity than those carried out by medical doctors. They work independently or with the guidance and supervision of medical doctors in institutions or in the field as part of the public health service, and may work mainly with diseases and disorders common in their region, or mainly apply specific types of treatment.

**Tasks include:**

- advising communities and individuals on hygiene, diet and other preventive medical measures;
- conducting medical examinations to diagnose illness and/or refer more difficult cases to medical doctors if and when necessary;
- prescribing medicine and giving treatment for diagnosed illnesses, disorders or injuries;
- performing simple surgical operations;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**32531 Laboratory assistant, medical**

**32532 Instructor, clinical**

**32533 Sub assistant, medical U29**

**3254 DISPENSING OPTICIANS**

Dispensing opticians advise patients on various types of lenses and spectacle frames, including advice on style, weight and colour. They also advise patients on how to wear and care for their spectacles and contact lenses.

**Tasks include:**

- interpreting optical prescriptions written by optometrists or ophthalmologists;
- giving advice to patients on lens type, frames and styling;
- fitting contact lenses and giving advice on their care and use;
- taking frame and facial measurements to ensure correct fit and positioning;
- advising patients on the use of low vision aids;
- advising patients when adjustments or repairs to spectacles are needed;
- selecting, managing and ordering a range of optical products;
- ordering lenses from prescription houses;
- checking lenses on delivery to ensure that they meet the required specifications;
- undertaking continuous education and training;
- arranging and maintaining shop displays;
- liaising with sales representatives from vision care product suppliers;
- performing related tasks.

**Examples of the occupations classified here:**

**32541 Optician, contact-lens dispensing**

### **3255 PHYSIOTHERAPY TECHNICIANS AND ASSISTANTS**

Physiotherapy technicians and assistants provide special medical therapeutic services to rehabilitate injured and mentally and physically disabled persons.

#### **Tasks include:**

- advising communities and individuals on correct body postures for work or otherwise, to avoid injuries and strain and to strengthen muscles;
- conducting examinations to make diagnoses of disorders of bones, muscles and parts of the circulatory or the nervous system to determine proper treatment or refer to medical doctors, if necessary;
- treating disorders of bones, muscles and parts of the circulatory or the nervous system by manipulative methods, and the use of ultrasound, heating, laser or similar techniques;
- massaging client to improve blood circulation, soothe or stimulate nerves, facilitate elimination of waste matter, stretch contracted tendons and produce other therapeutic effects;
- applying physiotherapy and related techniques as part of the treatment of the physically or mentally disabled persons;
- prescribing exercises for rehabilitation and/or prevention;
- participating in planned medically oriented vocational, educational or recreational activities designed to rehabilitate physically and mentally disabled persons;
- performing related tasks.

#### **Examples of the occupations classified here:**

**32551    *Electrotherapist***

**32552    *Physiotherapist U29***

### **3256 MEDICAL ASSISTANTS**

Medical assistants carry out advisory, diagnostic, preventive and curative medical tasks, more limited in scope and complexity than those carried out by medical doctors. They work independently or with the guidance and supervision of medical doctors in institutions or in the field as part of the public health service, and may work mainly with diseases and disorders common in their region, or mainly apply specific types of treatment.

#### **Tasks include:**

- advising communities and individuals on hygiene, diet and other preventive medical measures;
- conducting medical examinations to diagnose illness and/or refer more difficult cases to medical doctors if and when necessary;
- prescribing medicine and giving treatment for diagnosed illnesses, disorders or injuries;
- performing simple surgical operations;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

#### **Examples of the occupations classified here:**

**32561    *Operator, radiograph equipment***

**32562    *Operator, electrocardiograph equipment***

**32563    *Operator, electroencephalograph equipment***

- 32564** *Operator, sonographic*  
**32565** *Operator, ultrasonographic*

### **3257 ENVIRONMENTAL AND OCCUPATIONAL HEALTH INSPECTORS AND ASSOCIATES**

Environmental and occupational health inspectors and associates on behalf of the government or industrial and other enterprises, inspect places of work on the grounds of occupational safety, and safety of production processes, or of goods produced, used or sold, and ensure compliance with health and environment protection rules and regulations as well as with the quality standards and specifications of manufacturers.

#### **Tasks include:**

- advising employers and workers representatives on the implementation of government and other rules and regulations concerning occupational safety and the working environment;
- inspecting places of work to ensure that the working environment, machinery and equipment conform to government and other rules and regulations;
- inspecting places of work and by interviews, observations and other means, obtaining facts about work practices and accidents to determine compliance with safety rules and regulations;
- inspecting areas of production, processing, transport, handling, storage and sale of products to ensure conformity with government and other rules and regulations;
- inspecting finished products or parts for conformity with manufacturers' specifications and standards;
- advising enterprises and the general public on the implementation of government and other rules and regulations concerning hygiene, sanitation, purity and grading of primary products, food, drugs, cosmetics and similar goods;
- advising producers, operators and those maintaining and repairing aircraft, cars and other vehicles on the implementation of government and other rules and regulations concerning technical standards and conditions of vehicles;
- inspecting vehicles and places authorized to maintain and repair vehicles to ensure that they conform to technical standards and government and other regulations;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

#### **Examples of the occupations classified here:**

- 32571** *Inspector, occupational health and safety*  
**32572** *Assistant officer, environmental health U29*  
**32573** *Inspector, public health*  
**32574** *Assistant officer, environmental control C27*  
**32575** *Inspector, safety/vehicles*  
**32576** *Assistant inspector, factory & machinery J29*  
**32577** *Examiner, motor/vehicles A17*

### **3258 AMBULANCE WORKERS**

Ambulance workers care for ill and vulnerable patients while transporting them to hospitals and other medical facilities, and their homes.



**Tasks include:**

- responding to emergency calls and help to give patients the urgent care they need, while ensuring they get to hospital quickly and safely;
- moving into other roles in the ambulance service, such as working in the control room;
- delivering appropriate care and treatment while preserving life, preventing a patient's condition from deteriorating and promoting recovery;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**32581    *Ambulance worker***

**3259    HEALTH ASSOCIATE PROFESSIONALS NOT ELSEWHERE CLASSIFIED**

This unit group covers modern health associate professionals (except nursing) not elsewhere classified in Minor Group 325: Modern Health Associate Professionals (except nursing).

**Tasks include:**

- determining the nature of illness or condition affecting the patient;
- treating a particular illness, by giving patient infinitesimal doses of the bodies which provoke similar illnesses;
- writing specifications for artificial limbs or other appliances and helping to fit them and explaining their use;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**32591    *Health associate professionals not elsewhere classified***

**33    BUSINESS AND ADMINISTRATIONS ASSOCIATE PROFESSIONALS**

Business and administration associate professionals perform mostly technical tasks connected with the practical application of knowledge relating to financial accounting and transaction matters, mathematical calculations, human resource development, selling and buying financial instruments, specialized secretarial tasks, and enforcing or applying relevant government rules. Also included are workers who provide business services such as customs clearance, conference planning, job placements, buying and selling real estate or bulk commodities, and serving as agents for performers such as athletes and artists.

**This sub-major group consists of the following minor group:**

**331    FINANCIAL AND MATHEMATICAL ASSOCIATE PROFESSIONALS**  
**332    SALES AND PURCHASING AGENTS AND BROKERS**  
**333    BUSINESS SERVICES AGENTS**  
**334    ADMINISTRATIVE AND SPECIALIZED SECRETARIES**  
**335    REGULATORY GOVERNMENT ASSOCIATE PROFESSIONALS**

**331    FINANCIAL AND MATHEMATICAL ASSOCIATE PROFESSIONALS**

Financial and mathematical associate professionals place a value on various items and

property, maintain records of financial transactions, analyze loan application information and render a decision, buy and sell financial instruments, and perform mathematical and related calculations.

### **3311 SECURITIES AND FINANCE DEALERS AND BROKERS**

Securities and finance dealers and brokers buy and sell securities, stocks, bonds and other financial instruments, and deal on the foreign exchange on spot or on futures markets, on behalf of their own company or for customers on a commission basis and recommend transactions to clients or senior management.

#### **Tasks include:**

- obtaining information about the financial circumstances of customers and companies in which investments may be made;
- analyzing market trends for securities, bonds, stocks and other financial instruments, including foreign exchange;
- informing prospective customers about market conditions and prospects;
- advising on and participating in the negotiation of terms for, and organization of, loans and placement of stocks and bonds in the financial market to raise capital for customers;
- recording and transmitting buy and sell orders for securities, stocks, bonds or other financial instruments and for foreign exchange for future or immediate delivery;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

#### **Examples of the occupations classified here:**

**33111** *Broker, securities*

**33112** *Broker, stock and shares*

**33113** *Broker, foreign exchange*

**33114** *Jobber / stock broker*

**33115** *Broker, investment*

### **3312 CREDIT AND LOANS OFFICERS**

Credit and loan officers analyze and evaluate financial information on applications for credit and loans and determine approval or disapproval of the client for the credit or loan or recommend to management approval or disapproval.

#### **Tasks include:**

- interviewing applicants for personal, mortgage, student and business loans;
- submitting credit and loan applications to management with recommendations for approval or rejection; or approve or reject applications within authorized limits ensuring that credit standards of the institution are respected;
- keeping records of payments, and preparing routine letters requesting payment for overdue accounts and forwarding these for legal action;
- completing credit and loan documentation;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

#### **Examples of the occupations classified here:**

**33121** *Officer, loan*

## **33122 Cost controller**

### **3313 ACCOUNTING ASSOCIATE PROFESSIONALS**

Accounting associate professionals maintain complete records of financial transactions of an undertaking and verify accuracy of documents and records relating to such transactions.

#### **Tasks include:**

- maintaining complete records of all financial transactions of an undertaking according to general accounting principles, with guidance from accountants;
- verifying accuracy of documents and records relating to payments, receipts and other financial transactions;
- preparing financial statements and reports for specified periods;
- performing accounting calculation using standard computer software packages;
- providing assistance in the preparation of cash flow projection and budgets;
- preparing accounting and other results for presentation in graphical or tabular form;
- applying knowledge of accounting principles in order to identify and solve problems arising in the course of their work;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

#### **Examples of the occupations classified here:**

**33131 Assistant officer, account**

**33132 Assistant, auditor W27**

**33133 Supervisor, financial**

**33134 Assistant, accountant W27**

### **3314 STATISTICAL, MATHEMATICAL AND ACTUARIAL ASSOCIATE PROFESSIONALS**

Statistical, mathematical and actuarial associate professionals assist in planning the collection, processing and presentation of mathematical, statistical or actuarial data and in carrying out these operations, usually working under the guidance of Mathematicians and related professionals or Statisticians.

#### **Tasks include:**

- assisting in planning and performing mathematical, actuarial, statistical and related calculations;
- preparing detailed estimates of quantities and costs of materials and labour required for statistical census and survey operations;
- performing technical tasks connected with establishing, maintaining and using registers and sampling frames for census and survey operations;
- performing technical tasks connected with data collection and quality control operations in censuses and surveys;
- using standard computer software packages to perform mathematical, actuarial, statistical and related calculations;
- preparing mathematical, actuarial, statistical and other results for presentation in graphical or tabular form;
- applying knowledge of mathematical, actuarial, statistical and related principles and practices in order to identify and solve problems arising in the course of their work;
- performing related tasks;

- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**33141 Assistant officer, statistical E27**

**33142 Assistant, mathematical**

**33143 Assistant, actuarial**

**33144 Assistant, research**

### **3315 VALUERS AND LOSS ASSESSORS**

Valuers and loss assessors value property and various goods and assess losses covered by insurance policies, or sell objects, properties and goods by auction.

**Tasks include:**

- determining the value of raw materials, real estate, industrial equipment, personal and household effects, works of art, gems and other objects offered for sale or to be insured;
- assessing the extent of damage or loss and liabilities of insurance companies and underwriters for losses covered by insurance policies;
- selling by auction various kinds of properties, cars, commodities, art, jewelers and other objects;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**33151 Auctioneer**

**33152 Assistant officer, appraiser W27**

**33153 Valuer**

**33154 Assistant officer, evaluation W27**

**33155 Inspector, claims**

**33156 Adjuster, insurance**

**33157 Assessor, insurance**

**33158 Assistant officer, research Q27**

### **332 SALES AND PURCHASING AGENTS AND BROKERS**

Sales and purchasing agents and brokers maintain records of financial transactions, buy and sell financial instruments, different types of insurance, real estate and other business services, deal with foreign exchange, act as wholesale representatives of technical products and services or act as buyers on behalf of organizations, or they appraise the value of commodities, real estate and other properties, and sell these by auction or organize, manage and coordinate tour packages, exhibitions and conventions.

### **3321 INSURANCE REPRESENTATIVES**

Insurance representatives advise on and sell life, accident, automobile, liability, endowment, fire, marine and other types of insurance to new and existing clients.

**Tasks include:**

- compiling lists of prospective clients from directories and other sources and making contact with prospective clients to seek interviews;
- obtaining information about customers circumstances necessary to determine appropriate type of insurance and conditions;
- negotiating with customers to determine type and degree of risk for which insurance is derived, extent of coverage and terms of payment;
- negotiating and placing reinsurance contracts;
- advising on, negotiating terms for and placing insurance contracts for large or special types of projects, installations or risks;
- may collect premiums and keep records of payment;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**33211** *Agent, insurance*

**33212** *Broker, insurance*

**33213** *Underwriter, insurance*

**3322 COMMERCIAL SALES REPRESENTATIVES**

Commercial sales representatives sell various goods to retail, industrial, wholesale and other establishments includes doing planning, promotion, media relations, product development, direct marketing, sponsorship and market research and provide specialized information as required.

**Tasks include:**

- compiling lists of prospective customers using trade directories and other sources;
- acquiring and updating knowledge of employers' and competitors' products and understanding market conditions;
- soliciting orders and selling goods to retail, industrial, wholesale and other establishments;
- selling technical equipment, supplies and related services to business establishments or individuals;
- providing prospective customers with general and specialized information and the characteristics and functions of the equipment, and demonstrating its use;
- quoting and negotiating prices, credit terms, completing contracts and recording orders;
- arranging for delivery of goods, installation of equipment and provision of services;
- following up customers to ensure satisfaction with products purchased and resolving any problems arising;
- reporting to sales management on sales made and the marketability of products;
- reporting customers reactions and requirements to manufacturers;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**33221** *Agent, sales/engineering*

**33222** *Adviser, after sales service*

**33223** *Canvasser*

**33224** *Sales representative*

- 33225** *Salesperson, technical*
- 33226** *Salesperson, business services/advertising*
- 33227** *Analyst/executive, marketing research*
- 33228** *Salesman, car*

### **3323 BUYERS**

Buyers buy goods and services on behalf of industrial, commercial or other enterprises and organizations.

#### **Tasks include:**

- negotiating and entering into a contract for the purchase of equipment, raw materials, products and supplies for industrial plant, utilities, government units or other establishments and the purchasing of merchandise for resale;
- obtaining information about requirement and stock, and determining quantity and quality to be purchased, costs, delivery dates and other contract conditions;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

#### **Examples of the occupations classified here:**

- 33231** *Buyer*
- 33232** *Agent, procurement*

### **3324 TRADE BROKERS**

Trade brokers buy and sell commodities, usually in bulk, at auctions on the spot or future markets, carry out customers clearing procedures and ensure that insurance, export/import licences and other formalities are in order, match job seekers with vacancies, and establish business contacts and sell business services.

#### **Tasks include:**

- establishing contact between buyers and sellers of commodities;
- discussing buying or selling requirements of client and giving advice accordingly;
- arranging for the production of auction catalogues, fixing reserve prices, attending auctions of the spot or futures markets and bidding on behalf of client;
- negotiating purchase/sale by private treaty of goods not sold at auction;
- obtaining cargo space and fixing and collecting freight charges from client;
- carrying out customs clearing procedures for exports or imports;
- ensuring that insurance and export/import licenses and other formalities are in order;
- signing and issuing bills of lading;
- matching job seekers with vacancies known to job placement offices or advising on training schemes;
- finding workers for vacant posts against a commission from the employer or worker;
- discussing with enterprises/organizations the needed skills and other characteristics of the workers to be employed or contracted;
- ensuring that the employment contracts meet legal requirements and signing them;
- obtaining information about services to be sold and needs of prospective buyers;
- making sure that the business service purchased is made available to the buyer in the agreed format at the agreed time;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**33241**    *Broker, commodity*

**333    BUSINESS SERVICES AGENTS**

Business service agents establish contacts to sell various business services such as advertising space in the media, carry out customs clearance activities, ensuring that necessary documents are in order, match jobseekers with vacancies, find workers for employers, arrange contracts for the performance of athletes, entertainers and artists, as well as for the publication of books, the production of plays, or the recording, performing and sale of music, plan and organize conferences and similar events.

**3331    CLEARING AND FORWARDING AGENTS**

Clearing and forwarding agents carry out customs clearing procedures and ensure that insurance, export/import licenses and other formalities are in order.

**Tasks include:**

- carrying out customs clearing procedures for exports or imports;
- ensuring that insurance is in order;
- ensuring that export/import licenses and other formalities are in order;
- signing and issuing bills of lading;
- checking import/export documentation to determine cargo contents, and classifying goods into different fee or tariff groups, using a tariff coding system;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**33311**    *Agent, clearing and forwarding*

**33312**    *Agent, shipping*

**3332    CONFERENCE AND EVENT PLANNERS**

Conference and event planners organize and coordinate services for conferences, events, functions, banquets and seminars.

**Tasks include:**

- promoting conferences, conventions and trade shows to potential customers;
- responding to inquiries concerning services provided and costs for room and equipment hire, catering and related services;
- meeting with clients to discuss their needs and outlining package options to meet these needs;
- arranging and coordinating services, such as, conference facilities, catering, signage, displays, audiovisual and computer equipment, accommodation, transport and social events, for participants, logistical arrangements for presenters;
- organizing registration of participants;
- negotiating the type and costs of services to be provided within budget;
- overseeing work by contractors and reporting on variations to work orders;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

- 33321**    *Consultant, exhibition and convention*
- 33322**    *Organizer, exhibition and convention*
- 33323**    *Consultant, travel*
- 33324**    *Organizer, travel*

### **3333    EMPLOYMENT AGENTS AND CONTRACTORS**

Employment agents and contractors match jobseekers with vacancies, find workers for employers and contract labour for particular projects at the request of enterprises and other organizations including government, institutions, or find places for jobseekers either for a commission or not.

**Tasks include:**

- matching job seekers with vacancies known to job placement offices or advising on training schemes;
- finding workers for vacant posts against a commission from the employer or worker;
- discussing with enterprises/organizations the needed skills and other characteristics of the workers to be employed or contracted;
- finding workers with appropriate skills and undertaking the necessary formalities according to national or international regulations and requirements;
- ensuring that the employment contracts meet legal requirements and signing them;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

- 33331**    *Agent, employment*
- 33332**    *Officer, job placement*

### **3334    REAL ESTATE AND PROPERTY AGENTS**

Real estate agents arrange the sale, purchase, rental and lease of real property, usually on behalf of clients and on a commission basis.

**Tasks include:**

- obtaining information about properties to be sold or leased, the circumstances of their owner and the needs of prospective buyers or tenants;
- showing properties to be sold or leased to prospective buyers or tenants and explaining terms of sale or conditions of rent or lease;
- arranging signing of lease agreements and transfer of property rights;
- collecting rent and deposits on behalf of owner and inspecting properties before, during and after tenancies;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

- 33341**    *Agent, real estate*
- 33342**    *Agent, property*
- 33343**    *Realtor (property)*
- 33344**    *Negotiator (property)*



### **3339 BUSINESS SERVICES AGENTS NOT ELSEWHERE CLASSIFIED**

This unit group covers business services agents not classified elsewhere in Minor Group 333: Business Services Agents. For instance, here should be classified those who establish business contacts, sell business services such as advertising space in the media, arrange contracts for performances of athletes, entertainers and artists, as well as for the publication of books, the production of plays, or the recording, performing and sale of music. Also included are those selling objects, properties and goods by auction.

#### **Tasks include:**

- obtaining information about services to be sold and needs of prospective buyers;
- negotiating contracts on behalf of seller or buyer and explaining terms of sale and payment to client;
- signing agreements on behalf of seller or buyer and ensuring that contract is honoured;
- making sure that the business service purchased is made available to the buyer in the agreed format at the agreed time;
- selling by auction various kinds of property, cars, commodities, livestock, art, jewellery and other objects;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

#### **Examples of the occupations classified here:**

**33391** *Agent, literary*

**33392** *Agent, musical performance*

**33393** *Agent, sports*

**33394** *Agent, theatrical*

**33395** *Promoter, sports*

### **334 ADMINISTRATIVE AND SPECIALIZED SECRETARIES**

Administrative and specialized secretaries provide organizational communication and documentation support activities utilizing knowledge of the business activity of the organization. They take supervisory responsibility for office clerks in the organization.

### **3341 OFFICE SUPERVISORS**

Office supervisors supervise and coordinate the activities of workers in major group 4: Clerks. They also carry out administrative duties in the Support Group.

#### **Tasks include:**

- coordinating, assigning and reviewing the work of clerks engaged in the following duties: word processing, record keeping and filing; operating telephones and switchboards; data entry; desktop publishing; and other activities involving general office and administrative skills;
- endorsement of receipt, purchasing, inventory checking, controlling safe box and storage revenue matters;
- establishing work schedules and procedures and co-coordinating activities with other work units or departments;
- resolving work-related problems and preparing and submitting progress and other reports;

- training and instructing employees in job duties, safety procedures and company policies, or arranging for training to be provided;
- evaluating employees' job performance and conformance to regulations, and recommending appropriate personnel action;
- responsible for managing the land application, soil, land transactions, land revenue, the enforcement of land and other tasks related to land;
- recruiting, interviewing, and selecting employees;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

- 33411** *Supervisor, account*
- 33412** *Supervisor, human resource*
- 33413** *Management trainee*
- 33414** *Factory administrator*
- 33415** *Assistant officer, training E27*
- 33416** *Assistant officer, administrative N27*
- 33417** *Assistant officer, land administrative N27*

#### **3342 LEGAL SECRETARIES**

Legal secretaries assist the head of unit and other members of staff in implementing and supporting the communication, documentation and internal managerial co-ordination activities, in law offices, legal departments of large firms and governments.

**Tasks include:**

- preparing and processing legal documents and papers, such as deeds, wills, affidavits and briefs;
- reviewing and proofreading documents and correspondence to ensure compliance with legal procedures;
- preparing verbatim reports of proceedings in the legislative assemblies, courts of law or other places in shorthand or by other methods;
- mailing, faxing, or arranging for delivery of legal correspondence to clients, witnesses, and court officials;
- organizing and maintaining documents, case files and law libraries;
- screening requests for meetings, scheduling and organizing meetings;
- assisting in the preparation of budgets, monitoring of expenditures, drafting of contracts and purchasing or acquisition orders;
- assisting the head of unit and other staff with inquiries of an administrative or organizational nature;
- supervising the work of office clerks.

**Examples of the occupations classified here:**

- 33421** *Legal secretary*

#### **3343 ADMINISTRATIVE AND EXECUTIVE SECRETARIES**

Administrative and executive secretaries implement and support the communication, documentation and internal managerial co-ordination activities of an organizational unit to assist the head of unit and other members of staff.

**Tasks include:**

- drafting administrative correspondence and minutes;
- obtaining, proposing and monitoring deadlines and follow-up dates;
- screening requests for meetings, scheduling and organizing meetings and travel arrangements for the head of unit and other members of staff;
- assisting in the preparation of budgets, monitoring of expenditures, drafting of contracts and purchasing or acquisition orders;
- assisting the head of unit and other staff with inquiries of an administrative or organizational nature;
- assisting the head of unit in organizing and hosting hospitality functions for outside visitors or members of staff;
- liaising with other staff about a range of matters relating to the organization's operations;
- writing and answering business or technical letters and other similar correspondence;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**33431** *Chief secretary, office*

**33432** *Executive secretary, government administration*

**33433** *Officials, consular*

**33434** *Executive officer, government*

**33435** *Executive officer, statutory board*

**33436** *Meeting herald N27*

**33437** *Parliament herald N11*

**3344 MEDICAL SECRETARIES**

Medical secretaries, using specialized knowledge of medical terminology and procedures, assist the head of unit and other members of staff in implementing and supporting the communication activities, documentation and international managerial coordination activities, in doctors' offices, hospitals, medical clinics and other medical settings.

**Tasks include:**

- scheduling and confirming medical appointments and communicating messages for medical staff and patients;
- compiling, recording and reviewing medical charts, reports, documents and correspondence;
- interviewing patients to complete forms, documents and case histories;
- completing insurance and other claims forms;
- maintaining medical files and records and technical library;
- preparing financial statements and billing procedures;
- assisting in the preparation of budgets, preparing financial statements and billing procedures;
- drafting of contracts and purchasing or acquisition orders;
- supervising the work of office clerks.

**Examples of the occupations classified here:**

**33441** *Medical secretary*

### **3349 ADMINISTRATIVE AND SPECIALIZED SECRETARIES NOT ELSEWHERE CLASSIFIED**

Administrative and specialized secretaries not elsewhere classified provide assistance, utilizing knowledge in a specific area other than law or medicine, to the head of unit and other members of staff in implementing and supporting the communication, documentation and internal managerial coordination activities.

#### **Tasks include:**

- preparing and processing documents and papers;
- reviewing and proofreading documents and correspondence to ensure accuracy;
- mailing, faxing, or arranging for delivery of correspondence to clients;
- organizing and maintaining documents and files;
- screening requests for meetings, scheduling and organizing meetings;
- assisting in the preparation of budgets, monitoring of expenditures, drafting of contracts and purchasing or acquisition orders;
- assisting the head of unit and other staff with inquiries of an administrative or organizational nature;
- supervising the work of office clerks.

#### **Examples of the occupations classified here:**

**33491 School secretary**

### **335 REGULATORY GOVERNMENT ASSOCIATE PROFESSIONALS**

Regulatory government associate professionals prevent, investigate and solve cases on customs, tax, social benefit, licenses and civil.

### **3351 CUSTOMS AND BORDER INSPECTOR**

Customs and border inspector investigate and inspect persons, common carriers, goods and merchandise arriving in or departing or moving between states to detect violations of immigration and customs law and regulations.

#### **Tasks include:**

- examining immigration applications, visas, and passports and interview persons to determine eligibility for admission, residence and travel in the country;
- detaining persons found to be in violation of customs or immigration laws and arrange for legal action such as deportation;
- locating and seizing contraband or undeclared merchandise and vehicles, aircraft, or boats that contain such as merchandise;
- interpreting and explaining laws and regulations to travelers, prospective immigrants, shippers and manufacturers;
- collecting samples merchandise for examination, appraisal, or testing;
- inspecting cargo, baggage and personal articles entering or leaving states.

#### **Examples of the occupations classified here:**

**33511 Inspector, border**

**33512 Officer, passport checking**

**33513 Assistant superintendent, customs W27**

### **3352 TAXATION AND EXCISE OFFICIALS**

Taxation and excise officials work within the Royal Malaysian Customs Department apply legislation and make sure that companies and individuals pay the correct amount of tax. Tax inspectors are responsible for detecting tax evasion and, in disputed cases; they represent the Royal Malaysian Customs Department before an independent appeal tribunal. They offer information and advice to individuals, businesses and organizations on a range of issues.

#### **Tasks include:**

- applying tax legislation to companies, partnerships, organizations and individuals;
- examining accounts and researching background material;
- investigating fraud;
- giving expert advice on taxation matters to companies, partnerships, organizations and individuals;
- negotiating tax settlements with taxpayers and/or accountants;
- representing the Royal Malaysian Customs Department at independent appeal tribunals in disputed cases;
- reviewing the finances of a business to find out exactly how it operates;
- examining the records kept and taking into account the lifestyle of the proprietor or directors;
- visiting business premises and meeting people face to face during the investigation;
- reviewing in detail aspects of the business accounts to ensure that tax law has been applied correctly;
- presenting a case in correspondence, and in person, with the taxpayer or their professional advisers, accountants or lawyers;
- performing related tasks;
- supervising, scheduling and monitoring tasks of other workers.

#### **Examples of the occupations classified here:**

**33521 Assistant officer, tax/estimator**

### **3353 GOVERNMENT SOCIAL BENEFITS OFFICIALS**

Government social benefits officials investigate operation of social benefit.

#### **Tasks include:**

- enforcing related procedures, regulations and laws to social organization;
- providing social security protection by social insurance for individual, family and society for their human rights and their safety;
- enforcing the procedures, regulations and laws;
- performing related tasks;
- supervising, scheduling and monitoring tasks of other workers.

#### **Examples of the occupations classified here:**

**33531 Officer, social benefits**

**33532 Officer, social security claims**

### **3354 GOVERNMENT LICENSING OFFICIALS**

Government licensing officials examine applications, visas, and passports and interview persons to determine eligibility for admission, residence and travel privileges.

**Tasks include:**

- interpreting laws and explains decisions to persons seeking entry;
- arresting, detains, paroles, or arranging for deportation of persons according to laws, regulations, and departmental orders;
- writing reports of activities and decisions;
- may patrol border on foot or riding a horse, or by airplane, automobile, or boat to detect and apprehend persons cross country illegally and be designated Immigration Patrol Inspector (government servant).

**Examples of the occupations classified here:**

**33541** *Inspector, licensing*

**33542** *Assistant superintendent, immigration KP27*

**3355 POLICE INSPECTORS AND DETECTIVES**

Police inspectors and detectives investigate, prevent and solve criminal cases.

**Tasks include:**

- investigating alleged or suspected criminal violations of federal, state, or local laws to determine if evidence is sufficient to recommend prosecution;
- preparing charges, responses to charges, or information for court cases according to formalized procedures;
- noting, marking, and photographing location of objects found, such as footprints, vehicle tire tracks, bullets, and bloodstains, and take measurements of the scene;
- preparing, serve search and arrest warrants. Block or rope off scene and check perimeter to ensure that entire scene is secured;
- summon medical help for injured individuals and alert medical personnel to take statements from them.

**Examples of the occupations classified here:**

**33551** *Inspector, police*

**33552** *Detective, police*

**33553** *Assistant officer, investigation KR29*

**3356 CIVIL DEFENCE ASSOCIATE PROFESSIONALS**

Civil defence associate professionals investigate operations of civil.

**Tasks include:**

- enforcing related procedures regulation and laws;
- investigating fraud;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**33561** *Inspector, civil service*

- 33562** *Inspector, government administration*
- 33563** *Officer, civil service commission*
- 33564** *Assistant officer, Kesatria S27*
- 33565** *Officer, RELA*
- 33566** *Territorial army*
- 33567** *Assistant officer, civil defence KP27*
- 33568** *Officer, civilian relation KP19*

#### **3359 REGULATORY GOVERNMENT ASSOCIATE PROFESSIONALS NOT ELSEWHERE CLASSIFIED**

This unit group covers other regulatory government associate professionals engaged in regulation activities outside the scope of those classified in unit group 3351 – 3356.

##### **Tasks include:**

- interpreting and explaining related procedures regulation and laws;
- investigating fraud;
- enforcing the procedures regulations and laws;
- performing related tasks.

##### **Examples of the occupations classified here:**

- 33591** *Inspector, weight and measures*
- 33592** *Assistant officer, registration KP27*
- 33593** *Assistant superintendent, prison KX27*
- 33594** *Assistant officer, enforcement N27*
- 33595** *Inspector, wage*
- 33596** *Officials, electoral*
- 33597** *Assistant superintendent, fireman KB29*
- 33598** *Assistant officer, security KP27*

#### **34 LEGAL, SOCIAL, CULTURAL AND RELATED ASSOCIATE PROFESSIONALS**

Legal, social, cultural and related associate professionals perform technical tasks related to research and the practical application of concepts, theories, principles and operational methods particular to legal, social work, religious, sports, artistic, cultural and culinary.

##### **This sub-major group consists of the following minor groups:**

- 341** **LEGAL, SOCIAL AND RELIGIOUS ASSOCIATE PROFESSIONALS**
- 342** **SPORTS, SELF DEFENCE AND FITNESS ASSOCIATE PROFESSIONALS**
- 343** **ARTISTIC, CULTURAL AND CULINARY ASSOCIATE PROFESSIONALS**

#### **341 LEGAL, SOCIAL AND RELIGIOUS ASSOCIATE PROFESSIONALS**

Legal, social and religious associate professionals perform technical tasks related to research and the practical application of concepts, principles and operational methods connected with legal, social work and religious.

### **3411 LEGAL AND RELATED ASSOCIATE PROFESSIONALS**

Legal and related associate professionals who does legal work but who is not a qualified lawyer and employed across a range of organizations including law firms, the public sector, business and industry. The role of a paralegal can involve anything from basic level administrative work to higher level casework.

#### **Tasks include:**

- performing administration works, including arranging meetings, telephone work, billing;
- drafting and proofreading, including compiling attendance notes, taking notes at court, proofreading documents, letter writing;
- preparing litigation bundles and managing case files;
- legal research;
- liaising with clients (in more senior roles);
- taking witness statements;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

#### **Examples of the occupations classified here:**

**34111 Sub assistant, legal L29**

**34112 Assistant officer, Syariah LS27**

**34113 Assistant officer, Islamic affairs S27**

**34114 Assistant officer, anti-drug S27**

**34115 Superintendant, water supply J17**

### **3412 SOCIAL WORK ASSOCIATE PROFESSIONALS**

Social work associate professionals provide guidance to clients in social and related matters to enable them to find and used resources to overcome difficulties and achieve particular goals.

#### **Tasks include:**

- collecting information relevant to clients' needs and advising them on their rights and obligations;
- analyzing the client's situation and presenting alternative approaches to resolve problems;
- planning, evaluating, improving and developing welfare services;
- working to prevent development of delinquency or to achieve rehabilitation of delinquents by organizing and supervising social, recreational and educational activities in youth clubs, community centres and similar organizations, or by other means;
- helping to prevent child abuse and domestic violence, and assisting physically or mentally handicapped persons to obtain adequate treatment and improve their ability to function in society;
- planning, organizing or providing home-help services;
- compiling case records and preparing reports as required;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

#### **Examples of the occupations classified here:**



- 34121** *Social worker*
- 34122** *Assistant officer, social development S27*
- 34123** *Assistant officer, psychologist S27*
- 34124** *Assistant officer, information S27*
- 34125** *Assistant officer, social research N27*
- 34126** *Assistant officer, industrial relation S27*
- 34127** *Assistant officer, economy affairs E27*
- 34128** *Assistant officer, youth and sport S27*

### **3413 RELIGIOUS ASSOCIATE PROFESSIONALS**

Religious associate professionals undertake religious works, devote their lives to contemplative prayer or meditation, and preach and propagate the teachings of their particular religion.

#### **Tasks include:**

- undertaking religious works;
- living as a member of a separate community and observing its rules and practices;
- devoting their lives to contemplative prayer or meditation;
- preaching and propagating the teachings of a particular religious faith;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

#### **Examples of the occupations classified here:**

- 34131** *Monk, associate professional*
- 34132** *Nun, associate professional*
- 34133** *Preacher*
- 34134** *Bilal*

### **342 SPORTS, SELF DEFENCE AND FITNESS ASSOCIATE PROFESSIONALS**

Sports, self defence and fitness associate professionals participate or conduct public sporting competitions, coach sportsmen in the skills of their sport, instruct persons in the development of their physical fitness and perform various related functions.

### **3421 ATHLETES AND SPORTS PLAYERS**

Athletes and sports players participate in sporting events and regulate the progress of these events.

#### **Tasks include:**

- participating in competitive sporting events;
- conducting sports training to develop ability in and knowledge of the sport;
- analyzing performance and identifying individual or team weaknesses;
- officiating at sporting events to enforce rules of competitions;
- promoting sports and skills development, and overseeing the participation of young people in sport;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**34211**    *Sportsperson*

**34212**    *Athlete*

#### **3422    SPORTS COACHES, INSTRUCTORS AND OFFICIALS**

Sports coaches, instructors and officials participate in sporting events conduct sports training and regulate the progress of these events.

**Tasks include:**

- participating in competitive sporting events;
- conducting sports training to develop ability in and knowledge of the sport;
- analyzing performance and identifying individual or team weaknesses;
- officiating at sporting events to enforce rules of competitions;
- promoting sports and skills development, and overseeing the participation of young people in sport;
- instructing persons in the development and maintenance of their physical fitness;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**34221**    *Officials, sports*

**34222**    *Instructor, march S17*

**34223**    *Team manager, sports/games*

**34224**    *Coach, silat*

**34225**    *Coach, tennis*

**34226**    *Coach, tai chi*

**34227**    *Coach, swimming*

**34228**    *Coach, instructor and other sports officials (indoor)*

#### **3423    FITNESS AND RECREATION INSTRUCTORS AND PROGRAM LEADERS**

Fitness and recreation instructors and program leaders participate in sporting events, conduct sports training and regulate the progress of these events.

**Tasks include:**

- participating in competitive sporting events;
- conducting sports training to develop ability in and knowledge of the sport;
- analyzing performance and identifying individual or team weaknesses;
- officiating at sporting events to enforce rules of competitions;
- promoting sports and skills development, and overseeing the participation of young people in sport;
- instructing persons in the development and maintenance of their physical fitness;
- instructing persons in chess, billiards, bridge and other games;
- riding race horses at race tracks;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**34231** *Instructor, physical fitness*  
**34232** *Instructor, billiard*  
**34233** *Instructor, bridge*  
**34234** *Instructor, chess*  
**34235** *Jockey*  
**34236** *Instructor, sailing*  
**34237** *Instructor, horse riding*  
**34238** *Outdoor adventure guides*

**343     ARTISTIC, CULTURAL AND CULINARY ASSOCIATE PROFESSIONALS**

Artistic, cultural and culinary associate professionals apply artistic techniques to product design and sales promotion, take photographs, operate motion picture and video cameras and other equipment to record and edit images and sound; and performing various task related to the preparation and cooking of food.

**3431     PHOTOGRAPHERS**

Photographers take photographs, video cameras and other equipment to record and edit images.

**Tasks include:**

- consulting with clients to determine objectives of photograph assignment;
- studying requirements of assignment and selecting type of camera, film and lighting;
- working from a studio or transporting and setting up equipment at assigned locations;
- taking photographs for advertising or other commercial, industrial or scientific purposes and to illustrate stories and articles in newspapers, magazines, books and other publications;
- taking portrait photographs of persons and groups of persons;
- setting and operating motion picture, video, microscopic and other specialized cameras, including those for aerial photography to record images;
- controlling equipment to edit and mix image to ensure satisfactory quality and to create special image;
- may work with digital technology and manipulate resulting images on computer;
- applying principles and practices of image and sound recording and editing in order to identify and solve problems arising in the course of their work;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**34311** *Photographer*  
**34312** *Photographer, commercial illustration*  
**34313** *Photographer, news*  
**34314** *Microphotographer*  
**34315** *Photographer, scientific*  
**34316** *Photographer B27*

### **3432 INTERIOR DESIGNERS AND DECORATORS**

Interior designers and decorators apply artistic techniques to product design, interior decoration and sales promotion.

#### **Tasks include:**

- determining the objectives of the design by consulting with clients, undertaking research and analyzing functional requirements or studying layouts;
- designing industrial and commercial products, including new types and styles of clothing and accessories and endeavoring to harmonise aesthetic considerations with technical and other requirements;
- supervising the production of sample products or design illustrations, instructing other workers making models or patterns of products, or instructing finishing or layout artists assembling artwork for printing;
- creating interior decorating schemes and planning furnishings for houses, public buildings, ships and other places;
- designing and painting stage scenery;
- creating and executing artistic effects for use in show windows and other display/promotional areas;
- designing floral arrangements such as wreaths, bouquets and corsages according to customer's preference, purpose, occasion and availability of flowers;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

#### **Examples of the occupations classified here:**

**34321 Artist, design**

**34322 Decorator, display**

**34323 Designer, interior decoration**

**34324 Designer, furniture**

**34325 Decorator, motion picture set**

**34326 Decorator, flower**

### **3433 GALLERY, MUSEUM AND LIBRARY TECHNICIANS**

Gallery, museum and library technicians acquire and preserve important documents and other valuable items for permanent storage or display. They work for museums, governments, zoos, colleges and universities, corporations, and other institutions that require experts to preserve important records. Documents and collections may include works of art, transcripts of meetings, coins and stamps, living and preserved plants and animals, and historic objects, buildings, and sites.

#### **Tasks include:**

- assisting librarians in the acquisition, preparation and organization of information;
- describing, analyzing and maintaining valuable objects and collections for the benefit of researchers and the public;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

#### **Examples of the occupations classified here:**

**34331 Assistant officer, archives S27**

**34332 Assistant, curator S27**

- 34333** *Assistant officer, librarian S27*  
**34334** *Assistant officer, publication N27*

#### **3434 CHEFS**

Chefs usually supervise and coordinate the work of cooks and other kitchen helpers and prepare meal in large hotel, restaurants and other establishment.

##### **Tasks include:**

- planning daily menu, taking into account probable number of guests, popularity of various dishes and determines and assigns process to each serving;
- supervising preparation and cooking of food, and instructing cooks as required;
- preparing special dishes and inventing recipe;
- testing cooked foods by tasting or smelling them;
- requisitioning or purchasing food supplies and kitchen equipment as necessary and checks them for quality and quantity;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

##### **Examples of the occupations classified here:**

- 34341** *Chief chef*  
**34342** *Executive chef*  
**34343** *Chief*

#### **3435 OTHER ARTISTIC AND CULTURAL ASSOCIATE PROFESSIONALS**

This unit group covers other artistic and cultural associate professionals outside the scope of those classified in unit group 3431 – 3434.

### **35 INFORMATION AND COMMUNICATIONS TECHNICIANS**

Information and communications technicians provide support for the day-to-day running of computer systems, communications systems and networks and perform technical tasks related to telecommunications, broadcast of image and sound as well as other types of telecommunications signals on land, sea or in aircraft.

##### **This sub-major group consists of the following minor groups:**

- 351** **INFORMATION AND COMMUNICATIONS TECHNOLOGY OPERATIONS AND USER SUPPORT TECHNICIANS**  
**352** **TELECOMMUNICATIONS AND BROADCASTING TECHNICIANS**

#### **351 INFORMATION AND COMMUNICATIONS TECHNOLOGY OPERATIONS AND USER SUPPORT TECHNICIANS**

Information technology operations and user support technicians provide support for the day-to-day running of communications systems, computer systems and networks and provide technical assistance to users.

## **3511 INFORMATION AND COMMUNICATIONS TECHNOLOGY OPERATIONS TECHNICIANS**

Information and communications technology operations technicians support the day-to-day processing, operation and monitoring of information and communications technology systems, including local and wide area networks (LANs and WANs), and hardware, software and related computer equipment to ensure optimal performance, and identify any problems.

### **Tasks include:**

- operating and controlling peripheral and related computer equipment;
- entering commands, using computer terminal, and activating controls on computer and peripheral equipment to integrate and operate equipment;
- monitoring systems for equipment failure or errors in performance;
- notifying supervisor or maintenance technicians of equipment malfunctions;
- responding to program error messages by finding and correcting problems, escalating the problem to other staff or terminating the program;
- reading job set-up instructions to determine equipment to be used, order of use, material such as disks and paper to be loaded, and control settings;
- retrieving, separating and sorting program output as needed, and sending data to specified users;
- loading peripheral equipment, such as printers, with selected materials for operating runs, or oversee loading of peripheral equipment by peripheral equipment operators;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

### **Examples of the occupations classified here:**

**35111 Technician, computer**

**35112 Technician, semi-conductor**

**35113 Assistant, information technology**

**35113 Technician, information systems**

**35114 Technician, computer FT17**

## **3512 INFORMATION AND COMMUNICATIONS TECHNOLOGY USER SUPPORT TECHNICIANS**

Information and communications technology user support technicians provide technical assistance to users, either directly or by telephone, e-mail or other electronic means, including diagnosing and resolving issues and problems with software, hardware, computer peripheral equipment, networks, databases and the Internet, and providing guidance and support in the deployment, installation and maintenance of systems.

### **Tasks include:**

- answering user inquiries regarding software or hardware operation to resolve problems;
- entering commands and observing system functioning to verify correct operations and detect errors;
- installing and performing minor repairs to hardware, software, or peripheral equipment, following design or installation specifications;
- overseeing the daily performance of communications and computer systems;
- setting up equipment for employee use, performing or ensuring proper installation of cables, operating systems, or appropriate software;

- maintaining records of daily data communication transactions, problems and remedial actions taken, or installation activities;
- consulting user guides, technical manuals and other documents to research and implement solutions;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**35121 Technician, help desk**

**35122 Assistant, computer/user services**

**35123 Assistant officer, information technology F29**

### **3513 COMPUTER NETWORK AND SYSTEMS TECHNICIANS**

Computer network and systems technicians establish, operate and maintain network and other data communications systems.

**Tasks include:**

- operating, maintaining and troubleshooting network systems;
- operating and maintaining data communications systems other than network;
- assisting users with network and data communications problems;
- identifying areas needing upgraded equipment and software;
- installing computer hardware, network software, operating system software and applications software;
- performing start up and close down as well as backup systems and disaster recovery operations;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**35131 Technician, network support**

### **3514 WEB TECHNICIANS**

Web technicians maintain, monitor and support the optimal functioning of Internet and Intranet websites and web server hardware and software.

**Tasks include:**

- installing, monitoring and supporting the reliability and usability of Internet and Intranet websites or web server hardware or software;
- developing and maintaining documentation, policies and instructions, recording operational procedures and system logs;
- developing, coordinating, implementing and monitoring security measures;
- analyzing and making recommendations to enhance performance, including upgrading and acquiring new systems;
- liaising with, and providing guidance to, clients and users;
- modifying web pages;
- performing web server backup and recovery operations;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**35141 Administrator, website**

## **352 TELECOMMUNICATIONS AND BROADCASTING TECHNICIANS**

Telecommunications and broadcasting technicians control technical functioning of equipment to record and edit images and sound and for transmitting radio and television broadcasts of images and sounds, as well as other types of telecommunication signals on land, sea or in aircraft, perform technical tasks connected with telecommunications engineering research and with the design, manufacture, assembly, construction, operation, maintenance and repair of telecommunications systems.

### **3521 BROADCASTING AND AUDIO-VISUAL TECHNICIANS**

Broadcasting and audio-visual technicians control technical functioning of equipment to record and edit images and sound and for transmitting radio and television broadcasts of images and sounds, as well as other types of telecommunication signals on land, sea or in aircraft.

**Tasks include:**

- controlling equipment to record sound;
- controlling equipment to edit and mix image and sound recordings to ensure satisfactory quality and to create special image and sound effects;
- applying knowledge of principles and practices of image and sound recording and editing in order to identify and solve problems;
- controlling transmitting and broadcast systems and satellite systems for radio and television programmes;
- controlling radio communications systems, satellite services, and multiplex systems on land, sea or in aircraft;
- applying knowledge of principles and practices of broadcasting, telecommunications terminals and transmissions systems, in order to identify and solve problems;
- making repairs to equipment;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**35211 Cinematographer**

**35212 Editor, sound**

**35213 Projectionist, cinema**

**35214 Officer, ships radio**

**35215 Assistant officer, film laboratory C27**

**35216 Technician, audio and video equipment**

### **3522 TELECOMMUNICATIONS ENGINEERING TECHNICIANS**

Telecommunications engineering technicians perform technical tasks connected with telecommunications engineering research, as well as with the design, manufacture, assembly, construction, operation, maintenance and repair of telecommunications systems.



**Tasks include:**

- providing technical assistance connected with research and the development of telecommunications equipment, or testing prototypes;
- studying technical material such as blue prints and sketches to determine the method of work to be adopted;
- preparing detailed estimates of quantities and costs of materials and labour required for the manufacture and installation of telecommunications equipment, according to the specifications given;
- providing technical supervision of the manufacture, utilisation, maintenance and repair of telecommunications systems to ensure satisfactory performance and compliance with specifications and regulations;
- applying technical knowledge of telecommunications engineering principles and practices in order to identify and solve problems arising in the course of their work;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Examples of the occupations classified here:**

**35221    *Technician, engineering/telecommunications***



**MAJOR GROUP**



**CLERICAL  
SUPPORT  
WORKERS**

**M**

**A**

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**C**

**O**

**2008**

**2<sup>nd</sup> Edition**

# Major Group 4:

## CLERICAL SUPPORT WORKERS

Clerical support workers record, organize, store and retrieve information related to the work in question, compute financial, statistical and other numerical data, and perform a number of client-oriented clerical duties especially in connection with money-handling operations, travel arrangements and business information and appointments. Most occupations in this major group require skills at the second skill level.

**This major group consists of the following sub-major groups:**

- 41 OFFICE CLERKS**
- 42 CUSTOMER SERVICE CLERKS**
- 43 NUMERICAL AND MATERIAL RECORDING CLERKS**
- 44 OTHER CLERICAL SUPPORT WORKERS**

### **41 OFFICE CLERKS**

Office clerks record, organize, store and retrieve information related to the work in question and perform a range of clerical and administrative tasks according to established procedure.

**This sub-major group consists of the following minor groups:**

- 411 GENERAL OFFICE CLERKS**
- 412 SECRETARIES (GENERAL)**
- 413 KEYBOARD OPERATORS**

### **411 GENERAL OFFICE CLERKS**

General office clerks perform a range of clerical and administrative tasks according to established procedures.

#### **4110 GENERAL OFFICE CLERKS**

General office clerks perform duties too varied and diverse to be classified in any specific office clerical occupation and requiring limited knowledge of office management systems and procedures. Task involves in assisting the administrative and management duties for example, activities related to land, registration, disposal, revenue collection, development and other related tasks.

Clerical duties may be assigned in accordance with the office procedures of individual establishments and may include a combination of answering telephones, bookkeeping, typing or word processing, stenography, office machine operation, filing, recording, and assisting customer service.

#### **Tasks include:**

- recording, preparing, sorting, classifying and filing information;
- sorting, opening and sending mail;
- photocopying and faxing documents;
- preparing reports of a routine nature;
- recording issue of equipment to staff;
- responding to telephone or electronic enquiries or forwarding to appropriate person;

- transcribing information onto computers, and proofreading and correcting copy;
- assisting customer service tasks;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Example of the occupations classified here:**

- 41101 General office clerk**
- 41102 Clerk, management information systems**
- 41103 Sub assistant, administrative clerical/operation N17**
- 41104 Assistant officer, land NT27**
- 41105 Sub assistant, youth and sport S17**
- 41106 Sub assistant, land administrative N17**
- 41107 Sub assistant, publication N17**
- 41108 Supervisor, land planning G17**

## **412 SECRETARIES (GENERAL)**

General secretaries use typewriters, personal computers or other word-processing equipment to transcribe correspondence and other documents, check and format documents prepared by other staff, use various computer software packages including spreadsheets to assist in providing administrative support to other workers, deal with incoming and outgoing mail, screen requests for meetings or appointments, record and screen leave and other staff entitlements, organize and supervise filing systems, and deal with routine correspondence on their own initiative.

### **4120 SECRETARIES (GENERAL)**

General secretaries use typewriters, personal computers or other word-processing equipment to transcribe correspondence and other documents, check and format documents prepared by other staff, use various computer software packages including spreadsheets to assist in providing administrative support, deal with incoming and outgoing mail, screen requests for meetings or appointments, record and screen leave and other staff entitlements, organize and supervise filing systems, and deal with routine correspondence on their own initiative.

**Tasks include:**

- checking, formatting and transcribing correspondence, minutes and reports from dictation, electronic documents or written drafts to conform to office standards, using typewriter, personal computer or other word processing equipment;
- using various computer software packages including spreadsheets to provide administrative support;
- dealing with incoming or outgoing mail;
- checking, recording and distributing mail, correspondence and documents;
- screening requests for meetings or appointments and helping to organize meetings;
- screening and recording leave and other staff-members' entitlements;
- organizing and supervising filing systems;
- dealing with routine correspondence on their own initiative;
- taking responsibility to take shorthand, type and managing file movement;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Example of the occupations classified here:**

- 41201 Secretary**
- 41202 Verbatim/hansard reporter**
- 41203 Personal assistant**
- 41204 Secretary, sales**
- 41205 Secretary, golf**
- 41206 Sub assistant secretary, office / Secretary, office N27**
- 41207 Sub assistant, reporter/Journalist S17**

### **413 KEYBOARD OPERATORS**

Keyboard operators input and process text and data, and prepare, edit and generate documents for storage, process, publication and transmission.

#### **4131 TYPIST AND WORD PROCESSOR OPERATORS**

Typists and word processor operators type, edit and print using typewriter, personal computer or other word processor, and record oral or written matter in shorthand.

##### **Tasks include:**

- typing written material from rough drafts, corrected copies, voice recordings, or shorthand using a computer, word processor or typewriter;
- checking completed work to ensure proper spelling, grammar, punctuation and formatting;
- gathering and arranging the material to be typed, following instructions;
- filing and storing completed documents on computer hard drive or disk, or maintain a computer filing system to store, retrieve or update documents;
- taking dictation and recording other matter in shorthand;
- performing photocopying; and answering telephones or receiving clients;
- transcribing information recorded in shorthand and on sound recording equipment;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

##### **Example of the occupations classified here:**

- 41311 Justowriter**
- 41312 Clerk, word processing**

#### **4132 DATA ENTRY CLERKS**

Data entry clerks enter numerical and other data into electronic equipment for processing and transmission, enter data on the card and tape using machine puncher or operating machines that perform mathematical processes.

##### **Tasks include:**

- entering numerical and other data from source material into computer-compatible storage and processing devices;
- entering data from source material in the form of punch on cards or paper tapes;
- checking, correcting and updating entered data, if needed;
- operating bookkeeping and calculating machine;
- encoding and adding amounts of transaction documents using encoding machine;

- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Example of the occupations classified here:**

**41321 Clerk, data entry/computer**  
**41322 Machine operator, data processing F11**  
**41323 Clerk, index**  
**41324 Records custodian**

## **42 CUSTOMER SERVICES CLERKS**

Customer service clerks deal with clients related with money-handling operations, travel arrangements, requests for information, making appointments and operating telephone switchboards, and interviewing for surveys or to complete applications for eligibility for services.

**This sub-major group consists of the following minor groups:**

**421 TELLERS, MONEY COLLECTORS AND RELATED CLERKS**  
**422 CLIENT INFORMATION WORKERS**

### **421 TELLERS, MONEY COLLECTORS AND RELATED CLERKS**

Tellers, money collectors and related clerks perform money-handling operations in establishments related with banking, postal services, betting or gambling, pawning and debt-collecting.

#### **4211 BANK TELLERS AND RELATED CLERKS**

Bank tellers and related clerks deal directly with clients of banks or post offices related with receiving, changing and paying out money, or providing mail services.

**Tasks include:**

- processing customer cash deposits and withdrawals, cheques, transfers, bills, credit card payments, money orders, certified cheques and other related banking transactions;
- paying bills and making money transfers on clients' behalf;
- crediting and debiting clients' accounts;
- changing money from one currency to another as requested by clients;
- making records of all transactions and reconciling them with cash balance;
- receiving mail, selling postage stamps and conducting other post office counter business such as bill payments, money transfers and related business;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Example of the occupations classified here:**

**42111 Bank teller**  
**42112 Clerk, cash counter**  
**42113 Clerk, postal**  
**42114 Money changer**  
**42115 Currency sorter**

**42116 Clerk, safe deposit**

**4212 BOOKMAKERS, CROUPIERS AND RELATED GAMING WORKERS**

Bookmakers, croupiers and related gaming workers determine odds and receive and pay off bets on results of sporting or other events, or conduct games of chance in gambling establishments.

**Tasks include:**

- determining risks to decide odds and to hedge or refuse bets;
- preparing and issuing lists of approximate odds;
- distributing cards or slips, rolling dice or spinning a roulette wheel;
- explaining and interpreting operating rules of a gambling establishment;
- announcing winning numbers, paying winners and collecting payments from losers;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Example of the occupations classified here:**

**42121 Clerk, betting counter**

**42122 Croupier**

**42123 Clerk, casino**

**4213 PAWNBROKERS AND MONEY-LENDERS**

Pawnbrokers and money-lenders lend money against articles deposited as pledges, or against property or other security.

**Tasks include:**

- evaluating articles offered as pledges, calculating interest and lending money;
- returning articles when the loan is paid or, in the event of non-payment, selling pledged articles;
- lending money as personal loans against success of future revenue and other similar undertakings;
- making independent investigations on creditors' financial standing to determine risk in lending loan;
- collecting repayments in accordance with agreed terms;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Example of the occupations classified here:**

**42131 Pawnbroker**

**42132 Money-lender**

**4214 DEBT-COLLECTORS AND RELATED WORKERS**

Debt-collectors and related workers collect payments on overdue accounts and bad cheques and collect charity payments.

**Tasks include:**



- liaise with customers via telephone or letter to customers to collect money or arrange for late payments;
- tracing addresses of customers and visit them to collect debts;
- noting sum amounts collected;
- recommending legal action or seized the merchandise if payment is not obtained;
- asking for and collecting charity payments;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Example of the occupations classified here:**

**42141 Collector, bill**  
**42142 Collector, charity**  
**42143 Collector, debt**  
**42144 Collector, rent**  
**42145 Clerk, rent**

## **422 CLIENT INFORMATION WORKERS**

Client information workers provide or obtain information directly from customer, via telephone or electronic means such as e-mail related with making travel arrangements, describing the products or services of the organization, registering accommodation guests, greeting visitors, making appointments, connecting telephone calls and interviewing respondents to survey applicants for eligibility payments.

### **4221 TRAVEL CONSULTANTS AND CLERKS**

Travel consultants and clerks supply information, arrange travel itineraries, obtain travel and accommodation reservations and organize group tours.

**Tasks include:**

- obtaining information about the availability, cost and convenience of different types of transport and accommodation, ascertaining customer's requirements and advising them on travel arrangements;
- preparing itineraries;
- making and confirming necessary reservations;
- issuing tickets and vouchers;
- helping customers in obtaining necessary travel documents such as visas;
- preparing bills and receiving payments;
- organizing group tours for business or vacation travel and selling those programme or individuals;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Example of the occupations classified here:**

**42211 Clerk, ticket issuing/travel**  
**42212 Clerk, travel/air lines**  
**42213 Clerk, travel**  
**42214 Clerk, booking**

## **4222 CONTACT/CALL CENTRE INFORMATION CLERKS**

Contact/call centre information clerks, provide advice and information to clients, respond to queries regarding an organization's goods, services or policies to clients via the telephone or electronic communications media, such as email and process financial transactions. They are located in premises that may be far from clients or other operations of the organizations about whom information is provided.

### **Tasks include:**

- receiving clients or patients, noting inquiries and providing relevant information;
- making appointments for clients or patients;
- dealing with incoming calls and messages from clients, whether to answer queries, handle calls for service or sort out complaints;
- identifying requirements and entering events into a computer system;
- dispatching tasks to other units, when relevant;
- invoicing or handling payments, where necessary;
- sending letters, information sheets and other documents to clients;
- advising clients of additional products or services;
- accepting and operating complaint or feedback over service agency from customer;
- dealing with telephone requests for information or appointments;
- directing clients or patients to appropriate location or person;
- take any form of complaints or feedback from customer, related with operation and organization services;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

### **Example of the occupations classified here:**

- 42221 Clerk, appointments**
- 42222 Supervisor, customer service**
- 42223 Sub assistant, information S17**
- 42224 Telemarketer, salesperson**
- 42225 Clerk, call centre**
- 42226 Stewardess, floor**
- 42227 Officer, customer service N17**

## **4223 TELEPHONE SWITCHBOARD OPERATORS**

Telephone switchboard operators operate telephone communications switchboards and consoles to establish telephone connections, receive caller inquiries and service problem reports, and record and deliver messages to staff or clients.

### **Tasks include:**

- operating switchboards and consoles to connect, hold, transfer, and disconnect telephone calls;
- making connections for outgoing calls;
- dealing with telephone inquiries and recording messages;
- forwarding messages to staff or clients;
- investigating operating system problems and informing repair services;
- taking responsibility to accept and continue call in and out all staff, make reports of damage and make trunk call list those made by staff;
- performing related tasks;

- supervising, scheduling and monitoring task of other workers.

**Example of the occupations classified here:**

**42231**    *Operator, telephone (private branch exchange)*  
**42232**    *Switchboard-operator, telephone*  
**42233**    *Telecommunication service supervisor*

#### **4224 HOTEL RECEPTIONISTS**

Hotel receptionists register guests, assign rooms, issue keys, provide information concerning the hotel services, make room reservations, keep a record of rooms available for occupancy and present statements of charges to departing guests and receive payment.

**Tasks include:**

- maintaining an inventory of rooms available for occupancy, reservations and room assignments;
- registering arriving guests, assigning rooms; verifying customer's credit and issuing room keys;
- providing information regarding hotel services and services available in the community;
- providing information about availability of accommodation and making room reservations;
- responding to guests' requests for housekeeping and maintenance services as well as complaints;
- contacting housekeeping or maintenance services when guests report problems;
- compiling and checking guest accounts for charges using computerized or manual systems;
- receiving and forwarding messages in person or using telephone or telephone switchboard;
- reviewing statements of charges to departing guests and receiving payment;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Example of the occupations classified here:**

**42241**    *Receptionist, hotel*  
**42242**    *Clerk, hotel front desk*  
**42243**    *Supervisor, reservation*

#### **4225 ENQUIRY CLERKS**

Enquiry clerks respond to personal, written, electronic mail, and telephone inquiries and complaints about the organization's goods, services and policies, provide information and refer people to other sources. They are employed in locations which put them in direct contact with clients or with the production of the goods and services provided.

**Tasks include:**

- answering inquiries about goods services, and policy and providing information about their availability, location, price and related issues;
- responding to inquiry about problems and providing advice, information and assistance;

- receiving, attending and recording information about inquiries and complaints;
- referring complex inquiries to team leaders or expert advisers;
- issuing relevant forms, information kits and brochures to interested parties;
- serving counter duties and general inquiries;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Example of the occupations classified here:**

**42251 Clerk, customer-complaints**

**42252 Clerk, counter enquiries**

**42253 Clerk, inquiries**

#### **4226 RECEPTIONISTS (GENERAL)**

Receptionists receive and welcome visitors, clients, guests or patients and respond to inquiry and requests including arranging for appointments.

**Tasks include:**

- receiving and welcoming visitors, guests, clients or patients;
- making appointments for clients or patients;
- dealing with telephone requests for information or appointments;
- directing clients or patients to appropriate location or person;
- supplying information pamphlets, brochures or forms;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Example of the occupations classified here:**

**42261 Receptionist**

**42262 Receptionist, medical**

**42263 Receptionist, dental**

**42264 Receptionist, telephone**

**42265 Receptionist, front office**

**42266 Officer, front office**

**42267 Agent, guest service**

#### **4227 SURVEY AND MARKET RESEARCH INTERVIEWERS**

Survey and market interviewers interview people and record their responses to survey and market research questions on a range of topics.

**Tasks include:**

- contacting the individuals by telephone or in person and explaining the purpose of the interview;
- interviewing public for opinions on topics such as public issues or consumer ;
- asking questions following the outlines of questionnaires and surveys;
- recording responses on paper or enter responses directly into a computer database through computer-assisted interviewing systems;
- identifying and resolving inconsistencies in responses;
- providing feedback to survey sponsors concerning problems in obtaining valid data;

- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Example of the occupations classified here:**

**42271** *Market research interviewer*

**42272** *Public opinion interviewer*

**42273** *Survey interviewer*

#### **4229 CLIENT INFORMATION WORKERS NOT ELSEWHERE CLASSIFIED**

Client information workers not elsewhere classified obtain and process information from clients needed to determine eligibility for services.

**Tasks include:**

- interviewing patients to obtain and process information required to provide hospital services;
- interviewing applicants for public assistance to gather information related to their application;
- verifying the accuracy of information provided;
- initiating procedures to grant, modify, deny or terminate assistance;
- providing information and answering questions concerning benefits and claims procedures;
- referring patient or applicant to other organizations if they are ineligible for services;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Example of the occupations classified here:**

**42291** *Clerk, hospital admission*

**42292** *Interviewer, eligibility*

**42293** *Specialist, eligibility*

#### **43 NUMERICAL AND MATERIAL RECORDING CLERKS**

Numerical clerks and material recording clerks obtain, compile and compute accounting, bookkeeping, statistical, financial, and other numerical data, and take charge of cash transactions incidental to business matters. Some occupations classified here keep records of goods produced, purchased, stocked, dispatched, and of materials needed at specified production dates, or keep records of operational aspects and coordinate the timing of passenger and freight transport.

**This sub-major group consists of the following minor groups:**

**431** **NUMERICAL CLERKS**

**432** **MATERIAL-RECORDING AND TRANSPORTATION CLERKS**

**431** **NUMERICAL CLERKS**

Numerical clerks obtain, compile and compute accounting, bookkeeping, statistical, financial, and other numerical data, and take charge of cash transactions incidental to business matters.

## **4311 ACCOUNTING AND BOOKKEEPING CLERKS**

Accounting and bookkeeping clerks compute, classify, and record numerical data to keep financial records complete. They perform any combination of routine calculating, posting, and verifying duties to obtain primary financial data for use in management of accounting records.

### **Tasks include:**

- checking figures, postings, and documents for correct entry, mathematical accuracy and proper codes;
- operating computers programmed with accounting software to record, store, and analyse information;
- classifying, recording, and summarizing numerical and financial data to compile and keep financial records, using journals and ledgers or computers;
- calculating, preparing, and issuing bills, invoices, account statements, and other financial statements according to established procedures;
- compiling statistical, financial, accounting or auditing reports and tables pertaining to such matters as cash receipts, expenditures, payable and receivable accounts, and profits and losses;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

### **Example of the occupations classified here:**

**43111 Bookkeeper**

**43112 Clerk, account**

**43113 Sub assistant, appraiser W17**

**43114 Sub assistant, auditor W17**

**43115 Clerk, bank**

**43116 Sub assistant, accountant W17**

**43117 Clerk, office cash**

**43118 Sub assistant, administrative finance W17**

## **4312 STATISTICAL, FINANCE AND INSURANCE CLERKS**

Statistical, finance and insurance clerks obtain, compile and compute statistical data, or actuarial data or perform clerical tasks related with the transactions of insurance, bank and other financial establishments.

### **Tasks include:**

- obtaining and compiling statistical or actuarial data based on routine or special source of information;
- calculating totals, averages, percentages and other details and presenting them in required tabular form;
- preparing financial documents and calculating interest or brokerage charges and stamp duties payable;
- maintaining records of bonds, shares and other securities bought or sold on behalf of clients or employer;
- taking responsibility to set questionnaire sample, data collection and provide census report;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

### **Example of the occupations classified here:**

- 43121** *Clerk, statistical*
- 43122** *Clerk, grading*
- 43123** *Enumerator, field*
- 43124** *Sub assistant, statistician E17*
- 43125** *Sub assistant, economic affair E17*
- 43126** *Sub assistant, evaluation W17*
- 43127** *Sub assistant, research Q17*
- 43128** *Assistant, insurance/adjustment*

### **4313 PAYROLL CLERKS**

Payroll clerks collect, verify and process payroll information and compute wages and benefit eligibility for employees in a department, company or other establishment.

#### **Tasks include:**

- managing records of employee attendance, leave and overtime to calculate wages and benefit eligibility, using manual or computerized systems;
- preparing and verifying statements of earnings for employees, indicating gross and net salaries and deductions such as taxes, union dues, garnishments and insurance and pension plans;
- preparing employee payments and benefit payments by cheque or electronic transfer;
- reviewing time sheets, work charts, wage computation, and other information to detect and reconcile payroll discrepancies;
- verifying attendance, hours worked, and pay adjustments, and posting information onto designated records;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

#### **Example of the occupations classified here:**

- 43131** *Clerk, payroll*
- 43132** *Paymaster*

### **432 MATERIAL - RECORDING AND TRANSPORTATION CLERKS**

Material-recording and transport clerks keep records of goods produced, purchased, stocked, dispatched, and of materials needed at specified production dates, or keep records of operational aspects and coordinate the timing of passenger and freight transport.

### **4321 STOCK CLERKS**

Stock clerks maintain records of goods produced and production materials received, weighed, issued, dispatched or put into stock.

#### **Tasks include:**

- arranging and controlling receipt and dispatch of goods and keeping relevant records;
- maintaining stock records, verifying issue of goods, estimating needs and making requisitions of new stocks;
- advising the employer on very slow moving and obsolete items;

- receiving, storing and issuing tools, spare parts or various equipment and maintaining relevant records;
- weighing goods received, issued, produced or dispatched and maintaining relevant records;
- arranging the clearance and collection of imported cargo from customs or bond stores and arranging the shipment of cargo for export;
- compiling inventories of furniture and other items received for storage;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Example of the occupations classified here:**

**43211 Assistant, store**  
**43212 Clerk, estate/plantation stock**  
**43213 Clerk, weighbridge**  
**43214 Clerk, shipping**  
**43215 Clerk, tally**  
**43216 Clerk, inventory**  
**43217 Clerk, cargo**  
**43218 Clerk, import-export**

#### **4322 PRODUCTION CLERKS**

Production clerks compute quantities of materials required at specified dates for the production programmed, and prepare and check production operation schedules.

**Tasks include:**

- examining customers' orders for goods and services;
- computing quantities, qualities and types of materials required by production programmed;
- preparing production schedules, ensuring the availability of materials are available when required, and keeping relevant records;
- verifying stocks, arranging deliveries and investigating delays;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Example of the occupations classified here:**

**43221 Clerk, production control**  
**43222 Clerk, tooling**  
**43223 Clerk, power plant**  
**43224 Clerk, planning/production**  
**43225 Clerk, local sales**  
**43226 Clerk, technical**  
**43227 Clerk, quality assurance**  
**43228 Sub assistant inspector, factory and machinery J17**

#### **4323 TRANSPORTATION CLERKS**

Transportation clerks keep records of operational aspects and coordinate the timing of train, road, air and waterborne passenger and freight transport, and prepare reports for management.



**Tasks include:**

- keeping record of operational aspects and co-ordinating the timing of passenger and freight transport;
- directing train routings within a division or zone of a railway system and keeping related records;
- directing, controlling and keeping records of freight handling at the railway yard;
- co-ordinating and keeping records of operational activities concerning road transport such as allocation and scheduling of vehicles and drivers, loading and unloading of vehicles and storage of goods in transit;
- coordinating and keeping records of operational activities concerning air and water transport of passengers and freight such as passenger lists and freight manifests;
- taking responsibility to accept, processing and send fixed telecommunications network messages and checks and confirmed message transmission received;
- preparing reports for management;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Example of the occupations classified here:**

**43231 Clerk, logistic**

**43232 Clerk, goods transportation/railway**

**43233 Dispatcher, clerical/road transport (except bus and truck)**

**43234 Clerk, air transport operations**

**43235 Dispatcher, clerical/oil pipeline**

**43236 Supervisor, jetty N3**

**43237 Coordinator, shipping**

**43238 Sub assistant, air traffic control A17**

**44 OTHER CLERICAL SUPPORT WORKERS**

Other clerical support workers perform clerical duties in newspapers, courts, libraries and post offices, file documents, prepare information for processing, maintain personnel records, check material to ensure consistency with original source and write on behalf of illiterate persons.

**This sub-major group consists of the following minor groups:**

**441 OTHER CLERICAL SUPPORT WORKERS**

**441 OTHER CLERICAL SUPPORT WORKERS**

Other clerical support workers perform clerical duties in newspapers, courts, libraries and post offices, file documents, prepare information for processing, check material to ensure consistency with original source, maintain personnel records and write on behalf of persons who are unable to read or write.

**4411 LIBRARY CLERKS**

Library clerks issue and receive library materials, sort and organize the book shelves and provide general library information to users.

**Tasks include:**

- issuing and receiving library books and other materials;

- reshelving books and other library materials on the shelves;
- performing clerical activities such as manual and electronic filing, word processing and occasional typing;
- maintaining journal subscriptions;
- assisting library users in accessing basic library materials and making inter-library loans;
- maintaining library records related with the acquisition, issue and return of books and other publications;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Example of the occupations classified here:**

**44111 Clerk, library**

**44112 Assistant, library**

**44113 Filer, library**

**44114 Sub assistant, librarian S17**

#### **4412 MAIL CARRIERS AND SORTING CLERKS**

Mail carriers and sorting clerks perform sort, record, delivery and other duties related with mail services from post offices or related organizations as well as from within an establishment.

**Tasks include:**

- performing mail-handling duties in public post office;
- sorting and delivering mail to private houses and elsewhere;
- sorting and keeping simple records of incoming and outgoing correspondence and dispatching outgoing mail in various establishments;
- responsible in giving summons to the defendant and get receiver signature, provide endorsement of service, provide affidavit delivery and make sure summons signed as acceptance and delivered affidavit;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Example of the occupations classified here:**

**44121 Postman**

**44122 Clerk, mail/despatch**

**44123 Summon server**

**44124 Clerk, mail/sorting**

**44125 Clerk, mail**

**44126 Notice server N3**

#### **4413 CODING, PROOF-READING AND RELATED CLERKS**

Coding, proof-reading and related clerks convert information into codes, verify and correct proofs and perform various clerical duties.

**Tasks include:**

- converting information into codes and classifying information by codes for data-processing purposes;
- comparing proofs of texts and related material prepared for printing with original material, correcting errors and marking texts for printer in accordance with the requirement's set;
- sorting forms and marking them with identification numbers;
- sorting documents for filing or to collate sets of pages;
- taking responsibility to read internal proof for printing, supervise printing works, arrangement and binding;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Example of the occupations classified here:**

**44131** *Proof-reader, clerical*

**44132** *Clerk, coding/statistics*

#### **4414 SCRIBES AND RELATED WORKERS**

Scribes and related workers write letters and complete forms on behalf of persons who are unable to read or write.

**Tasks include:**

- reading letters and other written matter to illiterate persons and providing necessary interpretation and information;
- writing letters and completing forms on behalf of illiterate persons;
- offering advice to individuals and interpreting and helping with the completion of government and other official forms;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Example of the occupations classified here:**

**44141** *Petition writer*

**44142** *Public writer*

**44143** *Scribes*

#### **4415 FILING AND COPYING CLERKS**

Filing and copying clerks file correspondence, cards, invoices, receipts, and other records in alphabetical or numerical order or according to the filing system used. They locate and remove material from file when requested and photocopy, scan or fax documents.

**Tasks include:**

- sorting or classifying materials according to guidelines such as content, purpose, user criteria, or chronological, alphabetical, or numerical order;
- filing material in drawers, cabinets and storage boxes;
- locating and remove materials from files when requested;
- keeping records of materials filed and removed;
- photocopying, scanning or faxing documents and other records;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Example of the occupations classified here:**

- 44151 Clerk, filing**
- 44152 Clerk, photocopying**
- 44153 Clerk, document copyist**
- 44154 Officer, document controller**
- 44155 Controller, document**
- 44156 Coordinator, document**
- 44157 Officer, document**

#### **4416 PERSONNEL CLERKS**

Personnel clerks maintain and update personnel records such as information on transfers and promotions, performance evaluations, employee leave taken and accumulated, salaries, qualifications and training.

**Tasks include:**

- updating information on, employment history, salaries, performance evaluations, and training and leave taken and accumulated;
- initiating records for newly appointed workers and checking records to ensure a complete record;
- processing applications for employment and promotions and advising applicants on their application results;
- receiving and answering inquiries about qualifications and employment entitlements and conditions;
- organizing the advertisement on job applications and announcements of job openings and job examinations;
- maintaining and updating manual and computerized filing and registration systems, and compiling and preparing reports and documents relating to personnel activities;
- storing and retrieving personnel records and files on request;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Example of the occupations classified here:**

- 44161 Sub assistant, pupils management N17**
- 44162 Sub assistant, industrial relation N17**
- 44163 Sub assistant, registration KP17**
- 44164 Sub assistant, social development S17**
- 44165 Sub assistant, social research N17**
- 44166 Inspector, fingerprint N17**
- 44167 Clerk, employment**
- 44168 Clerk, probate**

#### **4419 CLERICAL SUPPORT WORKERS NOT ELSEWHERE CLASSIFIED**

This unit group covers clerks not classified elsewhere in Minor Group 441: Other Clerical Support Workers.

**Tasks include:**

- preparing dockets or calendars of cases to be called, using typewriters or computers;
- preparing, recording and issuing orders of the court, including probation orders, release documentation, sentencing information, and summonses;
- receiving customers orders for classified advertising, writing and editing copy, calculating advertising rates and preparing customers bill;
- writing business and government correspondence such as replies to requests for information and assistance, damage claims, credit and billing enquiries and service complaints;
- assisting in the preparation of periodicals, advertisements, catalogues, directories and other material for publication;
- performing related tasks;
- supervising, scheduling and monitoring task of other workers.

**Example of the occupations classified here:**

- 44191 Sub assistant, Islamic affairs S17**
- 44192 Bailif**
- 44193 Sub assistant, conservation S17**
- 44194 Sub assistant, anti-drug S17**
- 44195 Sub assistant, legal administrative S17**
- 44196 Sub assistant, Syariah LS17**
- 44197 Sub assistant, archives S17**
- 44198 Sub assistant, museum S17**

**MAJOR GROUP**



**SERVICE  
AND  
SALES WORKERS**

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**2008**

**2<sup>nd</sup> Edition**

# Major Group 5:

## SERVICE AND SALES WORKERS

Service and sales workers provide personal services related to travel, cooks, waiter and bartenders, hairdressers, beauticians, building and housekeeping supervisors, service workers and personal care, or protection against fire and unlawful acts, or they pose as models for artistic creation and display, or demonstrate and sell goods in wholesale or retail shops and similar establishments as well as at stalls and markets. Most occupations in this major group require skills at the second skill level.

**This major group consists of the following sub-major groups:**

- 51 PERSONAL SERVICE WORKERS**
- 52 SALES WORKERS**
- 53 EDUCATION AND SOCIAL SERVICES WORKERS**
- 54 PROTECTIVE SERVICES WORKERS**

### **51 PERSONAL SERVICE WORKERS**

Personal service workers provide personal and services related to travel, cooks, waiters and bartenders, hairdressers, beauticians, building and housekeeping supervisors and other personal service workers.

**This sub-major group consists of the following minor groups:**

- 511 TRAVEL ATTENDANTS, CONDUCTORS AND TRAVEL GUIDES**
- 512 COOKS**
- 513 WAITERS AND BARTENDERS**
- 514 HAIRDRESSERS, BEAUTICIANS AND RELATED WORKERS**
- 515 BUILDING AND HOUSEKEEPING SUPERVISORS**
- 516 OTHER PERSONAL SERVICES WORKERS**

### **511 TRAVEL ATTENDANTS, CONDUCTORS AND GUIDES**

Travel attendants, conductors and guides provide various personal services in connection with traveling by aircraft, train, ship, bus or other vehicles, and escorting individuals and groups on travel tours, sightseeing visits and excursions.

#### **5111 TRAVEL ATTENDANTS AND TRAVEL STEWARDS**

Travel attendants and travel stewards render personal services to ensure the comfort and safety of passengers. These include serving meals and beverages and co-ordinating housekeeping and social activities.

**Tasks include:**

- greeting passengers entering aircraft, conducting them to their seats, ensuring that seat- belts are fastened and "no smoking" and similar signs are obeyed;
- conducting safety checks and demonstrating the use of safety equipment such as life belts and oxygen masks and assisting passengers in case of emergencies;
- distributing reading material, headphones, blankets and similar items and answering passengers' inquiries;

- serving pre-prepared meals and refreshments;
- selling duty-free goods to passengers;
- administering minor medical aide to passengers in need;
- taking care of general needs and comfort of ship's and train's passengers;
- performing related tasks;
- supervising other workers.

**Examples of the occupations classified here:**

**51111** *Attendant, ship's cabin*  
**51112** *Steward, supervisor*  
**51113** *Steward, floor*  
**51114** *Attendant, flight*  
**51115** *Stewardess, flight*  
**51116** *Steward, train*  
**51117** *Attendant, airport*

## **5112 TRANSPORT CONDUCTORS**

Transport conductors collect or issue tickets and take care of safety and comfort on trains, trams, buses and other modes of public transport.

**Tasks include:**

- collecting or issuing tickets, passes or fares, or checking the validity of ticket issued previously;
- taking care of sleeping-car on a passenger train, including checking passengers' tickets, their safety and information requests;
- ensuring that safety regulations are respected;
- giving information to passengers especially about terminals and connections;
- co-operating with the driver in conformity with time schedules;
- taking appropriate action in case of emergencies;
- taking responsibility to help station supervisor or Operation Executive, supervise and overcome traffic operation problem, staff, trade and others in order to give efficient and economic service to train passengers;
- performing related tasks;
- supervising other workers.

**Examples of the occupations classified here:**

**51121** *Conductor, bus*  
**51122** *Inspector, ticket*  
**51123** *Guard, passenger train*  
**51124** *Attendant, sleeping car*  
**51125** *Manager, station N19*

## **5113 TRAVEL GUIDES**

Travel guides accompany individuals or groups on sightseeing tours or excursions, describe points of interest and provide other guide services.

**Tasks include:**

- escorting tourists and looking after their comfort;



- ensuring that reservations for transportation and accommodations are confirmed and prepared itineraries are met;
- accompanying tourists on sightseeing tours and describing points of interest;
- accompanying tourists to museums and exhibitions and giving information on exhibits;
- guiding groups through factories and similar establishments and giving relevant information;
- conducting excursions such as mountain climbing, hunting or fishing;
- collecting admission fees;
- performing related tasks;
- supervising other workers.

**Examples of the occupations classified here:**

**51131** *Guide, tourist*

**51132** *Guide, art gallery*

**51133** *Guide, factory tour*

**51134** *Guide, travel/sightseeing*

**512** **COOKS**

Cooks plan, organize, prepare and cook foodstuffs in hotels, restaurants and other public eating places, on board ships, on passenger trains, private households and other institutions or establishments. Collaborate with other personnel to plan and develop recipes and menus, taking into account such factors as seasonal availability ingredients and the likely number of customers.

**5120** **COOKS**

Cooks plan, organize, prepare and cook foodstuffs in hotels, restaurants and other public eating places, on board ships, on passenger trains, private households and other institutions or establishments.

**Tasks include:**

- planning meal and menus, ordering food supplies and preparing and cooking foodstuffs;
- monitoring quality at all stages of preparation and presentation and enforcing hygiene regulations;
- demonstrating techniques and advising on cooking procedures;
- planning, supervising and co-ordinating work in the kitchen;
- ensuring cleanliness of kitchen staff, dishes, utensils, kitchen equipment and work areas;
- organizing food promotions;
- taking responsibility in determining dry and wet ingredients for cooking, accept and checking essential goods cooking, provide ripe materials, preserving cleanliness of equipment and kitchen area, ensure that kitchenware was stored, locked and in good conditions;
- performing related tasks;
- supervising other workers.

**Examples of the occupations classified here:**

**51201** *Kitchen coordinator*

**51202** *Cook, ship*

- 51203** *Cook, private service*
- 51204** *Cook, food canning & preserving*
- 51205** *Cook N1*

### **513** **WAITERS AND BARTENDERS**

Waiters and bartenders serve food and beverages in commercially-operated dining and drinking places, clubs, institutions and canteens, on board ships and on passenger trains.

#### **5131** **WAITERS AND WAITRESS**

Waiters and waitress greet customers, escort them to seats and hand them menus, take food and drink orders, and serve food and beverages. They also answer question, explain menu items and specials, and keep tables and dining areas clean and set for new diners.

##### **Tasks include:**

- setting and arranging tables and escorting guests to the table;
- presenting menu and recommending customers of menu items;
- taking orders and serving food and beverages;
- advising on the choice of wines and serving them;
- serving alcoholic and non-alcoholic drinks at a bar;
- presenting bills to patrons and accepting payments;
- performing related tasks;

##### **Examples of the occupations classified here:**

- 51311** *Waiter, head*
- 51312** *Dang pawara*
- 51313** *Waiter and waitress, food and beverage*
- 51314** *Supervisor, food and beverage*
- 51315** *Food and beverage worker, banquet*
- 51316** *Food and beverage worker, room service*
- 51317** *Food and beverage worker*

#### **5132** **BARTENDERS**

Bartenders mix and serve drinks to patrons directly or through wait staff. Collect money for drinks served; check identification of customers in order to verify age requirements for purchase of alcohol and attempt to limit problems to customers' excessive drinking by taking steps such as persuading customers to stop drinking or ordering taxis or other transportation for drunk visitors.

##### **Tasks include:**

- setting and arranging tables and escorting guests to the table;
- presenting menu and recommending customers of menu items;
- taking orders and serving food and beverages;
- advising on the choice of wines and serving them;
- serving alcoholic and non-alcoholic drinks at a bar;
- presenting bills to customers and accepting payments;
- cleaning glasses, utensils and bar equipments;
- planning, organizing, and controlling the operation of bar;

- preparing appetizers, such as pickles, cheese and cold meats;
- performing related tasks.

**Examples of the occupations classified here:**

**51321** *Bartender*

**51322** *Assistant, bartender*

**51323** *Food and beverage barmen*

## **514 HAIRDRESSERS, BEAUTICIANS AND RELATED WORKERS**

Hairdressers, beauticians and related workers cut and dress hair, shave and trim beards, give beauty treatment, apply cosmetics and make-up and give other kinds of treatment to customers in order to improve their appearance.

### **5141 HAIRDRESSERS**

Hairdressers provide beauty services such as shampooing, cutting, coloring and styling hair and massaging and treating scalp, may also apply make-up, dress wigs, perform hair removal and provide nail and skin care services.

**Tasks include:**

- cutting, washing, colouring and waving hair; and shaving or trimming beards;
- giving scalp treatment;
- fitting wigs according to customer's requirements;
- cleaning and applying creams, lotions and related products to face and other parts of body;
- giving facial and body massage;
- applying make-up to clients of a beauty parlour;
- applying make-up to actors and other performers;
- cleaning, shaping and polishing finger and toe-nails and treating minor ailments of the human foot such as corns, calluses or deformed toe-nails;
- attending to clients taking baths and administering elementary massage;
- performing related tasks;
- supervising other workers.

**Examples of the occupations classified here:**

**51411** *Hairdresser*

**51412** *Barber*

**51413** *Hairstylist*

### **5142 BEAUTICIANS AND RELATED WORKERS**

Beauticians and related workers gives various forms of beauty treatment to customers; examines customer's skin and suggests suitable treatment, apply cosmetics and make-up and give other kinds of treatment to individuals to improve their appearance.

**Tasks include:**

- cleaning and applying creams, lotions and related products to face and other parts of body;

- giving facial and body massage;
- applying make-up to clients;
- applying make-up to actors and other performers;
- shaping, coloring and giving other treatments to eyebrows and eyelashes;
- doing tint or dye hair, and give scalp treatment;
- cleaning, shaping and polishing finger and toe-nails and treating minor ailments of the human foot such as corns, calluses or deformed toe-nails;
- cleaning, shape and polish finger nails;
- preparing special cosmetics for individual clients;
- attending to clients taking baths and administering elementary massage;
- applying make-up to artistes, announcers and other persons appearing on stage in film or television cameras;
- taking responsibility to help make-up artists, supply all plans either within or outside studio/ location and hairdressing according to plan which has been prescribed;
- preparing necessary materials such as latex or plastic masks, wigs and beards;
- performing related tasks;
- supervising other workers.

**Examples of the occupations classified here:**

**51421 Beautician**

**51422 Mak andam**

**51423 Manicurist**

**51424 Pedicurist**

**51425 Aesthetician**

**51426 Beautician B11**

## **515 BUILDING AND HOUSEKEEPING SUPERVISORS**

Building and housekeeping supervisors coordinate, schedule, and supervise the work of cleaners and other housekeeping staff in commercial, industrial and residential premises. They take responsibility for housekeeping and caretaking functions in hotels, offices, apartments, houses and private dwellings.

### **5151 CLEANING AND HOUSEKEEPING SUPERVISORS IN OFFICES, HOTELS AND OTHER ESTABLISHMENTS**

Cleaning and housekeeping supervisors in offices, hotels and other establishments organize, supervise and carry out housekeeping functions in order to keep clean and tidy the interiors and fixtures of hotels, offices and other establishments, as well as of aircraft, trains, buses and similar vehicles.

**Tasks include:**

- training, discharging, organising and supervising helpers, cleaners and other housekeeping staff;
- purchasing or controlling the purchase of supplies;
- controlling storage and issue of supplies;
- supervising general welfare and conduct individuals in institutions;
- sweeping or vacuum-cleaning, washing and polishing floors, furniture and other fixtures;
- making beds, cleaning bathrooms, supplying towels, soap and related items;
- cleaning kitchens and generally helping with kitchen work, including dishwashing;
- restocking minibars and replenishing items such as drinking glasses and writing equipment;

- taking responsibility to set clothing all television programme, staff work tabulation unit clothing, deal get clothing sponsoring and ensure suitability from the aspect fashion and colour, determine clothing cleanliness in hand and operate laundry business after plan recording;
- taking responsibility to handle hostel administration, managing accommodation in a hostel, supervising kitchen and dining hall, examining raw material, food testing and supervising employee, and kitchenware and hostel;
- performing related tasks;
- supervising other workers.

**Examples of the occupations classified here:**

- 51511** *Supervisor, banquet/hotel & lodging*
- 51512** *Assistant supervisor, housekeeping*
- 51513** *Captain, floor*
- 51514** *Assistant, wardrobe*
- 51515** *Housekeeper, hotel*
- 51516** *Supervisor, wardrobe N17*
- 51517** *Matron, housekeeping*
- 51518** *Supervisor, hostel N17*

#### **5152 DOMESTIC HOUSEKEEPERS**

Domestic housekeepers organize, supervise and carry out housekeeping functions in private households with or without the support of subordinate staff.

**Tasks include:**

- supervising workers employed in households as domestic staff;
- purchasing or controlling the purchase of supplies;
- controlling storage and issue of supplies;
- assisting in cases of minor injury or illness by performing tasks such as taking temperature, giving medicine, putting on bandages;
- sweeping or vacuum-cleaning, washing and polishing floors, furniture and other fixtures;
- making beds, cleaning bathrooms, supplying towels, soap and related items;
- taking care of household pets and plants, receiving visitors, answering telephones, delivering messages and shopping for groceries;
- preparing and cooking meals, setting and clearing tables and serving food and beverages;
- cleaning kitchens and generally helping with kitchen work, including dishwashing;
- performing related tasks;
- supervising other workers.

**Examples of the occupations classified here:**

- 51521** *Steward, floor/hotel and lodging*
- 51522** *Maid, linen*
- 51523** *Assistant, linen housekeeping*
- 51524** *Worker, housekeeping*

#### **5153 BUILDING CARETAKERS**

Building caretakers take care of apartment, houses, hotels, offices, churches and other

buildings and maintain them in a clean and in proper condition. They may supervise other workers and contractors depending on the size and nature of the building concerned.

**Tasks include:**

- supervising the work of cleaning, housekeeping and building maintenance staff and contractors;
- participating in cleaning, simple repairs and maintenance of interiors building;
- tending furnaces and boilers to ensure provision of heat and hot water;
- regulating conduct of tenants and visitors in such matters as noise abatement or misuse of property;
- providing small services to absent tenants such as accepting deliveries on their behalf or providing requested information to callers;
- notifying management and owners of buildings of the need for major repairs;
- patrolling buildings to ensure security is maintained;
- filling out registration forms and providing tenants with copies of rules;
- performing related tasks;
- supervising other workers.

**Examples of the occupations classified here:**

**51531** *Cleaner, building*

**51532** *Supervisor, recreation*

**51533** *Chief, concierge*

**51534** *Siak/nuja*

**516 OTHER PERSONAL SERVICES WORKERS**

Other personal services workers perform various tasks in order to improve the appearance of individuals, provide companionship or look after the wardrobe and other personal effects of employers or provide embalming and funeral services.

**5161 ASTROLOGERS, FORTUNE-TELLERS AND RELATED WORKERS**

Astrologers, fortune-tellers and related workers predict future events in persons' lives by practicing astrology or related techniques and give warnings and advice on possible courses of action.

**Tasks include:**

- casting horoscopes of individuals at birth or later to recount past and forecast future events and conditions of their lives;
- determining auspicious times for various human activities such as inaugurations, marriages, journeys and other religious ceremonies;
- studying the influence of the constellation of stars and of other phenomena on a person's life and situation;
- interpreting characteristics of client's palms, samples of playing cards, etc.;
- advising individuals on precautions to be taken to avoid evil influences;
- performing related tasks.

**Examples of the occupations classified here:**

**51611** *Astrologer*

**51612** *Palmist*

**51613** *Fortune-teller*

**51614** *Numerologist*

## **5162 COMPANIONS AND VALETS**

Companions and valets provide companionship and attend to various personal needs of the employer.

### **Tasks include:**

- providing companionship to employer by accompanying him/her to various places, reading, conversing and participating in activities such as sports;
- assisting in entertaining visitors in employer's home;
- keeping wardrobe and personal effects of the employer in a proper conditions;
- performing related tasks.

### **Examples of the occupations classified here:**

**51621** *Companion*

**51622** *Valet/ Personal maid*

## **5163 UNDERTAKERS AND EMBALMERS**

Undertakers and embalmers perform various tasks in the funeral of dead human bodies.

### **Tasks include;**

- making arrangements for, and conducting funerals, cremations and burials;
- embalming human bodies to retard or repress the process of decay;
- puncturing internal organs through abdomen to remove natural fluids and gases;
- restoring maimed or disfigured bodies to their normal appearance by affixing pieces of moulded wax, plaster-of-Paris or other materials to injured portions of body;
- making arrangements for and conducts funerals;
- interviewing family to obtain data about the deceased and other information and completes documents;
- bathe dead bodies and wrap them with kavan.
- performing related tasks.

### **Examples of the occupations classified here:**

**51631** *Undertaker*

**51632** *Embalmer*

**51633** *Attendant, crematorium*

## **5164 PET GROOMERS AND ANIMAL CARE WORKERS**

Pet groomers and animal care workers care for animals, training and performing with animals in zoo, bird and aquatic parks, they include animal caretakers and animal trainers - feed, drink, groom, bathe and exercise animals and clean, disinfect and repair their cages and also specialize in grooming or maintaining a pet's appearance.

### **Tasks include:**

- caring for animals in zoo, bird and aquatic parks;

- understanding and apply techniques required to feed, handle, train & groom animals;
- cleaning and disinfect cages and surrounding areas and to shampoo, clip and groom animals;
- monitoring and documenting animal behavior and to prepare food and feed animals, fish and birds at scheduled intervals;
- assisting scientist and researches in conducting laboratory tests with a animals;
- handling and nurturing animals when assisting breeders and in training dogs to obey commands and perform specific duties in response to signals;
- playing with the animals, provide companionship and observe behavioral changes that could indicate illness or injury;
- cleaning and sanitizing equipment to prevent the spread of disease, maintain grooming equipment and maintain clear scheduled appointment, discuss the needs of animal grooming with clients and collect information on the pet's disposition and its voter groomers often are the first to notice medical problem, such as ear or skin infection that requires veterinary care;
- training and performing with animals;
- performing related tasks;

**Examples of the occupations classified here:**

**51641** *Aide, veterinary*

**51642** *Caretaker, animal*

**51643** *Keeper in zoo, bird and aquatic parks*

**5165 DRIVING INSTRUCTORS**

Driving instructors is responsible for teaching a student to drive and maintaining the safety of the people in his or her vehicle. They must demonstrate proper driving techniques and keeping watch of the students' driving techniques.

**Tasks include:**

- teaching student the rules of driving;
- teaching student road safety;
- teaching student to manoeuvre the car;
- keeping student safe by operating dual controls ( e.g. brakes and mirrors);
- monitoring the student driving techniques;
- taking responsibility in teaching students;
- maintenance of car;
- performing related tasks.

**Examples of the occupations classified here:**

**51651** *Instructor, driving*

**5169 PERSONAL SERVICES WORKERS NOT ELSEWHERE CLASSIFIED**

Personal services workers not elsewhere classified in Minor Group 516: Other Personal Service Worker. This unit group performs miscellaneous tasks in the maintenance of law and order in the protection of property.

**Tasks include:**



- guarding industrial plants, warehouses or other properties against fire, theft or illegal entry or accompanying vehicles transporting cash or monitoring activities in swimming or boating areas and rescuing persons in danger of rehabilitation or detention centres;
- providing personal protection to individuals from assault;
- patrolling areas to detect contravention of traffic in public through performing the duties of a bodyguard;
- patrolling beaches and swimming pools to prevent accidents and to rescue bathers from drowning;
- patrolling natural reserves, game parks, forest areas and enclosures to prevent theft and killing of game;
- performing various underwater tasks, relating to salvage work or recovering dead bodies;
- taking responsibility to help in works law enforcement and prosecution, accident investigation and marine pollution and gathering information relating to enforcement of law, prosecution and investigation;
- taking responsibility to control security and rescue swimming-pool users and boat users on the lake;
- performing related tasks.

**Examples of the occupations classified here:**

**51691 Lifeguard**  
**51692 Bodyguard**  
**51693 Diver**  
**51694 Rescue diver**  
**51695 Coastguard**  
**51696 Lifeguard N1**

## **52 SALES WORKERS**

Sales workers in this major group are engaged in, or directly associated with, buying and selling goods and services of all kinds and in conducting wholesale and retail business on their own behalf or managing them on behalf of other.

**This sub-major group consists of the following minor groups:**

**521 STREET AND MARKET SALESPERSONS**  
**522 SHOP SALESPERSONS**  
**523 CASHIER AND TICKET CLERKS**  
**524 OTHER SALES WORKERS**

### **521 STREET AND MARKET SALESPERSONS**

Street and market salespersons sell various goods at stalls which are usually placed, by license, at particular places in streets or other open spaces, or they sell fruits, vegetables and other, mostly perishable foodstuffs at markets.

#### **5211 STALL AND MARKET SALESPERSONS**

Stall and market salespersons sell various goods such as leather or textile craft products, wood carvings, embroidery, lace, or newspapers, periodicals, postcards, cigarettes, chocolates and ice creams, at stalls usually grouped at particular places in streets or other open spaces by permission of the relevant local authorities, or they sell fruits, vegetables and other, mostly perishable foodstuffs at markets.

**Tasks include:**

- obtaining from the local authorities permission to set up a stand at a particular place in street or other open spaces;
- buying or contracting a regular supply of various goods to be sold such as a leather or textile craft products, wood carvings, embroidery or lace, displaying them on stands and selling them;
- buying or contracting a regular supply of newspapers, periodicals, postcards, cigarettes, chocolates, ice-creams and selling them at kiosks;
- buying from wholesale markets, or directly from farmers', fresh fruits and vegetables or other, mostly perishable foodstuffs and selling them at markets;
- displaying or demonstrating products and explaining qualities of products to customers;
- receiving payment and keeping accounts;
- wrapping or packing goods sold and reporting or resolving customer complaints;
- obtaining reusable materials from industrial, commercial and private establishments for resale;
- performing related tasks.

**Examples of the occupations classified here:**

**52111** *Salesperson, street stall*  
**52112** *Salesperson, market*  
**52113** *Salesperson, kiosk*  
**52114** *Assistant, counter sales/promoter*  
**52115** *Florist*

**5212 STREET FOOD SALESPERSONS**

Street food salespersons sell various goods at stalls which are usually placed, by license, at particular places in streets or other open spaces, or they sell fruits, vegetables and other, mostly perishable foodstuffs at markets.

**Tasks include:**

- obtaining from the local authorities permission to set up a stand at a particular place in streets or other open spaces;
- loading and unloading goods for sale;
- selling various goods like fruits, vegetables and other, mostly perishable foodstuffs at markets;
- performing related tasks.

**Examples of the occupations classified here:**

**52121** *Hawker (prepared food and drinks)*  
**52122** *Vendor, street/food*

**522 SHOP SALESPERSONS**

Shop salespersons sell various goods in wholesale establishments to retailers and large-scale consumers or to customers in retail establishments.

## **5221 SHOP KEEPERS**

Shop keepers own and manage a shop and selling goods and services usually grouped at particular places in streets or other open spaces.

### **Tasks include:**

- loading and unloading goods for sale;
- receiving payment and keeping accounts;
- stacking and displaying items for sales;
- advising customers on the selection, price, delivery, use and care of goods and services;
- writing bill, invoice, docket or receipt;
- checking stock and participating in stock takes;
- performing related tasks;
- supervising other workers.

### **Examples of the occupations classified here:**

**52211 Shop keeper**

## **5222 SHOP SUPERVISORS**

Shop supervisors supervise workers engaged in selling activities in wholesale and retail establishments or sales departments or other establishments.

### **Tasks include:**

- estimating the types, qualities and quantities of goods required by their customers and ensuring adequate stocks;
- supervising traveling sales and other sales staff;
- ensuring that credit and security procedures are observed;
- planning, organizing and developing various types of insurance business;
- supervising workers in a wholesale trade establishment engaged in buying goods for resale and selling them to retailers and to industrial, commercial and other large consumers;
- estimating needs of business, purchase or authorizes the purchases of goods of the types, qualities and quantities required, usually under the general direction of the proprietor or manager;
- supervising and instructs sales and other staff or sales department in their day-to-day work;
- ensuring that credit and other sales policies of the undertaking are observed;
- contacting business or private individuals by telephone to solicit sales for good or services;
- checking stock and participating in stock takes;
- performing related tasks;
- supervising other workers.

### **Examples of the occupations classified here:**

**52221 Supervisor, sales**

## **5223 SHOP SALES ASSISTANTS**

Shop sales assistants sell goods or product in wholesale establishments to retailers and large-scale consumers or to customers in retail establishments and explain functions and qualities of the product.

### **Tasks include:**

- moving goods to be sold from storage area to sales area and placing them on display;
- explain functions and qualities of the product;
- ascertaining nature and quality of the product desired by the customer;
- assisting customers in making a choice;
- quoting prices, credit terms and discounts;
- packing and arranging delivery of goods, if necessary;
- writing bill, invoice, docket or receipt;
- varying cashier's receipt, if necessary;
- giving demonstrations of articles on sale in order to inform customers about their characteristics and mode of use, as well as to stimulate buying interest;
- performing related tasks.

### **Examples of the occupations classified here:**

**52231** *Assistant, sales*

**52232** *Salesperson, wholesale and retail*

**52233** *Sales associate*

## **523 CASHIERS AND TICKET CLERKS**

Cashiers and ticket clerks deal directly with clients in connection with receiving, changing and paying out money in stores, theatres or cinemas, banks, post offices and other establishment such as stores and ticket offices or similar establishments.

## **5230 CASHIERS AND TICKET CLERKS**

Cashiers and ticket clerks receive directly from clients payments for goods or services in establishments such as stores and ticket offices or similar establishments.

### **Tasks include:**

- establishing or identifying price of goods, services or admission and tabulating bill using calculator, cash register or optical price scanner;
- receiving and verifying cash, cheque or credit-card payments in stores, ticket offices or similar establishments;
- giving change and issuing receipts;
- issuing tickets at ticket counter and taking corresponding payments;
- paying out cash against written orders, credit notes, or resulting from currency exchanges and obtaining receipts;
- keeping records and reconciling them with cash balance;
- receiving income cash and checking it against sales slips and other documents;
- operating cash register;
- wrapping or place merchandise in bags;
- performing related tasks.

**Examples of the occupations classified here:**

- 52301** *Cashier*
- 52302** *Cashier, box office*
- 52303** *Cashier, store*
- 52304** *Cashier, theatre*
- 52305** *Cashier, food and beverage*
- 52306** *Cashier, booking-office*
- 52307** *Clerk, ticket issuing (except travel)*

## **524     OTHER SALES WORKERS**

Other sales workers provide fashion and models, sales demonstrators, door to door salespersons, contact centre salespersons, service station attendants, food service counter attendants and sales workers not elsewhere classified.

### **5241   FASHION AND OTHER MODELS**

Fashion and other models wear and display clothing and other items for sale or pose as models for advertising or for artistic creation.

**Tasks include:**

- dressing in sample apparel of new or current styles or of type wanted by customer;
- demonstrating style and other characteristics to best advantage;
- posing as model for artistic photography, sculpture or painting;
- posing as model for still photographs or films and video action photography in the field of advertising;
- performing related tasks;
- supervising other workers.

**Examples of the occupations classified here:**

- 52411** *Model, fashion*
- 52412** *Model, advertising*
- 52413** *Model, artist*

### **5242   SALES DEMONSTRATORS**

Sales demonstrators demonstrate and sell goods in wholesale establishments to retailers and large-scale consumers or to customers in retail establishments.

**Tasks include:**

- stacking and displaying items for sales;
- advising customers on the selection, price, delivery, use and care of goods and services;
- giving demonstrations of articles on sale in order to inform customers about their characteristics and mode of use, as well as to stimulate buying interest;
- contacting business or private individuals by telephone to solicit sales for good or services;
- endeavoring to stimulate buying interest in a product by explaining its merit and demonstrating its uses;

- performing related tasks;
- supervising other workers.

**Examples of the occupations classified here:**

**52421 Demonstrator**

**52422 Telemarketer**

**52423 Rollerboy**

#### **5243 DOOR TO DOOR SALESPERSONS**

Door to door salespersons refer to knowledge of principles and methods for showing, promoting, and selling products or services. This includes marketing strategy and tactics, product demonstration, sales techniques, and sales control systems, for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.

**Tasks include:**

- contacting customers by phone, mail or in person to offer or persuade them to purchase merchandise or services;
- setting up and displays sample merchandise at parties or stands;
- explaining products or services and price and demonstrates use of products;
- delivering merchandise, serve customers, collects money and make change;
- circulating among potential customers or travels by foot, truck, automobile to deliver or sell merchandise or services;
- distributing product samples or brochures that details product or services;
- ordering or purchases supplies and stocks cart or stand;
- writing orders for merchandise or enters order into computer;
- arranging buying party and solicits sponsorship of parties to sell merchandise;
- explaining products or services and prices and demonstrates use of products;
- performing related tasks.

**Examples of the occupations classified here:**

**52431 Salesperson, marketing**

**52432 Salesperson, traveling**

**52433 Salesperson, direct selling**

#### **5244 CONTACT CENTRE SALESPERSONS**

Contact centre salespersons answer inbound calls as assist customers who have specific inquiries.

**Tasks include:**

- answering inbound calls as well as assist customers who have specific inquiries;
- building customer's interest in the services and products offered by the company;
- updating the existing databases with changes and the status of each customer/prospective customer ;
- arranging for the dispatch of products, information packages, brochures etc. to clients and other interested parties;
- following up the calls of the client with clerical duties which includes faxing, filling up paperwork, doing checks on credit references as well as liaising with other departments;

- taking ability to comprehend, capture as well as interpret basic customer information;
- soliciting feedback to improve service, respond to requests for service/assistance;
- taking ability to adapt to change, meet the changing demands of the work environment, any delays or other unexpected demands;
- analyzing the various parts of a problem properly and develop logical solutions;
- taking ability to work well as part of a team- to exhibit objectivity and be open-minded towards the ideas and views of others, give as well as welcome feedback, contribute to building team spirit, aide others to succeed;
- performing related tasks.

**Examples of the occupations classified here:**

**52441 Salesperson, customer relation centre**

#### **5245 SERVICE STATION AND PUMP ATTENDANTS**

Service station and pump attendants service automobiles, buses, trucks, boats and other automotive or marine vehicles with fuel, lubricants, and accessories. May lubricate vehicle, change motor oil, install antifreeze or replace lights or other accessories, such as windshield wiper blades of fan belts. May repair or replace tires.

**Tasks include:**

- checking air pressure in vehicle tires, and levels of fuel, motor oil, transmission, radiator, battery, and other fluids, and add air, oil, water or other fluids as required;
- collect cash from customer, make change or change merchandise to customers credit card and gives them receipt;
- activating fuel pumps and fill fuel tanks of vehicles with gasoline or diesel fuel to specified levels;
- ordering stock, gives price and arrange incoming goods in shelve;
- preparing daily reports of fuel, oil and accessory sales;
- selling and install accessories, such as batteries, windshield wiper blades, fan belts, bulbs and headings;
- maintaining customer records and follow periodically with telephone, mail or personal reminders or service due;
- performing minor repairs such as adjusting brakes, replacing spark plugs, and changing engine oil and filters;
- providing customers with information about local roads and highways rotate, test and repair or replace tires;
- checking stock and participating in stock takes;
- performing related tasks;
- supervising other workers.

**Examples of the occupations classified here:**

**52451 Attendant, petrol pump**

**52452 Attendant, service station**

#### **5246 FOOD SERVICE COUNTER ATTENDANTS**

Food service counter attendants prepare heats and finishes simple food items. These simple food items are served to customers at food customers.

**Tasks include:**

- acquiring knowledge of menu items and food preparation techniques and to take customers orders;
- doing simple arithmetic, may receive payment for food items;
- giving information and taking customers order;
- serving food to customers at counters;
- portioning and wrap food or place it directly on plates for service to patrons and package takeout food;
- performing related tasks.

**5249 SALES WORKERS NOT ELSEWHERE CLASSIFIED**

Sales workers not elsewhere classified perform various selling tasks not performed by those elsewhere classified. Their functions include, lending money to customers upon pledge or bonds; lending money on interest to individuals or companies with or without collateral or gives particulars of the service provided.

**Tasks include:**

- stacking and displaying items for sales;
- advising customers on the selection, price, delivery, use and care of goods and services;
- writing bill, invoice, docket or receipt;
- giving demonstrations of articles on sale in order to inform customers about their characteristics and mode of use, as well as to stimulate buying interest;
- contacting business or private individuals by telephone to solicit sales for good or services;
- checking stock and participating in stock takes;
- performing related tasks;
- supervising other workers.

**53 EDUCATION AND SOCIAL SERVICES WORKERS**

Education and social services workers provide child care workers and teachers' aide, personal care workers in health services, home-based personal care workers and personal care workers in health services not elsewhere classified.

**This sub-major group consists of the following minor groups:**

- 531 CHILD CARE WORKERS AND TEACHERS AIDE**
- 532 PERSONAL CARE WORKERS IN HEALTH SERVICES**

**531 CHILD CARE WORKERS AND TEACHERS AIDE**

Child care workers and teachers aide take care of employers' children and oversee their daily activities, or engage in helping teachers to look after schoolchildren.

**5311 CHILD CARE WORKERS**

Child care workers take care of children and oversee their daily activities, or engage in helping teachers to look after schoolchildren.



**Tasks include:**

- assisting children to bath, dress and feed themselves;
- attending to various personal needs and in general providing personal care for persons in need of such care at their own homes because of physical or mental illness or disability or because of impairment due to old age;
- taking children to and from school or outdoors for recreation;
- taking care of employers children and overseeing their daily activities looking after school children;
- playing games with children, or entertaining children by reading or story- telling;
- looking after welfare and safety of children in the absence of parents;
- maintaining order in children's bed-rooms and playrooms;
- taking care of school children on excursions, museum visits and similar outing;
- performing related tasks;
- supervising other workers.

**Examples of the occupations classified here:**

- 53111** *Worker, child care*
- 53112** *Junior assistant, nursery school*
- 53113** *Attendant, nursery school*
- 53114** *Worker, nursery*
- 53115** *Nanny*
- 53116** *Masseur (non-medical)*

**5312 TEACHERS AIDE**

Teachers aide help teachers in administrative and teaching in administrative and teaching work. Supervise students in different age groups and with special needs. May listen as students read or help them find information for a report. Supervise students who are working on projects and provide extra attention to students who having trouble in school.

**Tasks include:**

- assisting in the preparation of lessons plans and presentation of academic subjects as directed;
- administering, monitors, score tests and records grades;
- operating audio/visual equipment, computers and other teachings aides;
- observing and monitors student activities in a classroom setting;
- assisting the teacher in maintaining order and discipline in the classroom;
- checking attendants, arranges seating and ascertains whereabouts of absent students;
- making recommendations to teacher regarding students progress and goals;
- maintaining record, files and progress reports on students;
- performing related tasks;
- supervising other workers.

**Examples of the occupations classified here:**

- 53121** *Teachers aide*
- 53122** *Sub assistant officer, training E17*

## **532     PERSONAL CARE WORKERS IN MEDICAL CENTRES**

Personal care workers in medical centres provide routine, personal healthcare such as bathing, dressing, or grooming, to elderly, convalescent, or disabled persons in the home of patients or in a residential care facility.

### **5321    HEALTH CARE ASSISTANTS**

Health care assistants help the individual in obtaining health care as members the health care team under the direction of a health care professional. It may refer to nurse aides, orderlies, male attendants or personal care assistant. The assistant provides personal care such as bathing, feeding and dressing. The assistant also performs support functions such as taking vital signs, making beds, transporting patients, assisting patients with activities of daily living. The assistant may work in a variety of settings including, but not limited to, nursing homes or long term care, personal care facilities, hospitals, home health agencies and private homes.

#### **Tasks include:**

- washing and dressing;
- feeding;
- helping patients to mobilize;
- helping patients to go to the toilet;
- tidying up bed;
- assisting with patients overall comfort;
- monitoring patients conditions by taking temperatures, pulse, respirations and weight;
- performing related tasks.

#### **Examples of the occupations classified here:**

**53211    *Aide, nursing/home***

**53212    *Aide, dental surgery U17***

**53213    *Aide, pharmacy***

**53214    *Aide, hospital***

**53215    *Worker, hospital***

**53216    *Aide, public health U11***

**53217    *Assistant, nurse U11***

**53218    *Attendant, health U3 / Aide, nursing/health U3***

### **5322    HOME-BASED PERSONAL CARE WORKERS**

Home-based personal care workers aim to make it possible for people to remain at home rather than use institutional-based nursing care in a long term period. Home care providers render services in the client's own home. These services may include some combination of professional health care services and life assistance services.

#### **Tasks include:**

- helping with daily tasks such as meal preparation, medication reminders, laundry, light housekeeping, delivering and collecting groceries, shopping, arranging for transportation and accompany customers;
- bathing, dressing, transferring patients, helping them to use the toilet room, eating and walking that reflect the patient's capacity for self-care;
- lighting housework, preparing meals, taking medications, shopping for groceries or clothes, using the telephone and managing money that enables the patient to live independently in the community;

- assisting elderly or disabled with daily living activities at the person's home or in a daytime non-residential centres;
- advising families, the elderly and disabled on such things as nutrition, cleanliness and household utilities;
- performing health-care related tasks, such as monitoring vital signs and medication, under the direction of registered nurses and physiotherapists;
- caring for individuals and families during periods of incapacitation, family disruption or convalescence, providing companionship, providing personal care and help individual in adjusting to new lifestyles;
- performing related tasks.

**Examples of the occupations classified here:**

**53221 Attendant, bath**

#### **5329 PERSONAL CARE WORKERS IN MEDICAL SERVICES CENTRE NOT ELSEWHERE CLASSIFIED**

This unit group covers personal care workers in medical services centre not elsewhere classified in Minor Group 532: Personal Care Workers in Medical Care Services Centre.

**Tasks include:**

- performing related tasks;
- supervising other workers.

**Examples of the occupations classified here:**

**53291 Personal care workers in medical services centre not elsewhere classified**

#### **54 PROTECTIVE SERVICES WORKERS**

Protective services workers provide protective services workers related to fire-fighters, police officers, prison guards, security guards and protective services not elsewhere classified.

**This sub-major group consists of the following minor groups:**

#### **541 PROTECTIVE SERVICES WORKERS**

Protective services workers protect individuals and property against fire and other hazards, maintain law and order and enforce laws and regulations.

#### **5411 FIRE-FIGHTERS**

Fire-fighters prevent and try to extinguish fires, rescue persons and salvage property and goods during and after fires and major accidents.

**Tasks include:**

- preventing and extinguishing fires;
- fighting special types of fires and using special equipment in industrial establishments;

- preventing and extinguishing fires in crashed or damaged aircraft and rescuing crew and passengers;
- rescuing persons and salvaging property and goods during and after fires and major accidents;
- preventing or limiting the spread of dangerous substances in case of fires or accidents;
- fighting fires as a member of a public fire fighting force;
- connecting hose and directs jets of water or chemicals on fire, or uses portable fire-extinguisher in places not accessible by hose;
- directing fire fighting and rescue operations, and trains fighting personnel;
- directing rescue operations to rescue trapped people, animals, property and renders first aide to the injured victims;
- investigating causes of fire and submits report to superiors;
- preventing or extinguishes fires during the breakdown or accident of an aircraft and rescues crew and passengers;
- spraying the chemical foam to reduce danger of explosion caused by blows to the troubled aircraft to make emergency landings;
- taking responsibility as a supervisor in fire fighting operations, hall guard officer and managing-daily administration of the station;
- performing related tasks;
- supervising other workers.

**Examples of the occupations classified here:**

**54111 Fireman (fire brigade)**

**54112 Fire-fighter (air port)**

**54113 Officer, fireman KB17**

**54114 Fire watch**

**5412 POLICE OFFICERS**

Police officers maintain law and order and enforce laws and regulations.

**Tasks include:**

- maintaining law and order;
- protecting persons and property from hazards and unlawful acts;
- discovering facts concerned with the prevention and solution of crimes and arresting violators of the law;
- arresting persons for contraventions of the law;
- directing traffic and assuming authority in the event of accidents;
- maintaining law and order, protects persons and property from hazards and unlawful acts;
- taking responsibility to issue summons to offenders of traffics regulations, assuming authority in case of accident;
- rendering first aide and making necessary investigations, maintaining order during fires, inspecting licensed places of public assembly, and providing general information;
- keeping records, making reports of activities and giving evidence in courts;
- performing related tasks;
- supervising other workers.

**Examples of the occupations classified here:**

**54121 Constable, police Y14**

**54122 Officer, police**

- 54123** *Patrolman, police*
- 54124** *Warden, traffic*
- 54125** *Junior police officer and constable YY1- YY10*
- 54126** *Junior police officer and support constable YT1- 10*
- 54127** *Junior police officer and aborigines constable YP1- 10*
- 54128** *Sub assistant, Kesatria S17*

#### **5413 PRISON GUARDS**

Prison guards watch over and maintain discipline among inmates of prisons, reformatories or penitentiaries.

##### **Tasks include:**

- searching arriving prisoners, putting their valuables in safekeeping, escorting prisoners and locking them in prison cells;
- making periodic inspection tours from time to time at prison cells;
- supervising prisoners at work, meals, or during walks and patrolling prison areas to prevent prison breaking by prisoners;
- directing traffic and assuming authority if emergency occurred;
- taking responsibility to control prisoner in safety aspect involving physical and affairs management of prisoner including treatment duties in the hospital and attend trial in court;
- performing related tasks;
- supervising other workers.

##### **Examples of the occupations classified here:**

- 54131** *Guard, prison*
- 54132** *Warden, prison*
- 54133** *Officer, prison KX11*

#### **5414 SECURITY GUARDS**

Security guards guard industrial plant, warehouses, houses and other properties against fire, theft or illegal entry or accompanying vehicles transporting cash or valuables to protect against theft or robbery.

##### **Tasks include:**

- admitting employees and authorized persons and refusing entrance to unauthorized persons;
- issuing temporary passes to authorized visitors going in after recording pertinent particulars and collecting them on their return;
- keeping particulars of vehicles entering or leaving plant or premises;
- checking vehicles leaving premises to prevent unauthorized removal of goods;
- patrolling in and around premises for unauthorized entry;
- watching for irregularities such as fire hazards, malfunctions of machinery or equipment, lights left on, leaking water pipes and unlocked security doors;
- monitoring alarms and contacting supervisors, fire brigades or police by radio or phone if security is breached;
- accompanying or riding in vehicles transporting cash, payroll or valuables to protect against theft or robbery;
- performing security checks of passengers and luggage at airports;

- ushering people into courtrooms and similar establishments;
- taking responsibility to supervise and coordinate Security Guard KP11 Grade and KP14, determine control travel at all the main gateways and every building entrance complied and direct security guards supervise visitors enter complex;
- taking responsibility to make patrol in and outside building, register and to issue security pass to visitor or employee and report all collision regulation safety to the controller senior security (KP17);
- performing related tasks;
- supervising other workers.

**Examples of the occupations classified here:**

**54141** *Guard, departmental store/industrial*

**54142** *Sub assistant, security KP17*

**54143** *Sergeant major, security*

**54144** *Security guard KP11*

**54145** *Guard*

**54146** *Guard, office*

**54147** *Concierge*

**5415 IMMIGRATION/CUSTOM OFFICERS AND ASSISTANT**

Immigration or custom officers and assistant, responsible for examining and assessing the admissibility of all passengers entering at seaports and airports. Examining documentation, gathering intelligence and where necessary, using legal powers to detain or remove illegal entrants, to protect society by combating the importation of dangerous or illegal goods such as firearms, drugs and obscene items. Involved in preventive work-targeting and searching vehicles, freight and documentation.

**Tasks include:**

- selecting and targeting individual vehicle based on risk, intelligence, previous offences, previous shipping information, computer records and current trends;
- searching individuals, vehicles and cargo for smuggled goods;
- examining documentation relating to imported freight;
- examining freight to check that goods carried tally with documented description;
- arresting individuals suspected of smuggling;
- providing guidance and policy to meet departmental needs;
- reviewing areas of guidance, re-writing and improving them to incorporate news, views and legislation;
- accurately recalling facts and details of procedures and guidelines, quoting or referring people to specific sections of law or internal guidance corresponding to a variety of queries on a daily basis, often to do with poor performance or matters or probations or legislation, advising on the correct procedures to follow and the issue and risks connected to certain courses of action;
- liaising with people across the business to collect views on how policy and guidance could be improved or amended;
- working in a complementary way with customers and with colleagues in different teams and in areas all over the country;
- taking responsibility to lead civil defence office responsible district to on administrative duties / finance, team management and disaster operations in that district;
- taking responsibility to help and enforce the law, help operation duties in business premises, examination to on the premises wholesale business, retail, aiding in smuggling operation duties, wholesale licence application and retail, investigate cases and take action under the law enforcement, processing permit applications for rice transfer, collecting information on controlled goods, processing of applications for

- import license, rice by-products such as rice flour, glutinous rice flour, noodles and other and provide information relating to import and export of stated goods;
- performing related tasks;
- supervising, scheduling and monitoring other workers.

**Examples of the occupations classified here:**

- 54151** *Officer, immigration KP17*
- 54152** *Sub assistant superintendent, custom W17*
- 54153** *Sub assistant, civil defence KP17*
- 54154** *Sub assistant, enforcer N17*

**5419 PROTECTIVE SERVICES WORKERS NOT ELSEWHERE CLASSIFIED**

This unit group covers protective services workers not classified elsewhere in Minor Group 514: Protective Service and Related Workers. For instance, here should be classified those who act as bodyguards, lifeguards or game wardens.

**Tasks include:**

- performing the duties of a bodyguard;
- patrolling beaches and swimming pools to prevent accidents and to rescue bathers from drowning;
- patrolling natural reserves, game parks, forest areas and enclosures to prevent theft and killing of game;
- performing various underwater tasks, connected with salvage work or recovering dead bodies;
- taking responsibility to lead staff to carry out patrol, ambush and search follow Wildlife Protection Act No. 76/72, preparing the charge sheet, leading control task to on disruption wildlife, regulate supervise store and help chief department to carry out administrative duties;
- taking responsibility for recovery and caring the park, supervise the employees to makes fieldwork, and patrolling the boundary of park;
- taking responsibility to help, accept, get and gather information, to investigate, investigate and aiding in cases prosecution contact with activity corruption, deviation and abuses of power to under the act bribery prevention and laws set. Aiding in perform the duties prevention as give talk and others;
- performing related tasks;
- supervising other workers.

**Examples of the occupations classified here:**

- 54191** *Game ranger*
- 54192** *Warden, wild life*
- 54193** *Sub assistant, park/estate G17*
- 54194** *Detective, hotel*
- 54195** *Sub assistant, investigation KR17*
- 54196** *Investigator, industrial*
- 54197** *Rehabilitation workers N1*
- 54198** *Sub assistant, wildlife G17*



**MAJOR GROUP**



**SKILLED  
AGRICULTURAL,  
FORESTRY  
AND FISHERY  
WORKERS**

**M**

**A**

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**C**

**O**

**2008**

**2<sup>nd</sup> Edition**



# Major Group 6:

## SKILLED AGRICULTURAL, FORESTRY, LIVESTOCK AND FISHERY WORKERS

Skilled agricultural, forestry, livestock and fishery workers grow and harvest field or tree and shrub crops, gather wild fruits, herbs and vegetables, breed, tend or hunt animals, produce a variety of animal husbandry products, cultivate, conserve and obtain forests revenue, breed or catch fish and cultivate or gather other forms of aquatic life for sale or delivery to wholesalers, marketing organizations or at markets. Most occupations in this major group require skills at the second skill level.

**This major group consists of the following sub-major groups:**

- 61 MARKET-ORIENTED SKILLED AGRICULTURAL AND LIVESTOCK WORKERS**
- 62 MARKET-ORIENTED SKILLED FORESTRY, FISHERY AND HUNTING WORKERS**
- 63 SUBSISTENCE FARMERS, FISHERMANS, HUNTERS AND GATHERERS**

### **61 MARKET-ORIENTED SKILLED AGRICULTURAL AND LIVESTOCK WORKERS**

Market-oriented skilled agricultural workers plan and carry out the necessary operations to grow and harvest field or tree and shrub crops, breed animals, produce a variety of animal husbandry products, or cultivate, conserve and exploit forests for sale or delivery on a regular basis to wholesalers, marketing organizations or at markets.

**This sub-major group consists of the following minor groups:**

- 611 MARKET GARDENERS AND CROP GROWERS**
- 612 ANIMAL PRODUCERS**
- 613 MIXED CROP AND ANIMAL PRODUCERS**

### **611 MARKET GARDENERS AND CROP GROWERS**

Market gardeners and crop growers plan and carry out the necessary operations to grow and harvest field crops, to grow fruit and other tree and shrub crops, to grow garden vegetables and medicinal and other plants and to produce horticultural and horticultural nurseries products, for sale or delivery on a regular basis to wholesale buyers, marketing organizations or at markets.

#### **6111 FIELD CROP GROWERS**

Field crop growers plan and carry out the necessary operations to grow and harvest various types of field crops such as rice and other cereal, oil palm, rubber, coconut, tapioca, sugar cane, ground nuts, tobacco, or other field crops for sale or delivery on a regular basis to wholesale buyers, marketing organizations or at markets.

**Tasks include:**

- determining the kinds and amounts of crops to be grown;
- purchasing seeds, fertilizer and other supplies;
- renting or investing in real estates and land improvements, buildings and machinery;

- performing operations such as land preparation, sowing, planting, cultivating and harvesting crops;
- storing and carrying out some basic processing of plantation products;
- tending working animals and maintaining machinery and equipment in farm;
- performing related tasks;

**Example of the occupations classified here:**

- 61111** *Grower, pineapple*
- 61112** *Grower, intercrop*
- 61113** *Irrigator*
- 61114** *Mandore, estate/plantation*
- 61115** *Sub assistant, agricultural G17*
- 61116** *Grower, rubber*
- 61117** *Grower, coconut*

## **6112 SHRUB CROP GROWERS**

Shrub crop growers plan and carry out the necessary operations to grow and harvest shrubs product, such as fruit and nut trees, tea and coffee bushes, grape vines, cocoa trees and pomegranate trees for sale or delivery on a regular basis to wholesale buyers, marketing organizations or at markets.

**Tasks include:**

- determining the kinds and amounts of crops to be grown;
- purchasing seeds, fertilizer and other supplies;
- performing farm operations such as land preparation, sowing, planting, cultivating and harvesting crops;
- storing and carrying out some basic processing of their farm product;
- protecting animal used to work and maintaining nursery, green house, machinery and equipment;
- performing related tasks.

**Examples of the occupations classified here:**

- 61121** *Grower, shrub trees*
- 61122** *Grower, tea*
- 61122** *Grower, coco*
- 61123** *Grower, pomegranate*
- 61124** *Grower, coffee*

## **6113 GARDENERS, HORTICULTURAL AND NURSERY GROWERS**

Gardeners, horticultural and nursery growers plan and carry out the necessary operations to grow vegetables by intensive cultivation techniques, to cultivate trees, shrubs, flowers and other plants and to produce saplings, bulbs and seeds for sale or delivery on a regular basis to wholesale buyers, marketing organizations or at markets.

**Tasks include:**

- determining kinds and amounts of vegetables, horticultural and nursery products to be grown;
- renting or investing in real estates and land improvements, buildings, animals used for work, equipment and machinery;
- performing farm operations such as land preparation, sowing, growing vegetables by intensive cultivation, cultivating flowers, trees or bushes and harvesting crops;
- producing saplings, bulbs and seeds;
- cultivating flowers, trees, shrubs and other plants in parks or public or private gardens;
- growing plants for exhibition or medicinal purposes;
- protecting and maintaining green house, machinery and equipment in nursery;
- delivering or marketing products;
- storing and carrying out some processing of crop products;
- performing related tasks.

**Examples of the occupations classified here:**

**61131**    *Grower, horticultural*

**6114**    **MIXED CROP GROWERS**

Mixed crop growers plan and carry out the necessary operations to grow and harvest specific combinations of field crops, field vegetables, tree and shrub crops, garden, horticultural and nursery products, for sale or delivery on a regular basis to wholesale buyers, marketing organizations or at markets.

**Tasks include:**

- determining kinds and amounts of crops to be grown;
- purchasing seeds, fertilizer and other supplies;
- renting or investing in real estates and land improvements, buildings, animals used for works, equipment and machinery;
- performing farm operations such as land preparation, sowing, planting and tending trees or bushes and cultivating and harvesting crops;
- growing vegetables by intensive cultivation and producing saplings, bulbs and seeds;
- cultivating flowers, trees, shrubs and other plants for parks or public or private gardens;
- growing plants for exhibition or medicinal purposes;
- storing and carrying out some processing of crop product;
- protect animals used to work and maintaining buildings, machinery and equipment;
- delivering or marketing products;
- performing related tasks.

**Examples of the occupations classified here:**

**61141**    *Mixed crop grower (no husbandry)*

**6115**    **VEGETABLE GROWERS**

Vegetable growers plan and carry out the necessary operations to grow and harvest various types of vegetables for sale or delivery on a regular basis to wholesale buyers, marketing organizations or at markets.

**Examples of the occupations classified here:**

**61151**    *Grower, vegetable*

**61152**    *Grower, bean-sprout*

## **612    ANIMAL PRODUCERS, LIVESTOCK FARMERS AND ANIMAL PRODUCT PRODUCERS**

Market oriented animal producers, livestock farmers and animal product producers and related workers plan and carry out the necessary operations to breed, raise and tend livestock such as cattle, sheep, pigs, goats, horses, birds, reptiles, fur-producing animals, poultry, pets such as cats, rabbits, dogs, hamster or other animal and to produce a variety of animal husbandry products for sale or delivery on a regular basis to wholesale buyers, marketing organizations or at markets.

### **6121    LIVESTOCK AND DAIRY PRODUCERS**

Livestock and dairy producers plan and carry out the necessary operations to breed, raise and tending livestock such as cattle, sheep, pigs, goats, horses, dogs and cats which to be used to work, sports, or pet animals as well as to obtain meat, milk, hair, skin and other products for sale or delivery on a regular basis to wholesale buyers, marketing organizations or at markets.

**Tasks include:**

- determining kinds and amounts of livestock and livestock products to be produced;
- purchasing animals, producing and purchasing fodder and other supplies;
- renting or investing in grazing land, buildings, equipment and machinery;
- breeding, raising and tending livestock;
- milking animals;
- reaping animal fur producers;
- killing animals for meat and fur purposes;
- skinning animals and providing animals or animal products for market;
- storing and carrying out some basic processing of farm products;
- maintaining farm buildings, machinery and equipment;
- delivery or marketing farm products;
- performing related tasks.

**Examples of the occupations classified here:**

**61211**    *Breeder, cattle*

**61212**    *Farm worker, skilled/mixed animal husbandry*

**61213**    *Shepherd, buffalo / cow / goat*

### **6122    AVES PRODUCERS**

Aves producers plan and carry out the necessary operations to breed, raise and tend aves for sale or delivery of aves product such as eggs, meat, nest or feathers on a regular basis to wholesale buyers, marketing organizations or at markets.

**Tasks include:**

- determining kinds and amounts of aves and the products to be produced;
- renting or investing in grazing land, buildings, equipment and machinery;
- breeding, raising and tending poultry and collecting eggs;
- slaughtering, dressing and packing poultry for shipment;
- storing and carrying out some basic processing of the aves products;
- maintaining farm buildings, machinery and equipment;
- delivery or marketing farm products;
- performing related tasks.

**Examples of the occupations classified here:**

- 61221** *Farm worker, poultry*
- 61222** *Operator, incubator*
- 61223** *Inseminator, poultry*
- 61224** *Vaccinator, poultry*
- 61225** *Producer, bird nest*

## **6123 FISHERY PRODUCERS AND FARMERS**

Fishery producers and farmers plan and carry out the necessary operation to breed, raise and maintaining breeding pond and production of marine products such as balls, crackers, 'otak-otak', skin, shell, gamat, dried aquaculture products and ornamental husbandry for sale or delivery on a regular basis to wholesalers, marketing organizations or at markets.

**Tasks include:**

- determining the kinds and amounts of fishery products to be produced;
- purchasing aquaculture food and other supplies;
- breeding, raising, and tending marine husbandry and collecting their products;
- storing and carrying out some basic processing of marine products;
- maintaining pond, aquarium, water temperature and equipment;
- delivering or marketing products;
- performing related task.

**Examples of the occupations classified here:**

- 61231** *Farmer, ornamental fish*
- 61232** *Farmer, fish*
- 61233** *Farmer, gamat*
- 61234** *Farmer, crocodile*
- 61235** *Producer, marine product*

## **6129 ANIMAL PRODUCERS NOT ELSEWHERE CLASSIFIED**

Animal producers not elsewhere classified engaged in breeding, raising and tending wild mammals, game birds and other birds, non-domesticated fur giving animals, snakes and other reptiles as well as various insects and animals used for laboratory tests for sale or delivery on a regular basis to wholesale buyers, marketing organizations, zoos and circuses or at markets.

**Tasks include:**

- buying or setting up necessary buildings, open or sheltered space, equipment, etc and maintaining them;
- determining kinds and amounts of animals to be raised;
- purchasing animals, growing or purchasing food and other supplies;
- breeding, raising, feeding and tending animals;
- killing and skinning animals and preparing animals or animal products for market;
- storing and carrying out some basic processing of the products;
- protecting animals, especially in animal reserves;
- training animals for racing, circus performances and the like;
- performing related tasks.

**Examples of the occupations classified here:**

**61291** *Farmer, leech*  
**61292** *Farmer, worm*  
**61293** *Farmer, silkworm*  
**61294** *Collector, honey*

### **613 MIXED CROP AND ANIMAL PRODUCERS**

Mixed crop and animal producers plan and carry out the necessary operations for mixed farming of the kind that produces a combination of both crops and animals and related products, for delivery or sale on a regular basis to wholesale buyers, marketing organizations or at markets.

#### **6130 MIXED CROP AND ANIMAL PRODUCERS**

Mixed crop and animal producers plan and carry out the necessary operations for mixed farming of the kind that produces a combination of both crops and animals and related products, for delivery or sale on a regular basis to wholesale buyers, marketing organizations or at markets.

**Tasks include:**

- determining kinds and amounts of crops to be grown;
- purchasing seeds, fertilizer and other supplies;
- renting or investing in real estates and land improvements, buildings, animals used to work, equipment and machinery;
- performing farm operations such as land preparation, sowing, planting and tending trees or bushes, collecting sap and harvesting crops;
- storing and carrying out some basic processing of the farm products;
- tending animals used to work and maintaining farm buildings, machinery and equipment;
- delivering or marketing farm products;
- performing related tasks.

**Examples of the occupations classified here:**

**61301** *Mixed product farmer (crops and husbandry)*

### **62 MARKET-ORIENTED SKILLED FORESTRY, FISHERY AND HUNTING WORKERS**

Market oriented skilled forestry, fishery and hunting workers catch, breed and cultivate fish and other forms of aquatic life and hunt, birds and reptiles, for sale or delivery on a regular

basis, to wholesalers, marketing organizations or at markets and carry out the necessary operations to cultivate, conserve and exploit forests, for sale or delivery on a regular basis to wholesale buyers, marketing organizations or at markets.

**This sub-major group consists of the following minor groups:**

**621 FORESTRY AND RELATED WORKERS**  
**622 FISHERY WORKERS, HUNTERS AND TRAPPERS**

**621 FORESTRY AND RELATED WORKERS**

Forestry and related workers plan and carry out the necessary operations to cultivate, conserve and exploit forests, for sale or delivery of forestry products.

**6211 FORESTRY AND RELATED WORKERS**

Forestry and related workers carry out the necessary operations to cultivate, conserve and exploit forests, for sale or delivery of forestry products on a regular basis to wholesale buyers, marketing organizations or at markets.

**Tasks include:**

- establishing and tending for forest area;
- locating trees to be felled and estimating volume of timber;
- trimming, topping and felling trees and sawing them into logs;
- shaping rough wooden products from logs at felling site;
- stacking logs, loading them in chutes or floating them down rivers;
- grading logs at log pond;
- taking responsibility to supervise logging works, provide survey blocks, grid line, measure, topography and tree census;
- taking responsibility in teaching trainees on way of handling trainees and maintain deep heavy machinery logging, technique build roads timber and attract timber from the jungle;
- taking responsibility to help instructor to supervise/provide training to the school forestry surround in the field of forest engineering, land survey and use forest goods;
- performing related tasks.

**Examples of the occupations classified here:**

**62111 Scaler, logging**  
**62112 Ranger, forest**  
**62113 Checker, log**  
**62114 Ranger, forest G17**  
**62115 Forest guard G11**  
**62116 Instructor, logging G17**

**6212 CHARCOAL BURNERS AND RELATED WORKERS**

Charcoal burners and related workers carry out the necessary operations to convert wood into charcoal or to extract crude turpentine from wood, using traditional techniques.

**Tasks include:**

- operating a simple kiln to convert wood into charcoal by a slow-burning process;
- operating a simple crusher equipment or in-site distillation apparatus at the tree-felling site to obtain or distill crude wood turpentine;
- performing related tasks.

**Examples of the occupations classified here:**

**62121 *Burner, charcoal***

## **622 FISHERY WORKERS, HUNTERS AND TRAPPERS**

Fishery workers, hunters and trappers catch, breed and cultivate fish and other forms of aquatic life or hunt and trap mammals, birds and reptiles for sale or delivery on a regular basis of the animals or animal products to wholesale buyers, marketing organizations or at markets.

### **6221 AQUACULTURE WORKERS**

Aquaculture workers breed and raise fish, prawns, snakes, crocodiles and other forms of aquatic life, for sale or delivery on a regular basis to wholesalers, marketing organizations or at markets.

**Tasks include:**

- planning and managing the operation of hatcheries taking into consideration environmental and market factors;
- renting or investing in farm facilities;
- purchasing food and other supplies;
- monitoring and maintaining water quality to maintain health standards and optimal growth conditions;
- identifying and controlling environmental toxins and diseases;
- monitoring stock growth rates to determine when to harvest;
- directing and overseeing the harvesting, grading and packaging of fish, prawns, oysters and other aquatic stock;
- preparing fish and other products for shipment;
- cleaning, freezing, marinade or salting aqua products;
- constructing and maintaining farm facilities;
- delivering or marketing products;
- performing related tasks.

**Examples of the occupations classified here:**

**62211 *Pearl culturist***

**62212 *Farm worker, fish***

**62213 *Farm worker, prawn***

**62214 *Farm worker, crocodile***

**62215 *Farm worker, oyster***

**62216 *Farm worker, snake***

### **6222 INLAND AND COASTAL WATERS FISHERY WORKERS**

Inland and coastal waters fishery workers, alone or as crewman of fishing-boat, catch fish or gather other forms of aquatic life in inland or coastal water, for sale or delivery on a regular basis to wholesalers, marketing organizations or at markets.



**Tasks include:**

- preparing and repairing nets and other fishing gear and equipment;
- operating and maintaining fishing boat to, from and at fishing grounds;
- baiting, setting and hauling in fishing gear;
- gathering different forms of aquatic life from shores and shallow water;
- cleaning, freezing or salting haul;
- diving to gather oysters used for seed-pearl cultivation;
- delivering or marketing products;
- taking responsibility in administering the activity of culturing fish and water planning, implementing and monitoring and advising about the fish spawn and disease;
- performing related tasks.

**Examples of the occupations classified here:**

**62221** *Fishery worker, inland*  
**62222** *Fishery worker, coastal*  
**62223** *Diver, oyster*  
**62224** *Sub assistant, fishery G17*  
**62225** *Shipscrew*

**6223 DEEP-SEA FISHERY WORKERS**

Deep-sea fishery workers, as crewman of fishing boat, catch deep-sea fish, for sale or delivery on a regular basis to wholesalers, marketing organizations or at markets.

**Tasks include:**

- preparing and repairing nets and other fishing gear and equipment;
- operating and maintaining fishing vessels to, from and at fishing grounds;
- baiting, setting and hauling in fishing gear;
- cleaning, freezing, icing or salting haul on- or offshore;
- delivering or marketing the haul;
- performing related tasks.

**Examples of the occupations classified here:**

**62231** *Fishery worker, deep-sea*

**6224 HUNTERS AND TRAPPERS**

Hunters and trappers catch and kill mammals, birds or reptiles mainly to obtain meat, skin, feathers and other products, for sale or delivery on a regular basis to wholesale buyers, marketing organizations or at markets.

**Tasks include:**

- determining the types of mammals, birds or reptiles to hunt or trap;
- setting traps to catch mammals, birds or reptiles;
- killing trapped or free mammals, birds or reptiles with firearms or other weapons;
- skinning and processing killed mammals, birds or reptiles to obtain desired products for sale or delivery;
- delivering or selling trapped live mammals, birds or reptiles;
- repairing and maintaining equipment;

- performing related tasks.

**Examples of the occupations classified here:**

**62240 Hunter and Trapper**

## **63 SUBSISTENCE FARMERS, FISHERMAN, HUNTERS AND GATHERERS**

Subsistence farmers, fisherman, hunters and gatherers conduct mixed farms or plantations to produce a variety of agricultural and animal husbandry products or specialized farms or plantations to produce a particular type of agricultural or animal husbandry products, breed and cultivate fish and other forms of aquatic life, or hunt and collecting mammals, birds and reptiles or wild fruits, herbs and vegetables for own use or for sale to wholesale buyers, marketing organizations or at markets.

**This sub-major group consists of the following minor groups:**

- 631 SUBSISTENCE CROP FARMERS**
- 632 SUBSISTENCE LIVESTOCK FARMERS**
- 633 SUBSISTENCE MIXED CROP AND LIVESTOCK FARMERS**
- 634 SUBSISTENCE FISHERMAN, HUNTERS, TRAPPERS AND GATHERERS**

### **631 SUBSISTENCE CROP FARMERS**

Subsistence crop farmers plan and carry out the necessary operations to grow and harvest various types of crops for own use or for sale to wholesalers, marketing organizations or at market.

#### **6310 SUBSISTENCE CROP FARMERS**

Subsistence crop farmers plan and carry out the necessary operations to grow and harvest of crops for own use or for sale to wholesalers, marketing organizations or at market.

**Tasks include:**

- determining kinds and amounts of crops to be grown;
- purchasing seeds, fertilizer and other supplies;
- performing operations such as land preparation, sowing, planting, cultivating and harvesting crops;
- storing and carrying out some basic processing of the crop products;
- performing related tasks.

**Examples of the occupations classified here:**

**63101 Grower, crop farmers**

### **632 SUBSISTENCE LIVESTOCK FARMERS**

Subsistence livestock farmers plan and carry out the necessary operations to breed, raise and tend livestock to be used to work, sports or pet animals, as well as to obtain meat, milk, hair, skin and other products, for own use or for sale to wholesalers, marketing organizations or at markets.

## **6320 SUBSISTENCE LIVESTOCK FARMERS**

Subsistence livestock farmers plan and carry out the necessary operations to breed, raise and tend livestock to be used as working, sporting or pet animals, as well as for meat, milk, hair, hides and other products, for sale or delivery on a regular basis to wholesalers, marketing organizations or at markets.

### **Tasks include:**

- determining the kinds and amounts of livestock and livestock products to be produced;
- purchasing animals, producing and purchasing fodder and other supplies;
- renting or investing in grazing land, buildings, equipment and machinery;
- breeding, raising and tending livestock;
- milking, slaughtering and skinning animals, and preparing animals or animal products for market;
- storing and carrying out some basic processing of the livestock products;
- maintaining farm buildings, machinery and equipment;
- delivering or marketing farm products;
- performing related tasks.

### **Examples of the occupations classified here:**

**63201    *Subsistence livestock farmers***

## **633 SUBSISTENCE MIXED CROP AND LIVESTOCK FARMERS**

Subsistence mixed crop and livestock farmers plan and carry out the necessary operations to grow and harvest field, tree and various mixed crops, livestock to breed, raise and tend livestock to be used to work, sports or pet animals, as well as to obtain meat, milk, hair, skin and other products, for own use or for sale to wholesalers, marketing organizations or at markets.

## **6330 SUBSISTENCE MIXED CROP AND LIVESTOCK FARMERS**

Subsistence mixed crop and livestock farmers plan and carry out the necessary operations to grow and harvest field, tree and various mixed crops, livestock to breed, raise and tend livestock to be used as working, sporting or pet animals, as well as for meat, milk, hair, hides and other products, for sale or delivery on a regular basis to wholesalers, marketing organizations or at markets.

### **Tasks include:**

- determining the kinds and amounts of livestock and livestock products to be produced and amounts of crops to be grown;
- purchasing animals, producing and purchasing fodder and other supplies;
- purchasing seeds fertilizer and other supplies;
- performing operations such as land preparation, sowing, planting, cultivating and harvesting crops;
- producing or buying fodder and other food supplies;
- renting or investing in grazing land, buildings, equipment and machinery;
- breeding, raising and tending livestock;
- milking, slaughtering and skinning animals, and preparing animals or animal products for market;
- storing and carrying out some basic processing of the crop and livestock products;

- maintaining farm buildings, machinery and equipment;
- delivering or marketing farm products;
- performing related tasks.

**Examples of the occupations classified here:**

**63301    *Subsistence mixed crop and livestock farmers***

#### **634    SUBSISTENCE FISHERMAN, HUNTERS, TRAPPERS AND GATHERERS**

Subsistence fisherman, hunters, trappers and gatherers catch, breed and cultivate fish, for own use or for sale to wholesalers, marketing organizations or at markets, hunt and trap mammals, birds and reptiles mainly for meat, skin, feathers and other products, or gather wild fruits, herbs and vegetables.

#### **6340    SUBSISTENCE FISHERMANS, HUNTERS, TRAPPERS AND GATHERERS**

Subsistence fishermen, hunters, trappers and gatherers breed and cultivate fish, for own use or for sale to wholesalers, marketing organizations or at markets, hunt and trap mammals, birds and reptiles mainly to obtain meat, skin, feathers and other products, or gather wild fruits, herbs and vegetables

**Tasks include:**

- preparing, repairing nets and other fishing equipment;
- catching fish;
- determining the types of mammals, birds or reptiles to hunt or trap;
- setting traps to catch mammals, birds or reptiles;
- killing trapped or free mammals, birds or reptiles with firearms or other weapons;
- skinning and processing killed mammals, birds or reptiles to obtain desired products for sale or delivery;
- delivering or selling trapped live mammals, birds or reptiles;
- determining the type of wild fruits, herbs and vegetables to be gathered or collected;
- gathering or collecting wild fruits, herbs and vegetables either working alone or in a group, sorting gathered products and preparing it for market;
- selling gathered products and preparing it for market;
- performing related tasks.

**Examples of the occupations classified here:**

**63401    *Collector, jelutung***  
**63402    *Collector, dammar***  
**63403    *Collector, turtle-egg***  
**63404    *Gatherer, shellfish***  
**63405    *Collector, bird's nest***  
**63406    *Gatherer, seaweed***  
**63407    *Gatherer, wild fruits, herbs & vegetables***  
**63408    *Fisherman***

**MAJOR GROUP**



**CRAFT AND  
RELATED TRADES  
WORKERS**

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**2008**

**2<sup>nd</sup> Edition**

# **Major Group 7:**

## **CRAFT AND RELATED TRADES WORKERS**

Craft and related trades workers apply their specific knowledge and skills in the fields of mining and construction, form metal, erect metal structures, make, fit, maintain and repair machinery, equipment or tools, carry out printing work as well as produce or process foodstuffs, textiles, or wooden, metal and other articles.

The work is carried out by hand and by hand-powered and other tools which are used to reduce the amount of physical effort and time required for specific tasks, as well as to improve the quality of the products. The tasks call for an understanding of all stages of the production process, the materials and tools used, and the nature and purpose of the final product. Most occupations in this major group require skills at the second skill level.

**This major group consists of the following sub-major groups:**

- 71 BUILDING AND RELATED TRADES WORKERS, EXCLUDING ELECTRICIANS**
- 72 METAL, MACHINERY AND RELATED TRADES WORKERS**
- 73 HANDICRAFT AND PRINTING WORKERS**
- 74 ELECTRICAL AND ELECTRONIC TRADES WORKERS**
- 75 FOOD PROCESSING, WOODWORKING, GARMENT AND OTHER CRAFT AND RELATED TRADES WORKERS**

### **71 BUILDING AND RELATED TRADES WORKERS, EXCLUDING ELECTRICIANS**

Building and related trades workers construct, maintain and repair buildings, erect and repair foundations, walls and structures of brick, stone and similar materials, shape and finish stone for building and other purposes, and extract and work solid minerals from underground or surface mines or quarries.

The work is carried out by hand and by hand-powered and other tools which are used to reduce the amount of physical effort and time required for specific tasks, as well as to improve the quality of the products. The tasks call for an understanding of the work organization, the materials and tools used, and the nature and purpose of the final product.

**This sub-major group consists of the following minor groups:**

- 711 BUILDING FRAME AND RELATED TRADES WORKERS**
- 712 BUILDING FINISHERS AND RELATED TRADES WORKERS**
- 713 PAINTERS, BUILDING STRUCTURE CLEANERS AND RELATED TRADES WORKERS**

### **711 BUILDING FRAME AND RELATED TRADES WORKERS**

Building frame and related trades workers construct, maintain and repair buildings, erect and repair foundations, walls and structures of brick, stone and similar materials, shape and finish stone for building and other purposes, and perform miscellaneous construction and building maintenance tasks.

## **7111 HOUSE BUILDERS**

House builders erect, maintain and repair houses and similar small buildings using either traditional or modern techniques and materials.

### **Tasks include:**

- preparing ground for erecting building or other structures;
- erecting structures to support roof, and building and covering walls with appropriate materials;
- fixing rafters to roof and covering with roofing material;
- leveling floor to make it smooth and serviceable;
- maintaining and repairing existing structures;
- arranging for specialized work such as bricklaying, painting, plumbing and electrical wiring to be done by subcontractors;
- performing related tasks.

### **Examples of the occupations classified here :**

**71111 *Builder, house/traditional materials***

**71112 *Builder***

## **7112 BRICKLAYERS AND RELATED WORKERS**

Bricklayers and related workers lay bricks, pre-cut stones and other types of building blocks in mortar to construct and repair walls, partitions, arches and other structures.

### **Tasks include:**

- laying stone, brick and similar building blocks to construct or repair walls, partitions, fireplaces and other structures such as smokestacks, furnaces, converters, kilns and ovens, piers and abutments;
- laying footpaths, kerbs and pavements;
- laying bricks or other masonry to build patios, garden walls and other decorative installations;
- performing related tasks.

### **Examples of the occupations classified here:**

**71121 *Bricklayers, construction***

**71122 *Stonemason, construction***

**71123 *Firebrick, layer***

**71124 *Paviour***

**71125 *Worker, brickwork***

## **7113 STONEMASONS, STONE CUTTERS, SPLITTERS AND CARVERS**

Stonemasons, stone cutters, splitters and carvers cut and shape hard and soft stone blocks and slabs for the construction and maintenance of stone structures and monumental masonry, and carve designs and figures in stone.

### **Tasks include:**

- driving wedges into quarried stone to break it into slabs or blocks;
- selecting and grading slabs and blocks of granite, marble, and other stone;



- cutting, shaping and finishing building and monumental stone such as granite or marble by using hand or hand-powered tools;
- making patterns and marking shapes on stone for subsequent sawing, planing, drilling and other dressing and cutting operations;
- cutting and carving characters, figures or designs on stone blocks used for monuments or memorials;
- setting stone in the erection of monuments and memorials;
- repairing and replacing stonework on old buildings, churches and monuments;
- performing related tasks.

**Examples of the occupations classified here:**

**71131** *Splitter, stone*  
**71132** *Cutter and finisher, stone*  
**71133** *Grader, stone*  
**71134** *Carver, stone*  
**71135** *Stonework layout man*  
**71136** *Grinder, stone*  
**71137** *Carver-setter, monument*  
**71138** *Polisher, stone*

#### **7114 CONCRETE PLACERS, CONCRETE FINISHERS AND RELATED WORKERS**

Concrete placers, concrete finishers and related workers erect reinforced concrete frameworks and structures, make forms for moulding concrete, reinforce concrete surfaces, cement openings in walls or casings for wells, finish and repair cement surfaces and carry out terrazzo work.

**Tasks include:**

- constructing and repairing reinforced concrete floors, walls, tanks, silos and other concrete structures;
- making shuttering or assembling prefabricated forms for moulding concrete;
- cementing openings in walls or casings for wells;
- finishing and smoothing surfaces of concrete structures;
- applying a durable, smooth surfacing composed of cement, sand pigment and marble particles to floors, known as a terrazzo finish;
- performing related tasks.

**Examples of the occupations classified here:**

**71141** *Reinforced concrete worker*  
**71142** *Shutterer, concrete*  
**71143** *Steel bender*  
**71144** *Finisher, cement*  
**71145** *Cementer, petroleum and gas wells*  
**71146** *Mixer, concrete*

#### **7115 CARPENTERS AND JOINERS**

Carpenters and joiners cut, shape, assemble, erect, maintain and repair various types of wooden structures and fittings.

**Tasks include:**



- making, altering and repairing structural and other woodwork at a work-bench and on a construction site;
- fitting, assembling and altering internal and external fixtures of buildings, such as walls, doors, door and window frames, facings and panelling;
- making, repairing and fitting scenic equipment for theatrical performances, motion picture or television productions;
- constructing, assembling, altering and repairing wooden fixtures and fittings in train coaches, aircraft, ships, boats, floats, and other vehicles;
- performing related tasks;

**Examples of the occupations classified here:**

**71151** *Carpenter*  
**71152** *Carpenter, construction*  
**71153** *Joiner, construction*  
**71154** *Joiner, ship*  
**71155** *Boat builder, wood*  
**71156** *Joiner, aircraft*  
**71157** *Carpenter, stage and studio*  
**71158** *Carpenter, table*

**7119 BUILDING FRAME AND RELATED TRADES WORKERS NOT ELSEWHERE CLASSIFIED**

This unit group covers building frame and related trades workers not classified elsewhere in Minor Group 711: Building Frame and Related Trades Workers.

**Tasks include:**

- performing miscellaneous construction and building maintenance work on structures such as office buildings, apartment houses, factories and similar establishments in good repair;
- erecting temporary metal or wooden scaffolding on building sites;
- demolishing buildings and other structures;
- performing related tasks.

**Examples of the occupations classified here:**

**71191** *Worker, building maintenance*  
**71192** *Layer, pipe and drain*  
**71193** *Scaffolder*  
**71194** *Worker, demolition*  
**71195** *Erector, billboard*  
**71196** *Steeplejack*

**712 BUILDING FINISHERS AND RELATED TRADES WORKERS**

Building finishers and related trades workers cover, apply or install, maintain and repair roofs, floors, walls, insulation systems, glass in windows or other frames, as well as plumbing, piping and electrical systems in buildings and other structures.

## **7121 ROOFERS**

Roofers build and repair roofs on all types of buildings using one or more kinds of materials.

### **Tasks include:**

- studying drawings, specifications and construction sites to determine materials required;
- covering roof frameworks with slate and pre-fabricated tiles to cover pitched roofs;
- laying a waterproof shield and fixing metallic or synthetic materials to a building's frame;
- sizing and cutting roofing materials to fit around edges corners and protuberances such as chimney;
- using natural materials such as thatching to provide roof coverings;
- creating temporary structures such as scaffolding and ladders.

### **Examples of the occupations classified here:**

**71211** *Thatcher*  
**71212** *Roofer, composition*  
**71213** *Roofer, asphalt / asbestos*  
**71214** *Roofer, metal / zink*  
**71215** *Roofer, slate and tile*  
**71216** *Roofer, wood-shingle*  
**71217** *Awning installer*

## **7122 FLOOR LAYERS AND TILE SETTERS**

Floor layers and tile setters install, maintain and repair flooring, and cover floors, walls and other surfaces with tiles or mosaic panels for decorative or other purposes.

### **Tasks include:**

- preparing floor areas for covering with a variety of materials;
- assembling carpet, tiles or other materials and laying them on floors according to design and other specifications;
- preparing wall areas for covering with tiles or other materials for decorative or other purposes such as acoustic insulation;
- setting tiles and constructing and laying mosaic panels to walls, floors and other surfaces;
- performing related tasks.

### **Examples of the occupations classified here:**

**71221** *Setter, tile*  
**71222** *Setter, marble*  
**71223** *Worker, parquetry*  
**71224** *Cutter-setter, mosaic*  
**71225** *Layer, tile/composition*

## **7123 PLASTERERS**

Plasterers install, maintain and repair plasterboard in buildings, and apply decorative and

protective coverings of plaster, cement and similar material to the interiors and exteriors of structures.

**Tasks include:**

- applying one or more coats of plaster to interior walls and ceilings of buildings to produce finished surface;
- measuring, marking and installing ornamental plaster panels, and casting and trimming ornamental plaster cornices;
- applying protective and decorative covering of cement, plaster and similar materials to exterior building surfaces;
- making and installing decorative plaster fixtures of fibrous plaster;
- performing related tasks.

**Examples of the occupations classified here:**

**71231** *Plasterer*

**71232** *Plasterer, stucco*

**71233** *Plasterer, fibrous*

**71234** *Plasterer, ornamental*

## **7124 INSULATION WORKERS**

Insulation workers apply and repair insulating materials to buildings, boilers, pipes or refrigeration and air-conditioning equipment.

**Tasks include:**

- cutting insulation material by size and shape;
- applying slabs and sheets of insulating or sound-absorbing materials to walls, floors and ceilings of buildings;
- blow and pack insulating or sound-absorbing materials into cavities between walls, floors and ceilings of buildings with power-driven machines;
- examining plans, specifications and work sites to determine the type, quality and quantity of insulation material required;
- applying insulating materials to exposed surfaces of equipment such as boilers, pipes and tanks;
- insulating refrigeration and air-conditioning equipment;
- performing related tasks.

**Examples of the occupations classified here:**

**71241** *Insulator, building*

**71242** *Insulator, boiler and pipe*

**71243** *Insulator, acoustical*

**71244** *Insulator, refrigeration and air-conditioning equipment*

**71245** *Insulation worker, sound-proofing*

## **7125 GLAZIERS**

Glaziers measure, cut, finish, fit and install flat glass and mirrors.

**Tasks include:**

- selecting the type of glass to be used, cutting to right size and shape and installing in

- windows, doors, showers and partitions of buildings;
- installing glass and mirrors in skylights, display cases, interior walls and ceilings;
- installing or replacing windscreens in vehicles or boats;
- creating decorative glass features such as glass walls, staircases, balustrades and stained-glass windows;
- performing related tasks.

**Examples of the occupations classified here:**

- 71251** *Glazier, building*
- 71252** *Glazier, vehicle*
- 71253** *Glazier, leaded-glass*
- 71254** *Glazier, patent roofing*
- 71255** *Glazier, plate-glass*

## **7126 PLUMBERS AND PIPE FITTERS**

Plumbers and pipe fitters assemble, install, repair and maintain pipe systems, fittings and fixtures for water, gas, drainage, sewerage systems, and hydraulic and pneumatic equipment.

**Tasks include:**

- measuring, cutting, threading, bending, jointing, assembling, installing, maintaining and repairing pipes, fittings and fixtures of drainage, heating, water supply and sewerage systems;
- installing gas appliances, dishwashers and water heaters, sinks and toilets using hand and power tools;
- laying clay, concrete or cast-iron pipes in ditches to form sewers, drains or water mains, or for other purposes;
- inspecting, examining and testing installed systems and pipes, using pressure gauge, hydrostatic testing, observation or other methods;
- performing related tasks.

**Examples of the occupations classified here:**

- 71261** *Plumber*
- 71262** *Fitter, pipe*
- 71263** *Tradesman K1 R17*
- 71264** *Tradesman K2 R11*
- 71265** *Tradesman K3 R9*
- 71266** *Digger, well*

## **7127 AIR CONDITIONING AND REFRIGERATION MECHANICS**

Air conditioning and refrigeration mechanics assemble, install, maintain and repair air conditioning and refrigeration systems and equipment.

**Tasks include:**

- interpreting blueprints, drawings or other specifications;
- assembling, installing and repairing components for air conditioning and refrigeration systems;
- connecting piping and equipment by bolting, riveting, welding or brazing;
- testing systems, diagnosing faults and performing routine maintenance or servicing;
- performing related tasks.

## **713     PAINTERS, BUILDING STRUCTURE CLEANERS AND RELATED TRADES WORKERS**

Painters, building structure cleaners and related trades workers prepare surfaces and apply paint and similar materials to buildings and other structures, vehicles or various manufactured articles. They cover interior walls and ceilings with wallpaper, clean chimneys and exterior surfaces of buildings and other structures.

### **7131    PAINTERS AND RELATED WORKERS**

Painters and related workers prepare surfaces of buildings and other structures for painting, apply protective and decorative coats of paint or similar materials, or cover interior walls and ceilings of buildings with wallpaper or other finishes.

#### **Tasks include:**

- cleaning and preparing walls and other surfaces of buildings for painting or wallpapering;
- selecting and preparing paints to required colours by mixing pigments and additives;
- applying or spraying paint, varnish, and similar materials to surfaces, fixtures and fittings of buildings;
- measuring and hanging wallpaper or other fabrics on interior walls and ceilings;
- applying paints, varnishes and stains to surfaces using brushes, rollers and sprays;
- performing related tasks.

#### **Examples of the occupations classified here:**

**71311    *Painter, building***

**71312    *Painter, metal structure***

**71313    *Wall/ceiling paperhanger***

**71314    *Whitewasher***

### **7132    SPRAY PAINTERS AND VARNISHERS**

Spray painters and varnishers operate spray painting and varnishing equipment to apply protective coatings to manufactured items or structures.

#### **Tasks include:**

- preparing surfaces to be coated using a variety of methods to remove grease, dirt and rust;
- painting cars, buses, trucks and other vehicles, and applying varnish and other protective coatings;
- applying paint as well as protective coatings of enamel or varnish on metal, wooden and other manufactured products, usually with a hand-spraying device;
- performing related tasks.

#### **Examples of the occupations classified here:**

**71321    *Spray-painter, metal***

**71322    *Spray-painter, automobile***

**71323    *Painter, manufactured articles***

**71324    *Painter, metal***

- 71325** *Varnisher, manufactured articles*
- 71326** *Varnisher, metal*
- 71327** *Signpainter*
- 71328** *Painter, ship's hull*

### **7133 BUILDING STRUCTURE CLEANERS**

Building structure cleaners clean exterior surfaces of buildings and other structures, and remove soot from chimneys.

#### **Tasks include:**

- cleaning exterior surfaces of stone, brick, metal or similar materials by means of chemicals, of a jet of steam or sand applied under great pressure;
- removing soot from flues, chimneys and connecting pipes;
- performing related tasks.

#### **Examples of the occupations classified here:**

- 71331** *Cleaner, building exteriors*
- 71332** *Sandblaster, building exteriors*

## **72 METAL, MACHINERY AND RELATED TRADES WORKERS**

Metal, machinery and related trades workers cast, weld, forge and, by other methods, form metal, erect, maintain and repair heavy metal structures, install electrical wiring system, fit, maintain and repair machinery including engines, vehicles, electrical and electronic equipment, or they produce tools and various non-precious-metal articles.

#### **This sub-major group consists of the following minor groups:**

- 721 SHEET AND STRUCTURAL METAL WORKERS, MOULDERS AND WELDERS AND RELATED TRADES WORKERS**
- 722 BLACKSMITHS, TOOLMAKERS AND RELATED TRADES WORKERS**
- 723 MACHINERY MECHANICS AND REPAIRERS**

### **721 SHEET AND STRUCTURAL METAL WORKERS, MOULDERS AND WELDERS AND RELATED TRADES WORKERS**

Sheet and structural metal workers, moulders and welders and related trades workers make moulds and cores for casting metal, weld and cut metal parts, make, install and repair articles of sheet metal, install, erect, maintain and repair heavy metal structures, tackle, cable-cars and related equipment, or carry out similar work under water.

### **7211 METAL MOULDERS AND COREMAKERS**

Metal moulders and coremakers make moulds and cores for casting metal.

#### **Tasks include:**

- making moulds by hand or by using auxiliary machines on a bench for small metal castings, or on the foundry floor or in a pit for large castings;
- making cores for use in metal moulds;

- performing related tasks.

**Examples of the occupations classified here:**

**72111** *Moulder, metal*

**72112** *Core checker, foundry*

## **7212 WELDERS AND FLAME CUTTERS**

Welders and flame cutters weld and cut metal parts using gas flame, or an electric arc and other sources of heat to melt and cut, or to melt and fuse metal.

**Tasks include:**

- welding metal parts using gas flame, or an electric arc, thermite compound or other methods;
- operating resistance-welding machines; using blowtorch to make and repair lead linings, pipes, floors and other lead fixtures;
- brazing metal parts together;
- cutting metal pieces using gas flame or an electric arc;
- joining metal parts by hand soldering;
- performing related tasks.

**Examples of the occupations classified here:**

**72121** *Welder*

**72122** *Foreman, welder*

**72123** *Flame cutter*

**72124** *Solderer, metal*

**72125** *Burner, lead*

**72126** *Solderer*

**72127** *Welder, jig*

## **7213 SHEET-METAL WORKERS**

Sheet-metal workers make, install and repair articles and parts of articles of sheet metal such as stainless steel, copper, tin, brass, aluminium, zinc or galvanised iron.

**Tasks include:**

- marking sheet metal for cutting and shaping;
- making and repairing household utensils and other articles in tin, copper and light alloys, or ornamental articles and fittings;
- making and repairing boilers, tanks, vats and similar containers;
- installing and repairing sheet metal parts of vehicles and aircraft;
- performing related tasks.

**Examples of the occupations classified here :**

**72131** *Sheet metal worker*

**72132** *Coppersmith*

**72133** *Boilerman*

**72134** *Brazier*

**72135** *Panel beater, aircraft*

**72136 *Marker, sheet metal***

**7214 STRUCTURAL-METAL PREPARERS AND ERECTORS**

Structural-metal preparers and erectors assemble, erect and dismantle structural metal frames of buildings and other structures.

**Tasks include:**

- marking metal framework as a guide when drilling, cutting, and shaping them for use in buildings, ships and other structures;
- drilling, cutting and shaping structural steel in a workshop;
- erecting steel framework for buildings, bridges and other constructions;
- assembling and erecting the framework and other metal parts of ships' structures;
- shaping and fitting structural-steel plates of ships under construction or repair;
- riveting structural-metal members by hand, machine or pneumatic riveter;
- performing related tasks.

**Examples of the occupations classified here :**

**72141 *Structural steel worker, workshop***

**72142 *Erector, constructional steel***

**72143 *Plater, ship***

**72144 *Riveter***

**72145 *Marker, structural metal***

**72146 *Shipwright, metal***

**72147 *Erector, structural metal***

**72148 *Preparer, structural metal***

**7215 RIGGERS AND CABLE SPLICERS**

Riggers and cable splicers assemble rigging gear to move and position equipment and structural components, or install and maintain cables, ropes and wires on construction sites, buildings or other structures.

**Tasks include:**

- estimating the size, shape and weight of objects to be moved and deciding on the type of equipment to move them;
- installing and repairing cables, ropes, wires, pulleys and other tackle;
- joining, repairing and fitting attachments to wires, ropes and cables;
- working as member of crew erecting and repairing derricks for drilling water, gas- and oil-wells;
- lifting up scenery and lighting equipment in theatres if installing and maintaining communication towers, aerial cableways, funicular railways, ski lifts and similar infrastructure;
- performing related tasks.

**Examples of the occupations classified here:**

**72151 *Rigger, hoisting equipment/construction***

**72152 *Rigger, hoisting equipment***

**72153 *Rigger, logging***

**72154 *Rigger, ship***



**72155** *Rigger, petroleum and gas well drilling*

**72156** *Splicer, rope and cable*

**72157** *Rigger, aircraft*

**72158** *Rigger, railway cable*

## **722** **BLACKSMITHS, TOOLMAKERS AND RELATED TRADES WORKERS**

Blacksmiths, toolmakers and related trades workers hammer and forge bars, rods or ingots of iron, steel and other metals to make and repair various kinds of tools, equipment and other articles, and polish and sharpen metal surfaces.

### **7221** **BLACKSMITHS, HAMMERSMITHS AND FORGING-PRESS WORKERS**

Blacksmiths, hammersmiths and forging-press workers draw wire, hammer and forge bars, rods, ingots and plates of iron, steel or other metals to make and repair various kinds of tools, metal articles, pieces of equipment, agricultural and related implements.

#### **Tasks include:**

- heating metal in forge furnace and manufacturing and repairing articles by drawing, bending, cutting, hammering metal on an anvil, punching, shearing, joining and hardening or tempering;
- shaping heated metal into forgings on power hammer equipped with open dies;
- operating closed die-drop hammer to forge metal articles;
- operating a power-press machine equipped with closed dies to forge metal articles;
- performing related tasks.

#### **Examples of the occupations classified here:**

**72211** *Blacksmith*

**72212** *Hammersmith*

**72213** *Operator, drop-hammer*

**72214** *Operator, forging-press*

**72215** *Toolsmith*

### **7222** **TOOLMAKERS AND RELATED WORKERS**

Toolmakers and related workers make and repair tools, sports guns, locks, dies, patterns and other metal articles, as well as make engines or machinery components, and parts thereof, using hand and machine tools to work metal to fine tolerances.

#### **Tasks include:**

- making, maintaining and repairing dies, jigs, gauges and fixtures, using hand tools and various kinds of machine tools;
- making engines or machinery components, and parts thereof;
- fitting and assembling parts to make and repair jigs, fixtures and gauges;
- repairing and modifying sports guns and other small arms;
- making, fitting, assembling, repairing and installing lock parts and locks;
- making and repairing metal patterns used in making foundry moulds;
- laying out lines and reference points on metal stock to guide other workers who cut, turn, mill, grind or otherwise shape metal;
- performing related tasks.

**Examples of the occupations classified here:**

- 72221** *Maker, tool and die*
- 72222** *Pattern-maker, metal foundry*
- 72223** *Maker, jig and fixture*
- 72224** *Marker, metal*
- 72225** *Locksmith*
- 72226** *Gunsmith*

#### **7223 METAL WORKING MACHINE TOOL SETTERS AND OPERATORS**

Metal working machine tool setters and operators grind and polish metal surfaces and sharpen tools.

**Tasks include:**

- operating fixed or portable buffing and polishing machines;
- sharpening cutting tools and instruments using grinding wheel or mechanically operated grinding machines;
- repairing, adjusting and sharpening saw blades and metal teeth of cylinders in textile carding machines;
- grinding crank pins and journals of crankshaft accurately to uniform diameters by special grinding machine and attachments;
- performing related tasks.

**Examples of the occupations classified here:**

- 72231** *Grinder, metal*
- 72232** *Sharpener, cutting instruments*
- 72233** *Sharpener, machine tools*
- 72234** *Repairer, saw*
- 72235** *Grinder, textile card*
- 72236** *Grinder, crankshaft*
- 72237** *Polisher, metal*
- 72238** *Finisher, metal*

#### **7224 METAL POLISHERS, WHEEL GRINDERS AND TOOL SHARPENERS**

Metal polishers, wheel grinders and tool sharpeners grind and polish metal surfaces and sharpen tools.

**Tasks include:**

- operating fixed or portable buffing and polishing machines;
- sharpening cutting tools and instruments using grinding wheel or mechanically operated grinding machines;
- repairing, adjusting and sharpening saw blades and metal teeth of cylinders in textile carding machines;
- grinding crank pins and journals of crankshaft accurately to uniform diameters by special grinding machine and attachments;
- performing related tasks.

## **723     MACHINERY MECHANICS AND REPAIRERS**

Machinery mechanics and repairers fit, install, service and repair engines, vehicles, agricultural or industrial machinery, and mechanical equipment.

### **7231    MOTOR VEHICLE MECHANICS AND REPAIRERS**

Motor vehicle mechanics and repairers, install, service and repair motor vehicle.

#### **Tasks include:**

- fitting, examining, adjusting, dismantling, rebuilding and replacing defective parts of motor vehicles;
- installing or adjusting motors and brakes, and adjusting steering or other parts of motor vehicles;
- performing related tasks.

#### **Examples of the occupations classified here:**

- 72311    *Mechanic, earth-moving equipment***
- 72312    *Mechanic, garage***
- 72313    *Mechanic, motor-cycle***
- 72314    *Mechanic, motor vehicle***
- 72315    *Assistant motor vehicle mechanics and repairers***
- 72316    *Workshop, assistant***
- 72317    *Workshop, maintenance worker***
- 72318    *Foreman, vehicle***

### **7232    AIRCRAFT ENGINE MECHANICS AND REPAIRERS**

Aircraft engine mechanics and repairers repair and maintain the operating condition of aircraft engines; includes helicopter engine mechanics.

#### **Tasks include:**

- replacing or repairs worn, defective, or damage components, using hand tools, gauges, and testing equipment;
- testing engine operation, using test equipment such as ignition analyzer, compression checker, distributor timer, and ammeter, to identify malfunction;
- listening to operating engine to detect and diagnose malfunctions, such as sticking or burned valves;
- reassembling engine and installs engine in aircraft;
- disassembling and inspects engine parts, such as turbine blades and cylinders, for wear, warping, cracks, and leaks;
- performing related tasks.

#### **Examples of the occupations classified here:**

- 72321    *Mechanic, aircraft engine***

## **7233 AGRICULTURAL AND INDUSTRIAL MACHINERY MECHANICS AND REPAIRERS**

Agricultural and industrial machinery mechanics and repairers, repair, install, adjust, or maintain agricultural, industrial production and processing machinery or refinery and pipeline distribution systems.

### **Tasks include:**

- fitting, examining, testing and servicing vehicle or aircraft engines, agricultural or industrial machinery, and mechanical equipment;
- replacing engine components or complete engines;
- oiling and greasing stationary engines, machinery or vehicles;
- inspecting and testing new machinery and mechanical equipment for conformity with standards and specifications;
- performing related tasks.

### **Examples of the occupations classified here:**

- 72331** *Mechanic, machinery*
- 72332** *Filter, machinery*
- 72333** *Mechanic, office machinery*
- 72334** *Mechanic, mining machinery*
- 72335** *Mechanic, marine engine*
- 72336** *Shipyards*
- 72337** *Mechanic maintenance, estate/plantation*

## **7234 BICYCLE AND RELATED REPAIRERS**

Bicycle and related repairers, install and adjust speed and gear mechanisms. Assemble new bicycles. Install, repair, and replace equipment or accessories, such as handlebars, stands, lights, and seats. Align wheels. Disassemble axles to repair, adjust, and replace defective parts, using hand tools. Shape replacement parts, using bench grinders. Repair holes in tire tubes, using scrapers and patches. Weld broken or cracked frames together, using oxyacetylene torches and welding rods. Paint bicycle frames, using spray guns or brushes.

### **Tasks include:**

- installing, repairing, and replacing equipment or accessories, such as handlebars, stands, lights, and seats;
- aligning wheels;
- installing and adjusting speed and gear mechanisms;
- disassembling axle to repair, adjust, and replace defective parts, using hand tools;
- repairing holes in tire tubes, using scraper and patch;
- shaping replacement parts using bench grinder;
- assembling new bicycles;
- painting bicycle frame, using spray gun or brush;
- welding broken or cracked frame together, using oxyacetylene torch and welding rods;
- performing related tasks.

### **Examples of the occupations classified here:**

- 72341** *Repairer, bicycle*
- 72342** *Repairer, beca*

## **73     HANDICRAFT AND PRINTING WORKERS**

Handicraft and printing workers make and repair precision instruments, musical instruments, various articles such as jewellery, precious metal ware, ceramics, porcelain ware and glassware or they perform printing or book-binding tasks.

**This sub-major group consists of the following minor groups:**

### **731     HANDICRAFT WORKERS 732     PRINTING TRADES WORKERS**

## **731     HANDICRAFT WORKERS**

Handicraft workers make and repair precision instruments, musical instruments, jewellery and other articles of precious metals.

### **7311    PRECISION INSTRUMENT MAKERS AND REPAIRERS**

Precision instrument makers and repairers make, repair and calibrate mechanical watches, clocks, nautical, meteorological, optical, surgical, dental, orthopaedic and other precision instruments and equipment.

#### **Tasks include:**

- making, adjusting and repairing mechanical watches and clocks;
- making, adjusting and repairing nautical and meteorological instruments and equipment;
- making, adjusting and repairing optical instruments;
- making, adjusting and repairing surgical instruments and other medical equipment;
- making and repairing medical, orthopaedic and dental appliances and prostheses;
- calibrating instruments using standard weights and measures and using hand tools to adjust and align parts and small balancing weights;
- performing related tasks.

#### **Examples of the occupations classified here:**

- 73111    *Maker and repairer, instrument/precision***
- 73112    *Maker and repairer, dental prosthesis***
- 73113    *Maker and repairer, orthopedic appliance***
- 73114    *Maker and repairer, watch and clock***
- 73115    *Maker and repairer, instrument/optical***
- 73116    *Maker and repairer, balance***
- 73117    *Maker, barometer***
- 73118    *Maker, instrument/nautical***

### **7312    MUSICAL INSTRUMENT MAKERS AND TUNERS**

Musical instrument makers and tuners make, repair and tune a variety of musical instruments using hand or power tools.

#### **Tasks include:**

- making and repairing accordions and stringed and wind instruments;
- building and repairing organ and making parts for such organ;

- making instrumental parts of piano and assembling and repairing such piano;
- tuning piano and other keyboard instruments;
- making and repairing other musical instruments;
- performing related tasks.

**Examples of the occupations classified here:**

- 73121** *Turner, musical instrument*
- 73122** *Maker, piano*
- 73123** *Maker, drum*
- 73124** *Maker, wood-wind musical instrument*
- 73125** *Maker, metal-wind musical instrument*

### **7313 JEWELLERY AND PRECIOUS-METAL WORKERS**

Jewellery and precious-metal workers make and repair jewellery and precious metal ware, cut and set gems and engrave designs on jewellery and precious metal articles.

**Tasks include:**

- casting jewellery and other non-ferrous metal articles by hand;
- making complete jewellery articles such as rings, brooches and bracelets;
- cutting and polishing gems and setting them in jewellery articles;
- making, remodeling and repairing precious metal ware;
- rolling and beating precious metals;
- engraving letters and designs on jewellery and precious metal ware;
- performing related tasks.

**Examples of the occupations classified here:**

- 73131** *Goldsmith*
- 73132** *Grader, gold*
- 73133** *Slicer, gem*
- 73134** *Setter, gem*
- 73135** *Roller, precious metal*
- 73136** *Engraver, jewellery*
- 73137** *Polisher, gem*
- 73138** *Enameller, jewellery*

### **7314 POTTERS AND RELATED WORKERS**

Potters and related workers make pottery, porcelain ware, bricks and tiles.

**Tasks include:**

- making articles of pottery and porcelain;
- making clay or plaster of Paris moulds;
- forming articles on potter's wheel with hands, or using interior or exterior moulding shapes and shaping tools;
- forming articles by casting semi-liquid clay in plaster of Paris moulds;
- forming bricks and tiles into special shapes by hand;
- making articles by pressing plastic clay into moulds by hand;
- operating screw-press or hydraulic press to make products clay dust;

- operating a machine which extrudes moist clay for further processing;
- performing related tasks.

**Examples of the occupations classified here:**

- 73141** *Potter*
- 73142** *Moulder/presser, brick and tile*
- 73143** *Modeller, pottery and porcelain*
- 73144** *Caster, pottery and porcelain*
- 73145** *Maker, pottery and porcelain mould*

#### **7315 GLASS MAKERS, CUTTERS, GRINDERS AND FINISHERS**

Glass makers, cutters, grinders and finishers blow, mould, press and roll shapes molten glass and cut, grind and polish glass.

**Tasks include:**

- shaping molten glass by means of blowpipe, hand moulding, heating and bending;
- heating, moulding and pressing optical glass to make clear lens;
- grinding and polishing clear lens;
- grinding and bevelling edges of glass;
- cutting sheet glass with hand tools and sawing prisms and other shapes optical glass blocks;
- performing related tasks.

**Examples of the occupations classified here:**

- 73151** *Blower, glass*
- 73152** *Blower, glass N17*
- 73153** *Cutter, glass*
- 73154** *Cutter, optical glass*
- 73155** *Polisher, glass*
- 73156** *Grinder, glass*
- 73157** *Moulder, glass lens*
- 73158** *Finisher, glass*

#### **7316 SIGN WRITERS, DECORATIVE PAINTERS, ENGRAVERS AND INSCRIBERS**

Sign writers, decorative painters, engravers and inscribers design, illustrate, and decorate silver, gold, steel or glass and other materials, for personal, household use, or for decorative purposes.

**Tasks include:**

- cutting and design surface in a variety of shapes and sized that yield different line types;
- cutting designs on glass articles with sandblasting equipment;
- illustrating, cover and paints in surface such as walls, linen, paper and other materials;
- engraving monograms and ornamental designs on glassware;
- etching decorative designs, calibration markings and other figures on glass articles.

**Examples of the occupations classified here:**

**73161** *Engraver, glass*

**73162** *Dipper, ceramics*

**73163** *Router, printing plate*

#### **7317 HANDICRAFT WORKERS OF WOOD, BASKETRY AND RELATED MATERIALS**

Handicraft workers of wood, basketry and related materials apply traditional techniques to prepare wood, straw, rattan, reeds, stone, clay, shells, and other materials, and carve, mould, assemble, weave, or paint and decorate various articles for personal or household use, or for decorative purposes.

**Tasks include:**

- preparing wood, straw, rattan, reeds, stone, shells, or similar materials;
- carving, assembling, weaving, painting and decorating various articles for personal or household use such as salad bowls, serving-spoons, cutting-boards, trays, vases, jugs, baskets, straw hats, straw mats and similar objects;
- carving, assembling, weaving and painting various decorative articles such as statues and other sculptures;
- making wicker furniture peeled and softened rattan, reeds, rushes, willow branches and similar materials;
- making various kinds of baskets by interlacing rattan, reeds, rushes or similar materials;
- selecting and preparing brush materials such as bristles, nylon, fibres and wire, and setting them in brush base;
- selecting and preparing materials such as broom;
- making mats palm or coconut tree leaves and grass materials;
- performing related tasks.

**Examples of the occupations classified here:**

**73171** *Instructor, craft E11*

**73172** *Handicraft worker, stone articles*

**73173** *Handicraft worker, wooden articles*

**73134** *Maker, basket*

**73175** *Maker, brush*

**73176** *Weaver, mat*

**73177** *Maker, broom*

**73178** *Maker, furniture/rattan*

#### **7318 HANDICRAFT WORKERS OF TEXTILE, LEATHER AND RELATED MATERIALS**

Handicraft workers of textile, leather and related materials apply traditional techniques to produce various articles for personal or household use, as well as for decorative purposes.

**Tasks include:**

- preparing carving, moulding, assembling, painting and decorating various articles; weaving, knitting, embroidering and lace-making;
- producing traditional footwear;
- producing handbags, belts and other accessories.



Examples of the occupations classified here:

- 73181**    *Weaver, songket*
- 73182**    *Pencanting, batik*
- 73183**    *Maker, rattan bag*

#### **7319    HANDICRAFT WORKERS NOT ELSEWHERE CLASSIFIED**

This unit group covers handicraft workers outside the scope of unit group 7311-7318

Examples of the occupations classified here:

- 73191**    *Back knife fabricator*
- 73192**    *Batch maker*

#### **732    PRINTING TRADES WORKERS**

Printing trades workers set and arrange printing type or copy by hand or by electronic key-boarding or other machines, make printing plates set-up type, engrave lithographic stones, printing plates and rollers, make and print with silk-screens, print on paper and other materials, or bind and finish books.

#### **7321    PRE-PRESS TECHNICIANS**

Pre-press technicians set and arrange printing type by hand, machine or computer.

Tasks include:

- setting type by hand and printing copies with simple machines;
- operating linotype, monotype and typesetting machines;
- arranging set-up of type and spacing material and illustration blocks to make pages;
- arranging pages in sequence for printing;
- operating electronic key-boarding machines which reproduce letters on film or sensitized paper for eventual reproduction in printing;
- arranging photo-composed type film for reproduction on printing plates;
- performing word processing and typesetting works;
- performing related tasks.

Examples of the occupations classified here:

- 73211**    *Compositor*
- 73212**    *Printer*
- 73213**    *Typesetter*
- 73214**    *Operator, desktop publishing equipment*
- 73215**    *Maker, braille plate*

#### **7322    PRINTERS**

Printers cut stencils for use in silk-screen printing and print on paper, metal, textiles and other materials with silk-screens, blocks of rubber, wood or other materials, or engraved printing rollers.

**Tasks include:**

- cutting stencils for silk-screen printing;
- printing on paper, metal, textiles and other materials by silk-screen process;
- printing designs and patterns on cloth or wallpaper with engraved blocks or machines equipped with engraved rollers;
- reproducing copies of textile designs by tracing them onto transparent materials;
- performing related tasks.

**Examples of the occupations classified here:**

**73221 Cutter, stencil/silk-screen**

**73222 Printer, silk-screen**

**73223 Printer, textile**

**73224 Printer, block**

**73225 Press-operator, embossing**

**73226 Tracer, textile design**

**7323 PRINT FINISHING AND BINDING WORKERS**

Print finishing and binding workers bind books and other publications by hand or machine and perform book finishing operation.

**Tasks include:**

- binding books and periodicals by hand;
- setting and operating bookbinding machines;
- embossing designs or titles on books by hand or machine;
- mounting maps and charts;
- performing related tasks.

**Examples of the occupations classified here:**

**73231 Bookbinder**

**73232 Cutter, paper**

**73233 Mounter, map and chart**

**73234 Embosser, book**

**73235 Finisher, book**

**7324 PRINTING AND PHOTO ENGRAVERS AND ETCHERS**

Printing and photo engravers and etchers engrave lithographic stones and printing plates, rollers, dies and blocks by various processes, develop and process photographic film and make prints.

**Tasks include:**

- cutting designs through film applied to surface of lithographic stones;
- engraving steel and copper plates, rollers, dies or wood, rubber and linoleum blocks by hand;
- engraving metal plates and rollers by machine;
- transferring designs lithographic stone to metal plates;

- etching metal plates or rollers with acid and retouching;
- performing all or several tasks in preparing printing plates by photogravure process;
- processing black and white or colour film and plates to obtain negatives or transparent positives;
- printing black and white or colour photographs;
- developing x-ray films;
- performing related tasks.

**Examples of the occupations classified here:**

- 73241** *Engraver, printing, metal plate*
- 73242** *Etcher, printing, metal plate*
- 73243** *Engraver, printing/lithographic stone*
- 73244** *Photo-engraver*
- 73245** *Developer, film/color and black and white*
- 73246** *Developer, film/x-ray*

## **74 ELECTRICAL AND ELECTRONIC TRADES WORKERS**

Electrical and electronic trades workers fit, adjust, install and repair electrical motors, generators, household appliances, computer hardware, sound and image recording and telecommunications systems, install, service and repair electrical wiring systems in homes, industrial plants and other establishments, ships, motor vehicles and aircraft, and install, construct and repair electrical power transmission cables, telephone and telegraph lines and related equipment.

**This sub-major group consists of the following minor groups:**

- 741** **ELECTRICAL EQUIPMENT INSTALLERS AND REPAIRERS**
- 742** **ELECTRONICS AND TELECOMMUNICATIONS INSTALLERS AND REPAIRERS**

### **741 ELECTRICAL EQUIPMENT INSTALLERS AND REPAIRERS**

Electrical equipment installers and repairers fit, adjust, install and repair electrical motors, generators, household appliances, install, service and repair electrical wiring systems in homes, industrial plants and other establishments, ships, motor vehicles and aircraft, and install, construct and repair electrical power transmission cables and related equipment.

#### **7411 BUILDING AND RELATED ELECTRICIANS**

Building and related electricians service and repair electrical wiring system in building.

**Tasks include:**

- installing, maintaining and repairing electrical wiring systems and related equipment in various buildings such as schools, hospitals, commercial;
- establishments, residential building and other structures;
- performing related task.

**Examples of the occupations classified here:**

- 74111** *Electrician, building*
- 74112** *Electrician, construction*

## **7412 ELECTRICAL MECHANICS AND FITTERS**

Electrical mechanics and fitters fit, adjust, install, service and repair electrical wiring systems, electrical machinery and other electrical apparatus and equipment in buildings, factories, workshops or other places.

### **Tasks include:**

- installing, maintaining and repairing electrical wiring systems and related equipment in various buildings such as schools, hospitals, commercial establishments, residential buildings and other structures;
- fitting, adjusting and repairing various kinds of electrical machinery and motors, generators, switch gear and control apparatus, instruments, or electrical parts of elevators and related equipment;
- fitting, adjusting and repairing electrical parts in domestic appliances, industrial machines and other appliances, or electrical apparatus in aircraft, ships and vehicles;
- installing, maintaining and repairing electrical equipment in theatres and radio or television studios;
- inspecting and testing manufactured electrical products;
- planning and carrying out preventive and scheduled maintenance of electrical installation;
- performing related tasks.

### **Examples of the occupations classified here:**

- 74121** *Chargeman, high voltage/restriction*
- 74122** *Electrical chargeman R17*
- 74123** *Electrician, maintenance*
- 74124** *Electrician, ship*
- 74125** *Electrician, vehicle*
- 74126** *Electrician, aircraft*
- 74127** *Electrician, stage and studio*
- 74128** *Electrical repairman, household appliance*

## **7413 ELECTRICAL LINE INSTALLERS AND REPAIRERS**

Electrical line installers and repairers install and repair power, telephone, telegraph and television lines and cables.

### **Tasks include:**

- installing and repairing overhead and underground electrical power and electrical traction lines;
- installing and repairing overhead and underground telephone and telegraph lines;
- making joints in overhead and underground cables;
- performing related tasks.

### **Examples of the occupations classified here:**

- 74131** *Line worker, electrical power*
- 74132** *Cable line worker, telephone/telegraph/television*
- 74133** *Jointer, cable/electric*
- 74134** *Layer, underground cable*

## **742     ELECTRONICS AND TELECOMMUNICATIONS INSTALLERS AND REPAIRERS**

Electronics and telecommunications installers and repairers fit, adjust, install, service and repair computer hardware, sound and image recording and transmitting telecommunications equipment, audio and video recorders and other electronic equipment as well as telephone and telegraph equipment in homes, business or telephone exchanges.

### **7421    ELECTRONICS MECHANICS AND SERVICES**

Electronics mechanics and services fit, adjust, install, service and repair computer hardware, sound and image recording and transmitting telecommunications equipment, audio and video recorders and other electronic equipment.

#### **Tasks include:**

- fitting and adjusting computer hardware, sound and image recorders and transmitters, radar equipment, electronic components of musical instruments, medical or industrial equipment and signalling systems;
- inspecting and testing manufactured electronic products;
- examining radio or television equipment, tape recorders, video cassette recorders, and other audio-visual equipment, replacing defective parts and making adjustments and repairs;
- performing related tasks.

#### **Examples of the occupations classified here:**

- 74211    *Fitter, electronics***
- 74212    *Fitter, electronics/radio, television, video and radar equipment***
- 74213    *Fitter, electronics/signaling system***
- 74214    *Fitter, electronics/medical equipment***
- 74215    *Fitter, electronics/computer and related electronic equipment***
- 74216    *Fitter, electronics/industrial equipment***
- 74217    *Fitter, electronics/meteorological equipment***
- 74218    *Operator, wireless N17***

### **7422    INFORMATION AND COMMUNICATIONS TECHNOLOGY INSTALLERS AND SERVICES**

Information and communications technology installers and services install, service and repair telephone and telegraph equipment in homes, business or telephone exchanges.

#### **Tasks include:**

- installing, servicing and repairing telecommunications equipment such as telephones, switchboard telegraph and data transmission equipment;
- performing related tasks.

#### **Examples of the occupations classified here:**

- 74221    *Installer, telephone and telegraph***
- 74222    *Servicer telephone and telegraph***
- 74223    *Worker, IT support***

## **75     FOOD PROCESSING, WOOD WORKING, GARMENT AND OTHER CRAFT AND RELATED TRADES WORKERS**

Food processing, woodworking, garment and other craft and related trades workers treat and process agricultural and fisheries raw materials into food and other products, and produce and repair goods made of wood, textiles, leather or other materials.

**This sub-major group consists of the following minor groups:**

- 751 FOOD PROCESSING AND RELATED TRADES WORKERS**
- 752 WOOD TREATERS, CABINET-MAKERS AND RELATED TRADES WORKERS**
- 753 GARMENT AND RELATED TRADES WORKERS**
- 754 OTHER CRAFT AND RELATED WORKERS**

#### **751 FOOD PROCESSING AND RELATED TRADES WORKERS**

Food processing and related trades workers slaughter animals, kill fish, treat and prepare them and related food items for human and animal consumption, make various kinds of bread, cakes and other flour products, process and preserve fruits, vegetables and related foods, taste and grade various food products and beverages, or prepare tobacco and make tobacco products.

##### **7511 BUTCHERS, FISHMONGERS AND RELATED FOOD PREPARERS**

Butchers, fishmongers and related food preparers slaughter animals, kill fish, clean, cut and dress meat and fish and prepare related food items or preserve meat, fish and other foods and food products by drying, salting or smoking.

##### **Tasks include:**

- slaughtering animals or killing fish;
- flaying and trimming carcasses;
- cutting and dressing meat and fish for sale or further processing;
- preparing ingredients and making sausages and similar products using simple chopping, mixing and shaping machines;
- curing meat, fish and other foods;
- operating smokehouses or ovens to smoke meat, fish and other foodstuffs;
- cooking or in other ways preparing meat, fish and related food items for sale;
- performing related tasks.

##### **Examples of the occupations classified here:**

- 75111 *Slaughterer***
- 75112 *Butcher***
- 75113 *Fishmonger***
- 75114 *Curer, meat/fish***
- 75115 *Pickler, meat/fish***
- 75116 *Maker, sausage***
- 75117 *Grader, fish***

##### **7512 BAKERS, PASTRY-COOKS AND CONFECTIONERY MAKERS**

Bakers, pastry cooks and confectionery makers make various kinds of bread, buns, cakes and other flour products, as well as handmade chocolate and sugar confectionery.

**Tasks include:**

- making bread, buns, cakes, biscuits, pastries, pies and other flour products;
- making handmade confectionery mixtures of sugar, chocolate and other ingredients with the help of tools and some machines;
- performing related tasks.

**Examples of the occupations classified here:**

**75121 Baker**

**75122 Baker, bread**

**75123 Baker, pastry**

**75124 Maker, confectionary**

**75125 Maker, chocolate**

**75126 Maker, yeast**

**75127 Maker, noodle**

**75128 Maker, chewing-gum**

**7513 DAIRY-PRODUCTS MAKERS**

Dairy-products makers are generally defined as foodstuffs produced milk, processing is called a dairy or a dairy factory. Raw milk for processing generally comes cows, other mammals such as goats, sheep, water buffalo, yaks, or horses.

**Tasks include:**

- making milk powder, skim milk, cream, condensed milk, evaporated milk, ricotta cheese, butter, cheese and other dairy products;
- performing related tasks.

**Examples of the occupations classified here:**

**75131 Entrepreneur, cheese**

**75132 Maker, yogurt**

**7514 FRUIT, VEGETABLE AND RELATED PRESERVERS**

Fruit, vegetable and related preservers process or preserve fruits, nuts and related foods in various ways including cooking, drying, salting, or juice or oil extraction.

**Tasks include:**

- extracting juices various fruits;
- extracting oils oil-bearing seeds, nuts or fruits;
- cooking, salting or drying fruits, vegetables and related foods;
- performing related tasks.

**Examples of the occupations classified here:**

**75141 Preserver, fruit**

**75142 Preserver, vegetable**

**75143 Maker, fruit juice**

**75144 Maker, vegetable juice**

**75145** *Expeller, oil*

#### **7515 FOOD AND BEVERAGE TASTERS AND GRADERS**

Food and beverage tasters and graders inspect, taste and grade various types of agricultural products, food and beverages and liquor.

**Tasks include:**

- inspecting, testing and tasting agricultural products, food and beverages and liquor at various stages of processing to determine quality and grade into appropriate class;
- performing related tasks.

**Examples of the occupations classified here:**

**75151** *Grader/taster, tea*

**75152** *Grader/taster, coffee*

**75153** *Grader/taster, food*

**75154** *Grader/taster, liquor*

**75155** *Grader, meat*

**75156** *Grader, fruit/vegetable*

**75157** *Taster, juice*

**75158** *Grader, oil*

#### **7516 TOBACCO PREPARERS AND TOBACCO PRODUCTS MAKERS**

Tobacco preparers and tobacco products makers prepare tobacco leaves and make various tobacco products.

**Tasks include:**

- grading cured tobacco leaves by type, quality and locality where grown;
- mixing tobacco leaves according to formula to obtain a blend of distinct flavour;
- tending vacuum container which moistens tobacco for further processing;
- removing midribs and stalks tobacco leaves and shredding tobacco;
- making cigars, cigarettes and other tobacco products by hand or using simple machines;
- performing related tasks.

**Examples of the occupations classified here:**

**75161** *Grader, tobacco*

**75162** *Maker, cigar*

**75163** *Maker, cigarette*

**75164** *Quality checker, cigarette*

#### **752 WOOD TREATERS, CABINET-MAKERS AND RELATED TRADES WORKERS**

Wood treaters, cabinet-makers and related trades workers season and preserve wood, make and repair wooden furniture, wooden fittings, patterns and model, wicker furniture and related articles, and decorate and repair wooden articles and wooden parts of goods.

##### **7521 WOOD TREATERS**

Wood treaters season and preserve wood.



**Tasks include:**

- seasoning wood by air-drying in sunlight;
- treating wood with chemicals to protect it against decay or parasites manually;
- grading wood or veneer according to size and quality;
- performing related tasks.

**Examples of the occupations classified here:**

**75211** *Impregnator, wood*

**75212** *Seasoner, wood*

**75213** *Grader, wood*

**75214** *Grader, veneer*

**7522 CABINET-MAKERS AND RELATED WORKERS**

Cabinet-makers and related workers make, decorate and repair wooden furniture, wheels or other wooden parts of vehicles, wooden fittings, patterns, models and other items such as pipes, shoes, or sports racquets and sticks.

**Tasks include:**

- making and repairing wooden articles such as cabinets and other furniture, using woodworking machines and hand tools;
- making and repairing wooden vehicles, wheels or other wooden parts of vehicles;
- making and repairing wooden articles such as patterns, scale models and mock-ups, casks, tobacco pipes, picture frames, wooden toys, wooden clogs, shoes or sports racquets or sticks;
- decorating furniture and fixtures by inlaying wood, applying veneer and carving designs;
- finishing surfaces of wooden articles or furniture;
- performing related tasks.

**Examples of the occupations classified here:**

**75221** *Maker, cabinet/wooden*

**75222** *Builder, bullock cart*

**75223** *Maker, furniture/wooden*

**75224** *Maker, coffin*

**75225** *Maker, clog*

**75226** *Maker, model/wooden*

**75227** *Veneer applier*

**75228** *Maker, picture frame*

**7523 WOODWORKING-MACHINE TOOL SETTERS AND OPERATORS**

Woodworking-machine tool setters and operators build, make, or carve wood using machine and tools to produce wood based product.

**Tasks include:**

- making wooden product using woodworking machines and tools;

- making wooden product such as patterns, scale models and mock-ups, casks, tobacco pipes, picture frames, wooden toys, wooden clogs, shoes or sports racquets or sticks;
- decorating product and fixtures by inlaying wood, applying veneer and carving designs;
- finishing surfaces of wooden articles or product;
- performing related tasks;
- supervising other workers.

**Examples of the occupations classified here:**

**75231** *Regulator, wood machine*

**75232** *Operator, wood machine*

**75233** *Setter, wood machine*

## **753     GARMENT AND RELATED TRADES WORKERS**

Garment and related trades workers prepare natural and synthetic textile fibres, threads and yarns, make and repair garments and other textile articles, make patterns and mark and cut textile, leather and other materials in the manufacture of garments, gloves and miscellaneous products, or upholster furniture and interior of vehicles, or sew textiles and similar materials.

### **7531    TAILORS, DRESSMAKERS, FURRIERS AND HATTERS**

Tailors, dressmakers and hatters engaged in various sewing tasks, embroidering works and making umbrellas, fabric bags and sacks, artificial flowers, dolls and stuffed-toys and related items, make suits, dresses and other garments textile fabrics, leather or any other material, carry out alterations and repairs, or make hats, or participate in the manufacture of ready-to-wear garments.

**Tasks include:**

- operating and monitoring standard or specialized single- or multiple-needle sewing machines to make or repair garments, gloves and miscellaneous products in textiles, fur or leather;
- operating and monitoring standard or specialized single- or multiple-needle sewing machines to embroider ornamental designs on textiles or other materials;
- making overcoats, suits, skirts, shirts, blouses, lingerie, corsetry and similar garments according to customers requirements;
- participating in the manufacture of ready-to-wear clothing;
- embroidering decorative designs on garments or materials;
- making various kinds of hats and caps;
- altering, restyling and repairing garments;
- making and caring for costumes used in theatrical, television and motion picture productions;
- making wig according to specification, fastening strands of hair to cloth base;
- assembling complete umbrella by fixing various component parts such as collapsible metal frame, springs and umbrella cloth to stick;
- sewing sails, tents, awnings and similar articles;
- performing related tasks.

**Examples of the occupations classified here:**

**75311** *Dressmaker*

- 75312** *Maker, cap*
- 75313** *Maker, wig*
- 75314** *Operator, sewing*
- 75315** *Worker, sewing*
- 75316** *Embroiderer, hand*
- 75317** *Maker, artificial flower*
- 75318** *Maker, doll and stuffed-toy*

## **7532 GARMENT AND RELATED PATTERN-MAKERS AND CUTTERS**

Garment and related pattern-makers and cutters make patterns and mark and cut textile, leather and other materials in the manufacture of garments, gloves and miscellaneous products.

### **Tasks include:**

- drawing and cutting out patterns for making suits, dresses, shirts, blouses, gloves, hats and caps and other garments;
- making outlines of patterns on cloth, light leathers or other materials to guide cutting;
- cutting material according to pattern outline for making up garments, gloves and related items;
- performing pattern-making, marking and cutting tasks in the manufacture of other products such as soft furnishings, umbrellas and canvas goods;
- performing related tasks.

### **Examples of the occupations classified here:**

- 75321** *Pattern-maker, garment*
- 75322** *Pattern-maker, hat and cap*
- 75323** *Maker, garment*
- 75324** *Cutter, garment*
- 75325** *Cutter, gloves*
- 75326** *Pattern-maker, gloves*

## **7533 SHOEMAKERS AND RELATED WORKERS**

Shoemakers and related workers make and repair standard or special footwear and, except for leather garments, hats and gloves, make natural or synthetic leather articles such as luggage, handbags, and belts, or participate in the manufacture of shoes and related goods.

### **Tasks include:**

- making patterns to guide the cutting of shoe parts;
- cutting out, preparing and fitting together shoe parts;
- sewing shoe parts together;
- making standard or orthopedic footwear to individual requirements;
- making other special types of footwear to order;
- examining and finishing footwear;
- repairing footwear;
- making and repairing articles such as saddles and harnesses for animals, luggage, handbags, wallets, belts, brief-cases, leather bags and other accessories;
- cutting out, shaping and padding parts for making leather articles;
- sewing and stitching leather parts by hand or machine;
- performing related tasks.

**Examples of the occupations classified here:**

- 75331** *Shoemaker*
- 75332** *Maker, footwear/orthopedic*
- 75333** *Cobbler*
- 75334** *Pattern-maker, footwear*
- 75335** *Maker, leather goods*
- 75336** *Maker, sports equipment/footwear*

#### **7534 UPHOLSTERERS AND RELATED WORKERS**

Upholsterers and related workers upholster furniture, make mattresses, or make and install interior decorations of textile, leather and similar materials.

**Tasks include:**

- installing, arranging and securing springs, padding and covering material to furniture frames;
- fitting and installing covers and cushioning for seats and other furnishings on vehicles such as motor cars, buses, railways coaches and aircraft;
- making mattresses;
- fitting and installing soft furnishings and interior decorations of textiles, leather and similar materials;
- repairing upholstered parts of worn furniture, mattresses and related products;
- performing related tasks.

**Examples of the occupations classified here:**

- 75341** *Upholsterer, furniture*
- 75342** *Upholsterer, vehicle*
- 75343** *Maker, mattress*
- 75344** *Maker, cushion*
- 75345** *Maker, bedding*
- 75346** *Maker, leather*
- 75347** *Upholsterer, aircraft*
- 75348** *Upholsterer, railway carriage*

#### **7535 PELT DRESSERS, TANNERS AND FELLMONGERS**

Pelt dressers, tanners and fellmongers prepare hides and skins for making leather products.

**Tasks include:**

- sorting and grading pelts, hides and skins;
- removing flesh and fat pelts before curing;
- removing flesh and hair hides;
- removing long coarse hair pelts and trimming underlying hair to even length;
- operating machine to split hides edgeways;
- treating hides to convert them into leather;
- applying dyes to fur pelts;
- dressing and applying dyes and stains to leather;
- stretching and smoothing dressed pelts;
- performing related tasks.

**Examples of the occupations classified here:**

**75351** *Pelt dressers, tanners and fellmonger*

#### **754** **OTHER CRAFT AND RELATED WORKERS**

Other craft and related workers apply activities concerning underwater divers, shotfirers and blasters, product graders and testers (excluding foods and beverages), fumigators, and pest and weed controllers.

#### **7541** **UNDERWATER DIVERS**

Underwater divers work under water, dressed in scuba gear or diving suit, to inspect, install, repair, and remove equipment and structures.

**Tasks include:**

- working under water to lay and repair bridges, piers and harbour wall foundations;
- inspecting for suspected damage and making minor repairs to ships' hulls and underwater installations;
- reporting on condition of wrecked ships;
- removing underwater obstructions;
- drilling holes for underwater blasting;
- performing related tasks.

**Examples of the occupations classified here:**

**75411** *Diver, construction*

**75412** *Dive master*

**75413** *Dive boatman*

#### **7542** **SHOTFIRERS AND BLASTERS**

Shotfirers and blasters assemble, position and detonate explosive in order to move or break up soil and rock, or demolish building.

**Tasks include:**

- assembling, positioning and detonating explosive to move, break up soil and rock, or demolish building;
- ensuring that safety areas are adhered to by all staff and members of the public;
- measuring the amount of explosive required for a particular job;
- performing related tasks.

**Examples of the occupations classified here :**

**75421** *Shot firer*

#### **7543** **PRODUCT GRADERS AND TESTERS (EXCLUDING FOODS AND BEVERAGES)**

Product graders and testers (excluding foods and beverages) inspect and grade various types of product excluding food and beverages compliance with laws, regulations and grading standard at points of production, distribution and assembly, hatcheries, retail outlets and warehouses.

**Tasks include:**

- inspecting and testing products excluding food and beverages at various stages of processing to determine quality and grade into appropriate class;
- examining and verifying grade of product;
- conducting inspection to determine compliance with sanitation, grade, quality and labeling standard;
- obtaining representative sample of product;
- checking and recommending licensure of industry graders;
- assisting higher level graders in investigating consumer compliance;
- issuing holding orders and/or disposal orders;
- testifying in hearings and court actions as required;
- performing related tasks.

**Examples of the occupations classified here:**

**75431 Grader, fibre**

**7544 FUMIGATORS, PEST AND WEED CONTROLLERS**

Fumigators and pest and weed controllers inspect buildings and outside areas for pest infestation, and spray chemical treatments to kill insects, rodents and other pests. They may also set cage traps to capture and remove animals.

**Tasks include:**

- inspecting buildings or outdoor areas;
- taking safety precautions in the use and storage of chemicals;
- deciding on course of action to control or eliminate pests;
- preparing estimates and bills for clients;
- preparing and spraying chemical mixtures using various equipment;
- maintaining equipment in safe, efficient working order;
- maintaining work records of each property inspected, the pest or weed problem, chemicals used and amount of time spent at each location;
- placing and set traps;
- advising clients on how to prevent pest infestation;
- performing related tasks.

**Examples of the occupations classified here:**

**75441 Controller, pest**

**75442 Forging worker, bee**

**75443 Fumigation operator, weed**

**7549 CRAFT AND RELATED WORKERS NOT ELSEWHERE CLASSIFIED**

This unit group covers craft and related workers not elsewhere classified in minor group 754: Other Craft and Related Workers.

**MAJOR GROUP**



**PLANT AND  
MACHINE  
OPERATORS,  
AND ASSEMBLERS**

**M**

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**2008**

**2<sup>nd</sup> Edition**

# **Major group 8:**

## **PLANT AND MACHINE OPERATORS AND ASSEMBLERS**

Plant and machine operators and assemblers operate and monitor industrial and agricultural machinery and equipment, drive and operate trains, motor vehicles and mobile machinery and equipment, or assemble products component parts according to strict specifications and procedures.

The work mainly calls for experience with and an understanding of industrial and agricultural machinery and equipment as well as an ability to cope with machine-paced operations and to adapt to technological innovations. Most occupations in this major group require skills at the second skill level.

**This major group consists of the following sub-major groups:**

- 81 STATIONARY PLANT AND MACHINE OPERATORS**
- 82 ASSEMBLERS**
- 83 DRIVERS AND MOBILE PLANT OPERATORS**

### **81 STATIONARY PLANT AND MACHINE OPERATORS**

Stationary plant and machine operators operate and monitor industrial plant for mining or for the processing of metal, minerals, glass, ceramics, wood, paper, chemicals, or water-treatment, electrical-power-generator and other purposes, as well as automated or semi-automated assembling processes and industrial robots.

**This sub-major group consists of the following minor groups:**

- 811 MINING AND MINERAL PROCESSING PLANT OPERATORS**
- 812 PROCESSING PLANT AND METAL FINISHING OPERATORS**
- 813 CHEMICAL AND PHOTOGRAPHIC PRODUCTS PLANT AND MACHINE OPERATORS**
- 814 RUBBER, PLASTIC AND PAPER PRODUCTS MACHINE OPERATORS**
- 815 TEXTILE, FUR AND LEATHER PRODUCTS MACHINE OPERATORS**
- 816 FOOD AND RELATED PRODUCTS MACHINE OPERATORS**
- 817 WOOD PROCESSING AND PAPERMAKING PLANT OPERATORS**
- 818 OTHER STATIONARY PLANT AND MACHINE OPERATORS**
- 819 PRINTING, BINDING AND PAPER PRODUCTS MACHINE OPERATORS**

### **811 MINING AND MINERAL PROCESSING PLANT OPERATORS**

Mining and mineral processing plant operators operate and monitor plant for perforating channels in a mine workplace, for processing mineral ore and stone, or for the drilling and sinking of wells.



## **8111 MINERS AND QUARRY WORKERS**

Miners and quarry workers extract solid minerals from underground or surface mines or quarries, and charge and detonate explosives to fragment or dislodge coal, ores, rocks or other minerals in mines or quarries, or to clear building sites and similar places and operate machinery which cut channels in a mine workplace and perform related tasks.

### **Tasks include:**

- extracting coal, ores and other solid minerals from underground or open cast mine;
- extracting granite, limestone, slate, flint or other kinds of rocks from quarries;
- setting and operating machines which perforate channels or drill blasting holes into the open face of mines or quarries;
- cutting, fitting and installing wood or steel props;
- assembling poles and arches to support walls and roofs of underground work;
- collecting samples of coal or ore for laboratory analysis;
- extracting chalk, clay, gravel or sand from open cast mine;
- ensuring observance of workplace safety procedures and regulations;
- determining location of explosions required and giving instructions on holes to be drilled;
- deciding on force required and placing correct quantity of explosives and preparing blasting site;
- firing blasting-charge in mines or quarries;
- operating and monitoring machinery for perforating channels in a mine or quarry workplace or for drilling blasting holes in mines or quarries;
- operating and monitoring continuous mining machines;
- performing related tasks.

### **Examples of the occupations classified here:**

**81111 Miner**

**81112 Machine operator, drilling/quarry**

## **8112 MINERAL AND STONE PROCESSING PLANT OPERATORS**

Mineral and stone processing plant operators operate and monitor machinery and equipment for processing mineral ore and stone.

### **Tasks include:**

- operating and monitoring equipment which crushes and break lumps of minerals and stones to required size;
- operating and monitoring washing, separating, leaching, precipitating, filtering, extracting and combining equipment to wash mineral ores in order to remove waste material;
- combining mineral ores with solvents to facilitate further processing;
- separating metal or mineral concentrates from ore or alluvial deposits by thickening, floatation, gravity separation, filtration, or magnetic or electrostatic separation;
- performing related tasks.

### **Examples of the occupations classified here:**

**81121 Machine operator, crushing/coal**

**81122 Machine operator, milling/stone**

**81123 Worker, minerals floatation**

**81124 Keeper, jig**

## **8113 WELL DRILLERS AND BORERS AND RELATED WORKERS**

Well drillers, borers and related workers assemble and operate machinery which cut channels in a mine workface and perform related tasks in the sinking and operation of wells.

### **Tasks include:**

- preparing and operating derrick pipe-handling devices and slush pumps;
- operating rotary or percussion-drilling machinery and equipment to drill oil or gas wells;
- cleaning and servicing oil or gas wells and replacing pumping rods, casings and tubings;
- setting up and operating drilling machinery and equipment to drill wells or bores other than obtaining for oil or gas;
- performing related tasks.

### **Examples of the occupations classified here:**

**81131 Operator, drilling equipment/wells**

**81132 Operator, pulling equipment/oil and gas wells**

**81133 Machine operator, boring equipment/well**

## **8114 CEMENT, STONE AND OTHER MINERAL PRODUCTS MACHINE OPERATORS**

Cement, stone and other mineral products machine operators operate and monitor extrusion, moulding, mixing, grinding and cutter machines which manufacture and finish various precast concrete and stone products, or which make cast stone for building purposes.

### **Tasks include:**

- operating and monitoring extrusion, molding, grinding and cutter machines which manufacture and finish various precast concrete and stone products such as flagstones, fencing posts, moulded pipe sections and trench liners, walling and partition slabs, building components, cable conduits, fume and dust extraction conduits;
- operating and monitoring machines which mix sand, gravel, cement and water to make concrete;
- performing related tasks.

### **Examples of the occupations classified here:**

**81141 Machine operator, cast concrete products**

**81142 Machine operator, asbestos-cement product**

**81143 Machine operator, terrazzo tile**

## **812 METAL PROCESSING AND FINISHING PLANT OPERATORS**

Metal processing and finishing plant operators operate and monitor ore smelting, metal converting and refining furnaces, metal rolling mills, metal heat treating or metal extrusion plant.

## **8121 METAL PROCESSING PLANT OPERATORS**

Metal processing plant operators operate and monitor ore smelting, metal converting and refining furnaces, metal rolling mills, metal heat treating or metal extrusion plant.

**Tasks include:**

- operating and monitoring blast-furnaces to smelt ores for the production of ferrous or non-ferrous metals; to convert or refine pig-iron or scrap-metal to produce steel;
- operating and monitoring furnaces to convert or refine melt ferrous and non-ferrous metals for casting;
- operating and monitoring furnaces to reheat stock metal forms prior to forging, power-pressing, rolling and further processing;
- operating and monitoring rolling mills to shape hot or cold steel into shapes for further processing, or into final shapes;
- operating and monitoring rolling mills to reduce or form hot or cold non-ferrous metal to specified shapes, such as plate, sheet or foil;
- pouring molten metal into moulds and operating and monitoring casting machines;
- operating continuous mills by inserting hot steel slabs through a series of rolls (stands) to produce finished plates or sheets in one continuous operation;
- operating rolling mills to make or form hot or cold non-ferrous metal into plate, sheet, foil, wire or rod of specified dimensions;
- manipulating rolling mills control devices according to signals from rollers;
- operating and monitoring furnaces which heat and cool metal objects to relieve internal stresses, restore ductility and refine grain structure; operating furnaces which harden steel objects;
- operating and monitoring plant which imparts a hard skin and tough, ductile core to steel objects by treating them with chemicals, heating and quench hardening or cooling them;
- operating and monitoring furnaces which reheat hardened steel objects to relieve stresses and to impart toughness;
- operating and monitoring wire-drawing machines;
- operating and monitoring the machine to withdraw seamless metal tube;
- operating and monitoring extrusion press machines to make rods, bars and seamless tubing from metal;
- performing related tasks.

**Examples of the occupations classified here:**

**81211 Converter blowing operator, steel converting**

**81212 Continuous-mill roller, steel/cold-roller, steel**

**81213 Furnace-operator, smelting/metal (blast-furnace)**

**81214 Machine operator casting metal**

**81215 Annealer, metal**

**81216 Drawer, seamless pipe and tube**

**8122 METAL FINISHING, PLATING AND COATING MACHINE OPERATORS**

Metal finishing, plating and coating machine operators operate and monitor equipment which finishes, plates and coats metal compounds or parts, in order to give them improved resistance to corrosion and abrasion, for decorative purposes, or to impart electrical or magnetic properties.

**Tasks include:**

- operating and monitoring equipment which cleans metal compounds in preparation for electroplating, galvanising, enamelling or similar processes;
- operating and monitoring electroplating equipment;
- operating and monitoring hot-dip equipment used to coat iron and steel products;
- operating and monitoring machines which automatically coat wire with non-ferrous metal;
- operating and monitoring equipment used to spray molten metal or other substances on metal products to provide a protective or decorative coating or to build up worn-out or damaged surfaces;
- operating and monitoring equipment to oxidise metal surfaces to decorative finishes by chemical process;
- operating sandblasting equipment to clean and smoothen surfaces of metal parts;
- operating machines to semi-finish the surface of cast metal compounds;
- operating and monitoring equipment used to impart a rust-resistant finishing to metal compounds by treating them with chemicals and heating them;
- performing related tasks.

**Examples of the occupations classified here:**

**81221 *Electroplater***

**81222 *Machine operator, dipping/metal***

**81223 *Galvaniser***

**81224 *Machine operator, sandblaster equipment***

**81225 *Casting finisher***

**81226 *Machine operator, spraying/metal***

**81227 *Oxidizer***

**81228 *Operator, moulding***

## **813 CHEMICAL AND PHOTOGRAPHIC PRODUCTS PLANT AND MACHINE OPERATORS**

Chemical and photographic products plant and machine operators operate and monitor machines which processing a variety of chemicals and other ingredients to produce pharmaceuticals, toiletries, explosives and photographic or other chemical products.

### **8131 CHEMICAL PRODUCTS PLANT AND MACHINE OPERATORS**

Chemical products plant and machine operators monitor and operate units and machinery to blend, mix, process and package a wide range of chemical products.

**Tasks include:**

- setting up, starting, controlling, adjusting and stopping machines and plant;
- monitoring reaction processes and transferring products in compliance with safety procedures;
- monitoring meters, gauges and electronic instrumentation for one or more chemical compounds;
- monitoring formulation units, such as mixers, kettles, blenders, dryers, tableting, encapsulation, granulation and coating machines;
- measuring, weighing and loading chemical ingredients following formulation cards;
- taking samples and performing routine chemical and physical tests of products and recording production data;
- cleaning and performing minor repairs to machines and plant.

**Examples of the occupations classified here:**

- 81311** *Compounder, match/chemical and related processes*
- 81312** *Cement furnaceman*
- 81313** *Machine operator, sieving/chemical and related processes*
- 81314** *Enameller, chemical*
- 81315** *Operator, treater/radioactive waste*
- 81316** *Machine operator, pharmaceutical products*
- 81317** *Machine operator, ammunition products*

#### **8132 PHOTOGRAPHIC PRODUCTS MACHINE OPERATORS**

Photographic-products machine operators operate and monitor equipment which makes photographic film and paper, and which processes exposed photographic film and makes prints.

**Tasks include:**

- operating and monitoring equipment which makes photographic film and paper;
- operating, monitoring and testing photographic processing and printing equipment, and maintaining operational standards;
- preparing exposed film for different processing batches in dark rooms and dark chambers;
- inspecting images, films, prints and adjusting settings on print-making equipment to produce required colour, brightness, contrast, number, size and type of prints;
- adjusting settings and running automatic processing film equipment;
- operating equipment to transfer film to video tape or other electronic media;
- performing photographic processing related tasks;
- operating automatic equipment (in retail shops) to develop colour negatives, prints and slides.

**Examples of the occupations classified here:**

- 81321** *Assistant, scanning and filming*
- 81322** *Sub assistant, film laboratory C17*
- 81323** *Machine operator, film paper production*
- 81324** *Technician, audio-visual N17*
- 81325** *Operator, camera offset/platemaker N17*
- 81326** *Assistant operator, camera N11*
- 81327** *Operator, audio-visual aids*
- 81328** *Photo finisher*

#### **814 RUBBER, PLASTIC AND PAPER PRODUCTS MACHINE OPERATORS**

Rubber and plastic products machine operators operate and monitor machines which knead and blend rubber and rubber compounds, and produce various components and products from natural and synthetic rubber and plastics.

#### **8141 RUBBER PRODUCTS MACHINE OPERATORS**

Rubber products machine operators operate and monitor machines which knead and blend rubber and rubber compounds, and produce various components and products, from natural and synthetic rubber, such as moulded footwear, domestic articles, insulating materials, industrial accessories, or tyres for bicycles, automobiles, tractors, aircraft and other vehicles.

**Tasks include:**

- operating and monitoring machines which knead, mix and blend rubber and rubber compounds for further processing;
- operating and monitoring machines which produce sheets of rubber or rubberized fabric by a rolling process;
- operating and monitoring machines which extrude compounded rubber or shape vulcanized rubber by moulding;
- operating and monitoring machines which build up tyres according to the form, vulcanize tyres and mould or rebuild used tyres;
- operating and monitoring machines which manufacture rubber products such as hoses, air-bags, rubber foam for cushions and mattresses, rubber stamps, etc;
- performing related tasks.

**Examples of the occupations classified here:**

- 81411** *Attendant, mill/rubber*
- 81412** *Machine operator, extruding/rubber*
- 81413** *Press-operator, moulding/rubber*
- 81414** *Machine operator, calender/rubber*
- 81415** *Machine operator, cutting/rubber*
- 81416** *Machine operator, tyre production*
- 81417** *Machine operator, rubber stamp production*

**8142 PLASTICS PRODUCTS MACHINE OPERATORS**

Plastic products machine operators operate and monitor machines which knead and blend compounds to obtain plastic materials and which make various plastic components and articles.

**Tasks include:**

- operating and monitoring machines which knead, mix and blend compounds to obtain plastic materials;
- operating and monitoring machines which shape plastic materials by moulding, extrusion, cutting and other means;
- operating and monitoring machines which laminate plastics and plastic-impregnated materials;
- operating and monitoring machines which compress plastics powder into pellets;
- operating and monitoring machines which emboss designs on plastic sheets;
- operating and monitoring machines which make plastic products such as domestic articles, moulded footwear, toys and industrial accessories;
- performing related tasks;
- supervising other workers.

**Examples of the occupations classified here:**

- 81421** *Machine operator, mixing/plastics*
- 81422** *Press-machine operator, laminating/plastics*

- 81423** *Machine operator extruding/plastics*
- 81424** *Machine operator, injection moulding/plastics*
- 81425** *Machine operator, compression moulding/plastics*
- 81426** *Machine operator, vacuum plastic-forming*
- 81427** *Machine operator, embossing/plastics*
- 81428** *Machine operator, plastic production*

#### **8143 PAPER PRODUCTS MACHINE OPERATORS**

Paper products machine operators operate machines which produce boxes, envelopes, bags and other products from paper, paperboard, cardboard, cellophane and similar materials.

##### **Tasks include:**

- operating machines which sealed paper to cardboard, cut it to the required length or cut and crease cardboard or paperboard to form box blanks;
- operating pressing machines which form drinking cups or other containers from paper, paperboard or cardboard;
- operating machines which cut, fold and seal paper to make envelopes, paper straws and paper bags, or which form bags from other materials;
- operating machines which make joss paper and other ceremonial paper products used in praying and other religious activities;
- performing related tasks.

##### **Examples of the occupations classified here:**

- 81431** *Machine operator, carton and paper box production*
- 81432** *Machine operator, envelope & paper bag production*
- 81433** *Machine operator, straw production*
- 81434** *Machine operator, joss paper production*
- 81435** *Machine operator, cardboard products*

#### **815 TEXTILE, FUR AND LEATHER PRODUCTS MACHINE OPERATORS**

Textile, fur and leather products machine operators operate machines which spin and wind thread, weave fabrics, sew or embroider garments, or treat textile products.

#### **8151 FIBRE PREPARING, SPINNING AND WINDING MACHINE OPERATORS**

Fibre preparing, spinning and winding machine operators operate machines which prepare fibres, and spin, twist and wind yarn and thread.

##### **Tasks include:**

- operating machines which combine textile fibres into uniform blends;
- operating machines which clean and fluff textile fibres, transform them into sliver, comb them into sliver for first drawing, combine slivers into sliver lap or sliver laps into ribbon lap, combine several slivers into one attenuated strand of regular quality and weight;
- operating machines which transform sliver into roving;
- operating machines which spin thread and yarn from roving, wind two or more threads on to bobbin, twist two or more strands of yarn or thread into single heavier and stronger strand, or wind yarn or thread from one package to another;
- performing related tasks.

**Examples of the occupations classified here:**

**81511** *Machine operator, twisting/thread and yarn*

**81512** *Machine operator, fibre preparing*

**81513** *Machine operator, rope-laying*

**81514** *Instructor, spinner*

## **8152 WEAVING AND KNITTING MACHINE OPERATORS**

Weaving and knitting machine operators operate weaving and knitting machines and related equipment used to produce materials and fabrics.

**Tasks include:**

- operating machines used to weave or knit plain or figured cloth, tapestry, lace, carpets, garments, net, hosiery or other fabrics or articles;
- performing related tasks.

**Examples of the occupations classified here:**

**81521** *Instructor, weaving*

**81522** *Machine operator, net production*

**81523** *Wrinkle machine operator, textile*

**81524** *Assembler, weaving machine*

**81525** *Machine operator, lace production*

## **8153 SEWING MACHINE OPERATORS**

Sewing machine operators operate sewing machines to make textile, leather garments or embroider ornamental designs on garments or other materials.

**Tasks include:**

- operating and monitoring standard or specialized single- or multiple-needle sewing machines to make or repair garments, gloves and miscellaneous products in textiles or leather;
- operating and monitoring standard or specialized single- or multiple-needle sewing machines to embroider ornamental designs on textiles or other materials;
- performing related tasks.

**Examples of the occupations classified here:**

**81531** *Leather sewer, machine*

**81532** *Crocheter, machine*

**81533** *Embroiderer, machine*

## **8154 BLEACHING, DYEING AND FABRICS CLEANING MACHINE OPERATORS**

Bleaching, dyeing and fabrics cleaning machine operators operate machines which bleach, dye, wash and otherwise treat fibres, yarn, or cloth or dry clean textile and leather articles.

**Tasks include:**



- operating and monitoring machines which treat textile products to make them lighter in colour or to give them a specific colour;
- operating and monitoring machines which wash or dry-clean textile or leather products to remove dirt, impurities, excess chemicals or natural gum;
- operating and monitoring machines which shrink cloth or strengthen the weave by interlocking the fibres;
- operating and monitoring machines which impregnate textiles with chemicals to render them waterproof;
- operating and monitoring machines which treat silk to give it body and weight;
- operating and monitoring machines which press, stretch, or impart lustre, or other type of finishes on textiles;
- performing related tasks.

**Examples of the occupations classified here:**

- 81541** *Machine operator, bleaching/textile*
- 81542** *Machine operator, dyeing*
- 81543** *Machine operator, starch*
- 81544** *Machine operator, washing and shrinking/textile*
- 81545** *Machine operator, drying/textile*
- 81546** *Machine operator, dry-cleaning*
- 81547** *Operator, calendar/textile*

#### **8155 FUR AND LEATHER PREPARING MACHINE OPERATORS**

Fur and leather preparing machine operators operate and monitor various machines which prepare leather.

**Tasks include:**

- operating and monitoring machines which remove flesh, fat and hair from pelts before cured;
- operating and monitoring machines which treat hides and skins in solutions and apply finishing product to convert them into leather;
- operating and monitoring machines which apply dyes and stains to leather;
- performing related tasks.

**Examples of the occupations classified here:**

- 81551** *Machine operator, hide processing*
- 81552** *Machine operator, flesing/hide*
- 81553** *Machine operator, dehairing/hide*
- 81554** *Machine operator, tanning*
- 81555** *Machine operator, staining/leather*
- 81556** *Machine operator, cutting/leather*

#### **8156 SHOEMAKING AND RELATED MACHINE OPERATORS**

Shoemaking and related machine operators operate and monitor machines which produce and repair standard or special footwear, handbags and other accessories, mainly made of leather.

**Tasks include:**

- operating and monitoring machines which mark patterns and cut shoe parts;
- operating and monitoring machines which sew shoe parts together, or edge, polish, or apply ornaments and perform finishing tasks;
- operating and monitoring machines which produce luggage, handbags, belts and other accessories, as well as other items such as collars or harnesses;
- performing related tasks.

**Examples of the occupations classified here:**

**81561** *Machine operator, footwear production*

**81562** *Machine operator, footwear production/orthopaedic*

**81563** *Machine operator, footwear production/sports*

#### **8157 LAUNDRY MACHINE OPERATORS**

Laundry machine operators operate laundry, dry cleaning, presser and fabric treatment machines in laundries and dry cleaning establishments.

**Tasks include:**

- sorting articles for cleaning according to type colour, fabric and cleaning treatment required;
- placing sorted articles into containers and onto conveyor belts to be brought to the repair and cleaning areas;
- checking and removing stains from garments, and replacing buttons and making minor repairs;
- loading and unloading washing machines, driers and extractors;
- adding cleaning agents and starches to laundry articles;
- monitoring laundry articles and ensuring them through cleaning and pressing machine;
- stopping and starting machines to untangle, straighten and remove laundry articles;
- placing laundry articles on shelves and hanging laundry articles for delivery and collection;
- packing laundry articles and preparing orders for delivery.

**Examples of the occupations classified here:**

**81571** *Machine operator, dyeing/textile fibres*

**81572** *Machine operator, laundering*

**81573** *Machine operator, pressing/laundry*

#### **8159 TEXTILE, FUR AND LEATHER PRODUCTS MACHINE OPERATORS NOT ELSEWHERE CLASSIFIED**

This unit group covers textile and leather products machine operators not classified elsewhere in Minor Group 815: Textile Products Machine operators. For instance, here should be classified those who are engaged in operating machines which make hats, mattresses or miscellaneous articles such as braids, lace or other trimmings.

**Tasks include:**

- operating and monitoring machines which make hats, mattresses or miscellaneous articles such as braids, lace or other trimmings;
- performing related tasks.

**Examples of the occupations classified here:**

- 81591** *Machine operator, braid production*
- 81592** *Machine operator, cutting/garments*
- 81593** *Machine operator, cutting/textile*
- 81594** *Machine operator, hat making*
- 81595** *Machine operator, pattern-making/leather*
- 81596** *Machine operator, pattern-making/textile*
- 81597** *Machine operator, folding/cloth*

## **816 FOOD AND RELATED PRODUCTS MACHINE OPERATORS**

Food and related products machine operators operate machines which process foodstuffs and manufacture food and related products for human and animal consumption.

### **8160 FOOD AND RELATED PRODUCTS MACHINE OPERATORS**

Food and related products machine operators operate machines which process foodstuffs and manufacture food and related products for human and animal consumption.

#### **Task include:**

- operating machines used to slaughter animals and to cut animal carcasses or fish into standard pieces;
- operating machines which pasteurize, homogenize and heat-treat milk and cream;
- operating machinery used for the production of flour, meal and animal feed, and for processing rice;
- operating machines which mix and blend flour with other ingredients to prepare dough for the production of bread, pastries, pasta, noodle and related products;
- operating machines which extract juice from fruits and vegetables by heating or processing;
- operating machines which crush sugar-cane or extracting liquor from sugar-beet;
- operating machines which process barley and other grains used in making distilled and malt liquors, and controlling the fermentation process;
- operating machines which process tobacco in preparation for manufacturing cigarettes, cigar and other tobacco products;
- performing related tasks.

#### **Examples of the occupations classified here:**

- 81601** *Machine operator, 'belacan' production*
- 81602** *Attendant, churn/dairy products*
- 81603** *Assistant miller*
- 81604** *Machine operator, bread production*
- 81605** *Attendant, sterilizing oil palm*
- 81606** *Operator, processing and refining/sugar*
- 81607** *Attendant, filtration*
- 81608** *Machine operator, cigar production*

## **817 WOOD PROCESSING AND PAPERMAKING PLANT OPERATORS**

Wood-processing and papermaking plant operators operate and monitor machinery and equipment which saw, cut and grind wood in preparation for further use, process wood and their materials into pulp, and make paper from pulp

### **8171 PULP AND PAPERMARKING PLANT OPERATORS**

Pulp and papermaking plant operators operate and monitor machinery and equipment which process materials such as wood, rags, esparto, straw, scrap-pulp and paper into stock for use in papermaking.

**Tasks include:**

- operating and monitoring chipper and grinding machines which makes pulp from logs;
- operating and monitoring digesters which produce pulp from materials such as wood, rags, esparto, straw or scrap-pulp and scrap paper;
- operating and monitoring machines which bleach wood pulp, rags, esparto, straw or scrap- pulp and scrap paper;
- operating and monitoring machines which mix, beat and hydrate pulp and other ingredients to prepare stuff for making paper;
- cutting rags, wastepaper and straws to small pieces with cutting machine for making paper pulp;
- operating valves to charge raw materials into digester;
- operating and monitoring papermaker machines and equipments in which wet pulp formed into paper or in which paper is dried, lubricated, wound, slit, and rewound;
- operating and monitoring lubrication machines used to impart gloss and finishes of paper surface;
- operating and monitoring machinery and equipment used to glaze or impregnate paper with coating mixture;
- performing related tasks.

**Examples of the occupations classified here:**

- 81711 Operator, digester**
- 81712 Machine operator, chipping**
- 81713 Operator, beater**
- 81714 Machine operator, grinding/wood**
- 81715 Operator, bleach machine**
- 81716 Cutter, paper pulp**
- 81717 Valve operator, paper pulp**
- 81718 Operator, paper-pulp plant**

**8172 WOOD PROCESSING PLANT OPERATORS**

Wood processing plant operators operate and monitor machinery and equipment for sawing wood, cutting veneer and making plywood, particle board and chipboard, and otherwise prepare wood for further use.

**Tasks include:**

- operating and monitoring log in-feed and conveyor systems;
- operating and monitoring head saws, resaws and multi blade saws to saw logs, cants, flitches, slabs or wings and remove rough edges from sawn timber;
- operating and monitoring machines which cut veneer;
- operating and monitoring plywood core-laying machines and hot-plate plywood presses;
- operating steam-heated kilns to desiccate wood;
- operating equipment which desiccate wood;
- operating dryer to dry freshly shaped veneer sheets;
- operating machines to clip continuous sheet of veneer to specified width;
- performing related tasks.

Examples of the occupations classified here:

- 81721** *Operator, sawmill*
- 81722** *Cutter, veneer*
- 81723** *Plywood core layer*
- 81724** *Press-operator, plywood*
- 81725** *Machine operator, seasoning/wood*
- 81726** *Machine operator, incising (wood preserving)*
- 81727** *Operator, veneer dryer*
- 81728** *Operator, auto-clipper*

#### **8173 WOOD PRODUCTS MACHINE OPERATORS**

Wood products machine operators operate and monitor woodworking machines which perform repetitive works such as sawing, boring, shaping, planning, turning or carving wood.

Tasks include:

- setting and operating one or more previously set up machines for sawing, shaping, boring, planning, turning or carving wood;
- performing related tasks.

Examples of the occupations classified here:

- 81731** *Lathe-operator, woodworking*
- 81732** *Sawyer, precision wood*
- 81733** *Turner, wood (machine)*
- 81734** *Machine operator, wood-wool*
- 81735** *Operator, sander*
- 81736** *Machine operator, carving/wood*
- 81737** *Machine operator, furniture production*
- 81738** *Machine operator, wood products*

#### **818 OTHER STATIONARY PLANT AND MACHINE OPERATORS**

Other stationary plant and machine operators operate and monitor industrial plant for mining or for the processing of metal, minerals, glass, ceramics, wood, paper, chemicals, or water-treating, electrical-power-generating and other purposes, as well as automated or semi-automated assembling processes and industrial robots.

#### **8181 GLASS AND CERAMICS PLANT OPERATORS**

Glass and ceramics plant operators operate and monitor kilns, furnaces and other machinery and equipment used in the manufacture of glass, ceramics, porcelain, tiles or bricks. They operate machines to anneal, harden or decorate glass and ceramics.

Tasks include:

- operating and monitoring glass-making furnaces to make glass by melting and fusing pre-mixed ingredients;

- tending hot- or cold-end spray equipment used to coat glassware with surface hardener;
- operating and maintaining machines that press or blow molten glass in moulds to form or shape containers, such as bottles, jars and drinking glasses;
- operating hand press to mould glass into required shape;
- operating drawing kiln to process molten glass into continuous sheet of flat glass;
- operating and monitoring floating-glass production plant;
- operating and maintaining finishing machines to grind, drill, sand, bevel, decorate, wash or polish glass or glass products;
- setting and operating press machines to mould ceramic articles from moist clay;
- operating machines to mix clay with water to knead it into a suitable plastic condition or semi-liquid form for making ceramic products;
- operating and monitoring kilns which bake pottery, porcelain ware and bake bricks and tiles;
- operating and monitoring machines for making glaze or abrasives;
- operating and monitoring machines which extrude molten glass to form fibreglass filaments;
- observing finished products to identify splits, cracks, breaks, colour and other imperfections.

**Examples of the occupations classified here:**

**81811** *Machine operator, mixing/clay*

**81812** *Machine operator, mixing/glass*

## **8182 STEAM ENGINE AND BOILER OPERATORS**

Steam engine and boiler operators operate and monitor steam engines and boilers on land and at sea.

**Tasks include:**

- operating and monitoring coal or oil-fired steam engines or boilers on land and at sea;
- performing related tasks.

**Examples of the occupations classified here :**

**81821** *Operator, boiler/ship*

**81822** *Boilerman*

**81823** *Fireperson, railway engine*

## **8183 PACKING, BOTTLING AND LABELLING MACHINE OPERATORS**

Packing, bottling and labelling machine operators operate machines which pack, label and, if needed, add revenue stamps to products, packages and containers, or inspect finished products or parts in compliance with manufacturer's standards, finish and appearance.

**Tasks include:**

- inspecting finished products or parts in compliance with manufacturer's standards, finish and appearance;
- operating machines which wrap and pack various products, including liquid ones, for storage or shipment;
- operating machines which, by gluing or other methods, label products, packages and various containers, or add revenue stamps;

- performing related tasks.

**Examples of the occupations classified here:**

**81831** *Operator, carton*

**81832** *Operator, packing*

#### **8184 GLASS AND CERAMICS KILN AND RELATED MACHINE OPERATORS**

Glass and ceramics kiln and related machine operators operate and monitor kilns, furnaces and other machinery and equipment used in the manufacture of glass, ceramics, porcelain or bricks.

**Tasks include:**

- operating and monitoring glass-making furnaces;
- operating and monitoring glass-annealing furnaces to prevent or remove internal stresses;
- operating and monitoring tempering furnaces to toughen glass;
- operating and monitoring machines which shape glass articles by blowing or pressure-moulding;
- operating and monitoring machines which draw or roll molten glass to a continuous sheet of flat glass;
- operating and monitoring floating-glass production plant;
- operating and monitoring machines which polish and level plate-glass surfaces;
- operating and monitoring machines which make glass rods and tubes from molten glass by drawing or drawing and blowing;
- operating and monitoring kilns which bake pottery and porcelain ware or which fix glazing and decoration by rebaking;
- operating and monitoring kilns which bake bricks and tiles;
- performing related tasks.

**Examples of the occupations classified here:**

**81841** *Furnace-operator, glass production*

**81842** *Furnace-operator, annealing/glass*

**81843** *Kiln-operator, brick and tile*

**81844** *Machine operator, pottery and porcelain*

**81845** *Furnace-operator, tempering/glass*

**81846** *Machine operator, blowing/glass*

**81847** *Machine operator, engraving/glass*

**81848** *Operator, sandblasting equipment/glass*

#### **8189 STATIONARY PLANT AND MACHINE OPERATORS NOT ELSEWHERE CLASSIFIED**

Stationary plant and machine operators not elsewhere classified operate and monitor industrial plant for mining or for the processing of metal, minerals, glass, ceramics, wood, paper, chemicals, or water-treating, electrical-power-generating and other purposes, as well as automated or semi-automated assembling processes and industrial robots.

## **819     PRINTING, BINDING AND PAPER PRODUCTS MACHINE OPERATORS**

Printing, binding and paper products machine operators operate and monitor various types of printing and copying machines, or machines which bind and emboss books or which produce various articles from paper, paperboard and similar materials.

### **8191    PRINTING MACHINE OPERATORS**

Printing machine operators operate and monitor various types of machines which print on paper, tinplate and other materials.

#### **Tasks include:**

- operating and monitoring cylinder, platen, rotary, offset, direct lithographic, rotogravure and wallpaper printing machines;
- performing related tasks.

#### **Examples of the occupations classified here:**

- 81911    *Press-operator, printing/cylinder***
- 81912    *Press-operator, printing/offset***
- 81913    *Press-operator, printing/rotary***
- 81914    *Press-operator, printing/rotogravure***
- 81915    *Press-operator, printing/direct lithographic***
- 81916    *Press-operator, printing/wallpaper***

### **8192    BOOKBINDING MACHINE OPERATORS**

Bookbinding machine operators operate machines which bind and emboss books and other publications.

#### **Tasks include:**

- operating bookbinding machines;
- operating pressing machines which emboss designs and titles on book covers;
- performing related tasks.

#### **Examples of the occupations classified here:**

- 81921    *Machine operator, bookbinding***
- 81922    *Machine operator, embossing/book***

## **82     ASSEMBLERS**

Assemblers operate and monitor industrial machines or assemble products from parts according to strict specifications and procedures.

#### **This sub-major group consists of the following minor groups:**

- 821     ASSEMBLERS**
- 822     METAL AND MINERALS PRODUCTS MACHINE OPERATORS**

### **821     ASSEMBLERS**

Assemblers assemble components into products according to specifications.



## **8211 MECHANICAL MACHINERY ASSEMBLERS**

Mechanical machinery assemblers assemble the components or parts of mechanical machinery according to specifications.

### **Tasks include:**

- assembling the components or parts of mechanical machinery, engines and vehicles according to specifications;
- performing related tasks.

### **Examples of the occupations classified here:**

- 82111** *Assembler, aircraft*
- 82112** *Repairer, bicycle*
- 82113** *Assembler, refrigeration and air-conditioning equipment*
- 82114** *Assembler, sewing machine*
- 82115** *Assembler, earth-moving equipment*
- 82116** *Assembler, printing machinery*
- 82117** *Assembler, industrial machinery*
- 82118** *Assembler, agricultural machinery*

## **8212 ELECTRICAL AND ELECTRONIC EQUIPMENT ASSEMBLERS**

Electrical and electronic equipment assemblers assemble the components or parts of electrical and electronic equipment according to specifications.

### **Tasks include:**

- assembling the components or parts of electrical and electronic equipment according to specifications;
- performing related tasks.

### **Examples of the occupations classified here:**

- 82121** *Assembler, electrical equipment*
- 82122** *Assembler, electronic equipment*
- 82123** *Assembler, semi-conductor*
- 82124** *Assembler, battery*
- 82125** *Assembler, electric-sign*
- 82126** *Assembler, watch*
- 82127** *Assembler, hearing aid*
- 82128** *Assembler, audio-visual equipment*

## **8213 LEATHER, METAL, RUBBER AND PLASTIC PRODUCTS ASSEMBLERS**

Leather, metal, rubber and plastic products assemblers perform specialized tasks in assembling the leather, metal, rubber or plastic components or parts of various types of products such as toys, sports articles, bicycles, etc., according to specification.

### **Tasks include:**

- assembling the leather, metal, rubber or plastic components or parts of various types of products according to specifications;

- performing related tasks.

**Examples of the occupations classified here:**

- 82131** *Assembler, leather products*
- 82132** *Assembler, metal products*
- 82133** *Assembler, rubber products*
- 82134** *Assembler, plastics products*

## **8219 ASSEMBLERS NOT ELSEWHERE CLASSIFIED**

Assemblers not elsewhere classified in minor group, operate machines which pack, label and, if needed, add revenue stamps to products, packages and containers, or inspect finished products or parts for conformance to manufacturer's standards, finishes and physical appearance.

**Tasks include:**

- assembling the components or parts made from wood, paperboard, textile or related materials, of various types of products, according to specifications;
- inspecting finished products or parts for conformance to manufacturer's standards, finishes and physical appearance;
- assembling parts of component products which made from of a wide range of materials;
- attaching metal, plastic or other fittings;
- operating machines which wrap and pack various products, including liquid ones, for storage or shipment;
- operating machines which, by gluing or other methods, product labelling, packaging and various containers, or add revenue stamps;
- performing related tasks.

**Examples of the occupations classified here:**

- 82191** *Machine operator, labeling*
- 82192** *Machine operator, sealing*
- 82193** *Machine operator, filling/container*
- 82194** *Machine operator, pelletizing*
- 82195** *Operator, merry-go-round*
- 82196** *Machine operator, silicon chip production*
- 82197** *Operator, sub-assembly manual*
- 82198** *Assembler, wood products*

## **822 METAL AND MINERAL PRODUCTS MACHINE OPERATORS**

Metal and mineral products machine operators operate and monitor metalworking machines or make products composed primarily from non-metallic mineral materials.

### **8221 MACHINE-TOOL SETTER-OPERATORS**

Machine-tool setter-operators set and operate various machine tools so that can used to work on high power tolerances.

**Tasks include:**

- setting one or more types of machine tools to produce metal articles in standardised series;

- operating and monitoring particular types of metalworking machines such as lathes, stamping presses, power shears, metal-bending, milling, sizer, boring, drilling, grinding, honing or metal-sawing machines which may be numerically controlled or linked by an automatic- transfer machine;
- performing related tasks.

**Examples of the occupations classified here:**

- 82211** *Coremaker, machine, foundry*
- 82212** *Setter-operator, lathe*
- 82213** *Setter-operator, shaping machine*
- 82214** *Setter-operator, boring and drilling machine*
- 82215** *Setter-operator, honing machine*
- 82216** *Setter-operator, milling machine*
- 82217** *Setter-operator, planning machine*

### **83      DRIVERS AND MOBILE PLANT OPERATORS**

Drivers and mobile plant operators drive trains and motor vehicles, operate mobile industrial and agricultural machinery and equipment, or execute deck duties on board ship and other water-borne craft.

**This sub-major group consists of the following minor groups:**

- 831      LOCOMOTIVE ENGINE DRIVERS AND RELATED WORKERS**
- 832      CAR, VAN AND MOTORCYCLE DRIVERS**
- 833      HEAVY TRUCK AND BUS DRIVERS**
- 834      MOBILE PLANT OPERATORS**
- 835      SHIPS DECK CREWS AND RELATED WORKERS**

#### **831      LOCOMOTIVE ENGINE DRIVERS AND RELATED WORKERS**

Locomotive engine drivers and related workers drive, or assist in driving, locomotive engines to transport passengers and freight, take charge of and safeguard railway freight trains during runs, control the movement of railway traffic by operating signals, switch rolling stock and make up trains in railway yards, make up trains for hauling in mines and control their movement.

##### **8311      LOCOMOTIVE ENGINE DRIVERS**

Locomotive engine drivers drive, or assist in driving, locomotive engines to transport passengers and freight.

**Tasks include:**

- driving or assisting in driving a steam, electric or diesel-electric locomotive engine;
- driving an underground or elevated passenger train;
- driving a locomotive to haul carriages underground or on the surface of a mine or quarry;
- watching for track hazards, observing signals and indicator gauges;
- operating communications systems to communicate with train crews and traffic controllers to ensure safe operation and scheduling of trains.

**Examples of the occupations classified here:**

- 83111** *Driver, locomotive*

- 83112** *Operator, mono-rail*
- 83113** *Driver, mine engine*
- 83114** *Assistant, locomotive driver*
- 83115** *Driver, engine (Bukit Bendera Train) R9*
- 83116** *Driver/ Operator, mobile harbour crane R3*
- 83117** *Driver, Sabah locomotive AA13*

## **8312 RAILWAY BRAKE, SIGNAL AND SWITCH OPERATORS**

Railway brakemen, signallers and shunters take charge of and safeguard railway freight trains during runs, control the movement of railway traffic by operating signals, switch rolling stock and make up trains in railway yards, make up trains for hauling in mines and control their movement.

### **Tasks include:**

- taking charge of and safeguarding freight train during run;
- controlling flow of railway traffic over section of line by operating signals and switches from control panel or signal box;
- switching and coupling rolling stock in railway yards and sidings in accordance with orders about loading, unloading and make-up of trains;
- making up trains for hauling by locomotive or cable and directing their movement along haulage ways in a mine or quarry;
- checking train systems and equipment such as air conditioning and heating systems, brakes and brake hoses prior to train run.

### **Examples of the occupations classified here:**

- 83121** *Braker, railway*
- 83122** *Signaller, railway*
- 83123** *Shunter, railway*
- 83124** *Coupler, railway yard*
- 83124** *Yardman*
- 83125** *Pointsman, railway*
- 83126** *Gateman, railway*

## **832 CAR, VAN AND MOTORCYCLE DRIVERS**

Car, van and motorcycle drivers drive and tend motor cycles, motorized tricycles, cars or vans to transport passengers, materials or goods.

### **8321 MOTORCYCLE DRIVERS**

Motorcycle drivers drive and tend motor cycles or motorized tricycles equipped to transport materials, goods or passengers.

### **Tasks include:**

- driving and tending motor cycle or motorized tricycle to transport materials, goods and passengers;
- observing traffic rules and signals;
- cleaning and washing vehicle as well as performing maintenance and minor repairs;

- keeping a record of journeys;
- delivering messages.

**Examples of the occupations classified here:**

- 83211** *Motorcyclist*
- 83212** *Rider, despatch*
- 83213** *Driver, auto rickshaw*
- 83214** *Driver, motorized tricycle*

**8322 CAR, TAXI AND VAN DRIVERS**

Car, taxi and van drivers drive and tend motor cars and vans to transport passengers, mail or goods.

**Tasks include:**

- driving and tending passenger, vans, cars or taxis;
- driving and tending cars, vans or small trucks to deliver mail or goods;
- assisting passengers with handling of luggage;
- collecting fares, payments for deliveries, or documents certifying deliveries;
- operating telecommunications equipment to report location and availability and follow directions of control centre;
- determining most appropriate route;
- assisting disabled passengers;
- operating equipment to facilitate the loading and unloading of disabled passengers.

**Examples of the occupations classified here:**

- 83221** *Driver, taxi*
- 83222** *Chauffeur*
- 83223** *Driver, van*
- 83224** *Driver, ambulance*
- 83225** *Car jockey*
- 83226** *Driver, personal*
- 83227** *Driver, car*
- 83228** *Driver R3*

**833 HEAVY TRUCK AND BUS DRIVERS**

Heavy truck and bus drivers drive and tend heavy trucks, lorries, buses or street tramcars to transport goods, liquids, heavy materials, mail or passengers.

**8331 BUS AND TRAM DRIVERS**

Bus and tram drivers drive and tend buses or street tramcars to transport passengers, mail or goods.

**Tasks include:**

- driving and tending motor bus, trolley bus or motor coach to transport local or long-distance passengers, mail or goods;

- driving and tending street tramcar transporting passengers;
- opening and closing doors before or after passengers board or alight;
- assisting passengers with luggage;
- controlling lighting, heating and ventilation on buses and trams;
- observing traffic to ensure safe progress;
- collecting fares or verifying passenger has necessary ticket.

**Examples of the occupations classified here:**

- 83311** *Driver, bus*
- 83312** *Driver, tram*
- 83313** *Assistant, driver*
- 83314** *Motor coach driver*

### **8332 HEAVY TRUCK AND LORRY DRIVERS**

Heavy truck and lorry drivers drive and tend heavy motor vehicles to transport goods, liquids and heavy materials over short or long distances.

**Tasks include:**

- driving and tending a heavy motor vehicle, such as a lorry with or without trailer or a dump-truck, to transport goods, liquids or heavy materials over short or long distances;
- determining the most appropriate routes;
- ensuring goods are stowed and securely covered, to prevent loss and damage;
- assisting with or carrying out loading or unloading operations, using various lifting or tipping devices;
- carrying out minor maintenance to vehicles, and arranges major maintenance and repairs;
- estimating weights to comply with load limitations, and ensuring the safe distribution of weights.

**Examples of the occupations classified here:**

- 83321** *Driver, lorry*
- 83322** *Driver, fire-engine*
- 83323** *Driver, dumper*
- 83324** *Driver, truck*
- 83325** *Driver, tanker*
- 83326** *Driver, towing*
- 83327** *Operator, shuffle-car/mine*

### **834 MOBILE PLANT OPERATORS**

Mobile plant operators drive or operate agricultural and other machinery and equipment for handling materials and heavy objects.

### **8341 MOBILE FARM AND FORESTRY PLANT OPERATORS**

Mobile farm and forestry plant operators drive or operate one or more types of motorized, mobile farm or forestry machinery or equipment.

**Tasks include:**

- driving or operating tractor or self-propelled scaper for ploughing, planting, harvesting, threshing/baling or other special-purpose farm machinery, or similar tractor-drawn equipment;
- driving or operating tractor or self-propelled scaper for clearing, planting, harvesting, timber- carrying or other special-purpose forestry machinery;
- performing related tasks.

**Examples of the occupations classified here:**

**83411** *Driver, farm tractor*

**83412** *Driver, timber carrier*

**83413** *Driver, winch-truck (logging)*

**83414** *Operator, harvester (paddy)*

**8342 EARTH MOVING AND RELATED PLANT OPERATORS**

Earth moving and related plant operators operate machines to excavate, grade, level, smooth and compact earth or similar materials.

**Tasks include:**

- operating and monitoring excavating machines, equipped with moveable shovel, grab-bucket or dragline bucket, to excavate and move earth, rock, sand, gravel or similar materials;
- operating and monitoring machines for digging trenches for sewers, drainage, water, oil, gas or similar pipelines;
- operating and monitoring machines equipped with concave steel blade to move, distribute and level earth, sand, snow and other materials;
- operating and monitoring equipment to remove sand, gravel and mud from bottom of body of water;
- operating and monitoring machines for hammering wooden, concrete or steel piles into ground;
- operating and monitoring power roller to compact and smooth layers of materials in making roads, pavements and similar work;
- operating and monitoring machines which spread and smooth concrete or bituminous or tar preparations to construct roadways, roads or similar work;
- performing related tasks.

**Examples of the occupations classified here:**

**83421** *Operator, backhoe*

**83422** *Machine operator, trench digging*

**83423** *Operator, pile-driver*

**83424** *Driver, ditch backhoe*

**83425** *Machine operator, road making*

**83426** *Operator, backhoe dredger*

**83427** *Operator, tunneling machinery/construction*

**83428** *Operator, drilling plant*

**8343 CRANE, HOIST AND RELATED PLANT OPERATORS**

Crane, hoist and related plant operators operate and monitor stationary and mobile cranes and other hoisting equipment.

**Tasks include:**

- operating and monitoring stationary or mobile cranes by raising and lowering jibs and booms, to lift, move, position or place equipment and materials;
- operating and monitoring equipment for hoisting, lowering or raising workers and materials on construction sites or in mines;
- operating and monitoring ski-lifts and similar equipment;
- operating and monitoring machinery used to haul ferry or barge with goods, passengers and vehicles across short stretches of water;
- operating and monitoring machinery to open and close bridge for the passage of road and water traffic;
- operating and monitoring cranes equipped with dredging attachments to dredge waterways and other areas;
- operating cranes mounted on boats or barges to lift, move and place equipment and materials;
- performing related tasks.

**Examples of the occupations classified here:**

**83431** *Operator, crane*

**83432** *Operator, hoist*

**83433** *Operator, winch*

**83434** *Operator, elevator/material handling*

**83435** *Operator, cable car*

**8344 LIFTING TRUCK OPERATORS**

Lifting-truck operators drive, operate and monitor lifting-truck or similar vehicle to transport, lift and stack pallets with goods.

**Tasks include:**

- operating and monitoring lifting-truck and similar equipment to load and unload, transport, lift and stack goods and pallets in terminals, harbours, ware-houses, factories and other establishments;
- positioning lifting devices under, over, or around loaded pallets, skids and boxes, and securing material or products to be transported to fixed areas;
- inspecting equipment to identify wear and damage;
- performing routine maintenance on vehicles and equipment;
- keeping records of work undertaken and breakdowns of vehicles.

**Examples of the occupations classified here:**

**83441** *Operator, truck/fork-lift*

**83442** *Operator, truck/industrial*

**83443** *Operator, truck/lifting*

**835 SHIPS DECK CREWS AND RELATED WORKERS**

Ships deck crews and related workers carry out deck duties on board ship and similar duties on board other water-borne craft.

**8350 SHIPS DECK CREWS AND RELATED WORKERS**

Ships deck crews and related workers carry out deck duties on board ship and similar duties



on board other water-borne craft.

**Tasks include:**

- standing look-out watches at sea and when entering or leaving harbour or other narrow waters;
- steering ship according to instruction;
- handling ropes and wires, and operates mooring equipment;
- maintaining and, in some cases, operating ship's equipment, cargo gear, rigging, life-saving and fire-fighting appliances;
- performing deck and hull cleaning, scraping, painting and other maintenance duties as required;
- breaking out, rigging and stowing cargo-handling gear, stationary rigging and running gear.

**Examples of the occupations classified here:**

**83501 Helmsman**

**83502 Assistant mechanic, marine engine / Mechanic, marine engine A1/A11**

**83503 Sailor**

**83504 Crew, ferry**

**83505 Lighterman**

**83506 Ram controller**

**83507 Serang A17**

**MAJOR GROUP**



**ELEMENTARY  
OCCUPATIONS**

**M**

**A**

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**C**

**O**

**2008**

**2<sup>nd</sup> Edition**

# Major Group 9:

## ELEMENTARY OCCUPATIONS

Elementary occupations perform simple and routine tasks which mainly require the use of handheld tools and in some cases considerable physical effort. Most occupations in this major group require skills at the first skill level.

**This major group consists of the following sub-major groups:**

- 91 CLEANERS AND HELPERS**
- 92 AGRICULTURAL, FORESTRY AND FISHERY LABOURERS**
- 93 MINING, CONSTRUCTION, MANUFACTURING AND TRANSPORTATION LABOURERS**
- 94 FOOD PREPARATION ASSISTANTS**
- 95 STREET AND RELATED SALES AND SERVICES WORKERS**
- 96 REFUSE WORKERS AND OTHER ELEMENTARY WORKERS**

### **91 CLEANERS AND HELPERS**

Cleaners and helpers perform various tasks in private households, hotels, offices, hospitals and other establishments, as well as in air craft, trains coaches, trams and similar vehicles, in order to keep the interiors and fixtures clean or they do hand-laundering and pressing.

**This sub-major group consists of the following minor groups:**

- 911 DOMESTIC, HOTEL AND OFFICE CLEANERS AND HELPERS**
- 912 VEHICLE, WINDOW, LAUNDRY AND OTHER HAND CLEANING WORKERS**

### **911 DOMESTIC, HOTEL AND OFFICE CLEANERS AND HELPERS**

Domestic, hotel and office cleaners and helpers sweep, vacuum, clean, wash, polish, take care of household linen, purchase household supplies; perform various tasks in order to keep the interiors and fixtures of hotels, offices and other establishments, as well as aircraft, trains, buses and similar vehicles are always clean and tidy.

#### **9111 DOMESTIC CLEANERS AND HELPERS**

Domestic cleaners and helpers sweep, vacuum clean, wash and polish, take care of household linen, purchase household supplies, prepare food, serve meals and perform various other domestic duties.

**Tasks include:**

- sweeping, vacuum-cleaning, polishing and washing floors and furniture, or washing windows and other fixtures;
- washing, ironing and cleaning linen and other textiles;
- washing dishes;
- preparing, cooking and serving meals and refreshments;
- purchasing food and other various household supplies;
- cleaning, disinfecting and deodorizing kitchens, bathrooms and toilets;
- cleaning windows and other glass surfaces;
- performing related tasks.

**Examples of the occupations classified here:**

- 91111** *Helper, domestic*
- 91112** *Laundress, household*
- 91113** *Cleaner, domestic*
- 91114** *Domestic housekeeper*
- 91115** *Char worker, domestic*

## **9112 CLEANERS AND HELPERS IN OFFICES, HOTEL AND OTHER ESTABLISHMENT**

Cleaners and helpers and in offices, hotels and other establishments perform various cleaning tasks in order to keep the interiors and fixtures of hotels, offices and other establishments, as well as of aircraft, trains, buses and similar vehicles are always clean and tidy.

**Tasks include:**

- sweeping or vacuum-cleaning, washing and polishing floors, furniture and other fixtures in buildings, coaches, buses, trams, trains and aircraft;
- making beds, cleaning bathrooms, supplying towels, soap and related items;
- cleaning kitchens and generally helping with kitchen work, including dishwashing;
- picking up rubbish, emptying garbage containers and taking garbage to disposal areas for removal;
- performing related tasks.

**Examples of the occupations classified here:**

- 91121** *Chambermaid*
- 91122** *Porter, hotel/bellman*
- 91123** *Washer, hand/dish*
- 91124** *Cleaner, hotel/club/cafe*
- 91125** *Tea lady*

## **912 VEHICLE, WINDOW, LAUNDRY AND OTHER HAND CLEANING WORKERS**

Vehicle, window, laundry and other hand cleaning workers clean windows, showcases or other surfaces of buildings or vehicles and ironing, launder or dry-clean linen and other textiles by hand.

### **9121 HAND LAUNDRYMAN AND IRONERS**

Hand-laundryman and ironers, ironing or dry-clean linen and other textiles by hand.

**Tasks include:**

- laundering and ironing linen, clothing, fabrics and similar articles by hand in a laundry or other establishment;
- cleaning, cloths, fabrics, leather goods and similar articles by hand and with chemical solutions in a dry-cleaning or other establishment;
- replacing buttons and making minor repairs;
- placing articles on shelves and hanging articles for delivery and collection;
- performing related tasks.

**Examples of the occupations classified here:**

**91211** *Workers, laundry and dry cleaning*

**91212** *Ironers*

**91213** *Dry-cleaner, hand*

**91214** *Presser, hand*

**9122 VEHICLE CLEANERS**

Vehicle cleaners, wash, clean and polish vehicles.

**Tasks include:**

- cleaning, washing and polishing cars and other vehicles, by hand or machine;
- vacuuming interiors vehicle and dry cleaning carpets and upholstery;
- applying cleaning agents to remove stains from vehicle interiors;
- washing tyres and wheel arches and blackening tyres;
- washing and polishing vehicle windows;
- emptying and cleaning compartments in vehicles;
- performing related tasks.

**Examples of the occupations classified here:**

**91221** *Cleaner, bus/interior*

**91222** *Cleaner, vehicles*

**91223** *Cleaner, aircraft*

**91224** *Operator, auto polish*

**91225** *Cleaner, janitor*

**91226** *Car detailer*

**9123 WINDOW CLEANERS**

Window cleaners wash and polish windows and other glass fittings.

**Tasks include:**

- washing windows or other glass surfaces with water or various solutions, drying and polishing them;
- using ladders, swinging scaffolds, bosun's chairs, hydraulic bucket trucks and other equipment to reach and clean windows in multi-storey buildings;
- selecting appropriate cleaning or polishing methods;
- performing related tasks.

**Examples of the occupations classified here:**

**91231** *Cleaner, window*

**9129 OTHER CLEANING WORKERS**

Other cleaning workers clean surface, materials and objects, such as carpets, walls, swimming pools and cooling towers, using specialized cleaning equipment and chemicals.

**Tasks include:**

- cleaning carpets and upholstered furniture using cleaning machines and their attachments;
- selecting and applying cleaning agents to remove stains from carpets;
- treating carpets with soil-repellent chemicals and deodorants, and treating for pests;
- cleaning stone walls, metal surfaces and fascias using high pressure water cleaners and solvents;
- applying chemicals and high pressure cleaning methods to remove micro-organisms from water and filtration systems and using wet vacuums and other suction equipment to remove scale, accumulated dirt and other deposits from swimming pools, cooling tower components and drains;
- performing related tasks.

**Examples of the occupations classified here:**

**91291** *Worker, sundries and toiletries*

**91292** *Worker, sundries (cleaning)*

**91293** *Operator, washing*

**91294** *Carpet cleaner*

**91295** *Swimming pool cleaner*

**91296** *Graffiti cleaner*

**92      AGRICULTURAL, FORESTRY, FARMING AND FISHERY LABOURERS**

Agricultural, forestry, farming and fishery labourers and related workers mainly perform simple and routine farming, forestry, fishing, hunting or trapping tasks, which require the use of simple hand-held tools and usually need a lot of physical energy.

**This sub-major group consists of the following minor groups:**

**921      AGRICULTURAL, FORESTRY, FARMING AND FISHERY LABOURERS**

**921      AGRICULTURAL, FORESTRY, FARMING AND FISHERY LABOURERS**

Agricultural, forestry, farming and fishery labourers and related workers mainly perform simple and routine farming, forestry, fishing, hunting or trapping tasks which require the use of simple hand-held tools and usually need a lot of physical energy.

**9211      CROP FARM LABOURERS**

Crop farm labourers help with farm work by performing a variety of simple farming tasks.

**Tasks include:**

- digging and shoveling to clean ditches or for other purposes;
- loading and unloading various crops and other materials;
- raking, pitching and stacking hay;
- watering and weeding;
- picking fruits, vegetables and various plants;
- helping with planting, harvesting and general farm work;
- performing related tasks.

**Examples of the occupations classified here:**

- 92111**    *Worker, farm*
- 92112**    *Worker, estate/plantation*
- 92113**    *Worker, manuring*
- 92114**    *Worker, vegetables*

#### **9212    LIVESTOCK FARM LABOURERS**

Livestock farm labourers help with livestock work by performing a variety of simple farm tasks.

**Tasks include:**

- digging and shoveling to clean ditches or for other purposes;
- raking, pitching and stacking hay;
- watering and weeding;
- feeding, watering and cleaning animals and keeping their stockyard clean;
- performing related tasks.

**Examples of the occupations classified here:**

- 92121**    *Collector, egg*
- 92122**    *Cleaner, livestock farm*
- 92129**    *Worker, livestock farm*

#### **9213    MIXED CROP AND LIVESTOCK FARM LABOURERS**

Mixed crop farm labourers help with farm work by performing a variety of simple farming tasks. Livestock farm labourers help with livestock work by performing a variety of simple farm animals tasks.

**Tasks include:**

- digging and shoveling to clean ditches or for other purposes;
- loading and unloading various crops and other materials;
- raking, pitching and stacking hay;
- watering and weeding;
- picking fruits, vegetables and various plants;
- helping with planting, harvesting and general farm work;
- feeding, watering and cleaning animals and keeping their animal corral clean;
- performing related tasks.

**Examples of the occupations classified here:**

- 92131**    *Hand, farm*

#### **9214    GARDEN AND HORTICULTURAL LABOURERS**

Garden and horticultural labourers perform a variety of simple gardening tasks.

**Tasks include:**

- preparing soil and planting flowers, shrubs and trees in parks or public or private gardens;
- cutting lawns using hand mover or power motor;

- trimming and edging around paths, flower beds and walls using clippers and edging tools;
- pruning shrubs and trees to shape and improve growth using shears;
- weeding and tending plants;
- spraying shrubs and trees with fertiliser or insecticide;
- raking, sweeping and burning leaves, grass or litter;
- watering lawn and plants using hose, water can or by activating fixed or portable sprinkler system;
- performing related tasks.

**Examples of the occupations classified here:**

- 92141** *Gardener*
- 92142** *Cutter, grass*
- 92143** *Cutter, tree*
- 92144** *Worker, ground maintenance*
- 92145** *Worker, golf course*
- 92146** *Labourer, landscape*

#### **9215 FORESTRY LABOURERS**

Forestry labourers perform a variety of simple forestry, hunting and trapping tasks.

**Tasks include:**

- digging holes for tree planting;
- stacking logs and timber;
- clearing undergrowth in forest stands;
- cleaning up landing areas at logging sites;
- digging pits and holes, setting traps, keeping watch and performing other simple tasks connected with hunting and trapping;
- performing related tasks.
- supervising other workers.

**Examples of the occupations classified here:**

- 92151** *Labourer, forestry*
- 92152** *Labourer, hunting*
- 92153** *Labourer, trapping*
- 92154** *Operator, green wood*

#### **9216 FISHERY AND AQUACULTURE LABOURERS**

Fishery and aquaculture labourers perform a variety of simple fishery tasks.

**Tasks include:**

- digging the sea-bed and feeding fish and mollusks that are being cultivated;
- performing related tasks.

**Examples of the occupations classified here:**

- 92161** *Labourer, fishery*



**93     MINING, CONSTRUCTION, MANUFACTURING AND TRANSPORTATION  
LABOURERS**

Mining, construction, manufacturing and transportation labourers perform simple and routine activities in mining, construction, manufacturing and transportation tasks which, require the use of simple hand-held tools and usually need a lot of physical energy.

**This sub-major group consists of the following minor groups:**

- 931     MINING AND CONSTRUCTION LABOURERS**
- 932     MANUFACTURING LABOURERS**
- 933     TRANSPORTATION AND STORAGE LABOURERS**

**931     MINING AND CONSTRUCTION LABOURERS**

Mining and construction labourers and related workers perform simple and routine tasks connected with mining or construction, which require the use of simple hand-held tools and usually need a lot of physical energy.

**9311    MINING AND QUARRYING LABOURERS**

Mining and quarrying labourers perform simple and routine tasks related with mining or quarrying.

**Tasks include:**

- washing gauge on palong to recover tin concentrate using pan;
- maintaining or constructing underground installations;
- removing wood and steel supports from the work areas that are not used in mines and quarries;
- loading, moving, sorting and piling materials and supplies;
- digging out chalk, clay, gravel or sand from open pits;
- clearing various obstructions as instructed;
- performing related tasks.

**Examples of the occupations classified here:**

- 93111    *Bucket labourer***
- 93112    *Labourer, quarrying***

**9312    CIVIL ENGINEERING LABOURERS**

Civil engineering labourers perform a variety of routine tasks related with the building and maintenance of roads, dams and similar constructions.

**Tasks include:**

- digging and filling holes and trenches, spreading gravel and related materials and performing other tasks related with building and maintenance of railway tracks and roads;
- loading and unloading construction materials and equipment and transporting them to building sites;
- performing related task.

**Examples of the occupations classified here:**

**93121**    *Labourer, construction*

**93122**    *Labourer, maintenance/dam*

### **9313    BUILDING CONSTRUCTION LABOURERS**

Building construction labourers perform a variety of routine tasks related with building construction work.

**Tasks include:**

- cleaning used building bricks and doing other simple work on demolition sites;
- clearing various obstructions as instructed;
- loading and unloading construction materials and equipment and transporting them around building sites;
- performing related tasks.

**Examples of the occupations classified here:**

**93131**    *Hod carrier*

**93132**    *Worker, maintenance*

**93133**    *Labourer, digging*

**93134**    *Land clearer*

**93135**    *Trackman, railway*

**93136**    *Handyman, building construction*

**93137**    *Labourer, demolition*

### **932    MANUFACTURING LABOURERS**

Manufacturing labourers and related workers perform simple and routine tasks related with manufacturing which require the use of simple hand-held tools and mainly need a lot of physical energy.

#### **9321    HAND PACKERS**

Hand packers perform a variety of simple routine tasks related with the manufacturing sector such as product sorting, hand packing and simple hand assembling of components.

**Tasks include:**

- carrying out manual sorting of products or components;
- carrying out simple assembling of components;
- packing materials or products by hand in boxes, bags, cartons, crates, kegs and other containers for shipment or storage;
- moving, lifting, carrying, loading, unloading or washing raw materials or products in various manufacturing industries or repair and maintenance of establishments;
- performing related tasks.

**Examples of the occupations classified here:**

**93211**    *Packer, hand*

**93212    *Labeller, hand***

## **9322    RUBBER PROCESSING WORKERS**

Rubber processing workers process raw rubber latex in factories.

### **Tasks include:**

- coagulating latex with acid and water;
- tending milling machine which rolls coagulated rubber into sheets or scrap rubber into crepe rubber sheets;
- tending smokehouse to cure and dry milled rubber sheets;
- tending furnace in smokehouse for drying of rubber sheets;
- clipping and sorting rubber sheets according to quality;
- operating crushing and crumbing machines to process rubber into blocks of special quality;
- cleaning and preparing latex tanks and aluminium partitions used for coagulating rubber latex;
- performing related tasks.

### **Examples of the occupations classified here:**

**93221    *Rubber coagulator***  
**93222    *Sheet rubber maker***  
**93223    *Attendant, smokehouse/rubber***  
**93224    *Smokehouse stoker***  
**93225    *Rubber sheet clipper and sorter***  
**93226    *Cleaner, latex tank***  
**93227    *Worker, heavecrumb process***  
**93228    *Operator, laminating-machine/rubber***

## **9329    MANUFACTURING LABOURES NOT ELSEWHERE CLASSIFIED**

Manufacturing labourers and related workers not elsewhere classified in Minor Group 932: Manufacturing Labourers and Related Workers perform a variety of simple routine tasks related with the manufacturing sector such as product sorting, hand packing and simple hand assembling of components.

### **Tasks include:**

- carrying out manual sorting of products or components;
- carrying out simple assembling of components;
- packing materials or products by hand in boxes, bags, cartons, crates, kegs and other containers for shipment or storage;
- moving, lifting, carrying, loading, unloading or washing raw materials or products in various manufacturing industries or repairing and maintaining establishments;
- performing related tasks.

### **Examples of the occupations classified here:**

**93291    *Labourer, manufacturing***  
**93292    *Sorter***  
**93293    *Winder, coil/hand***

- 93294** *Labourer, assembling*  
**93295** *Washer, hand/manufacturing*

### **933**    **TRANSPORTATION AND STORAGE LABOURERS**

Transportation and storage labourers propel cycles and similar vehicles to transport passengers or goods, drive animal-drawn vehicles to transport passengers or goods, drive animal-drawn machinery, carry out freight handling by hand, and stock shelves and display areas in stores.

#### **9331**    **HAND AND PEDAL VEHICLE DRIVERS**

Hand or pedal vehicle drivers propel cycles and similar vehicles to transport passengers or goods.

**Tasks include:**

- loading or unloading goods, or assisting passengers in getting on or off a vehicle;
- moving vehicle in the desired direction with due regard to other traffic and traffic regulations;
- inspecting vehicle components to identify wear and damage;
- maintaining vehicle, making minor repairs and installing replacement parts;
- collecting fares or charges.

**Examples of the occupations classified here:**

**93311**    *Driver, pedal vehicle*

#### **9332**    **MACHINERY AND ANIMAL – DRAWN VEHICLES DRIVERS**

Machinery and animal-drawn vehicles driver, drive animal-drawn vehicles to transport passengers or goods.

**Tasks include:**

- install the harness on the animal and hitching them to vehicles or machinery;
- loading or unloading goods, or assisting passengers in getting on or off a vehicle;
- driving animals in the desired direction with due regard to other traffic and traffic regulations;
- collecting fares or charges;
- driving animals to haul wagons in mines or quarries;
- driving animals hitched to farm or other machinery;
- driving working elephants;
- maintaining vehicle or machinery, making minor repairs and installing replacement parts;
- performing related tasks.

**Examples of the occupations classified here:**

- 93321**    *Driver, animal-drawn vehicle or machinery*  
**93322**    *Driver, bullock-cart*  
**93323**    *Driver, animal train*

### **9333 FREIGHT HANDLERS**

Freight handlers carry out tasks such as packing, carrying, loading and unloading furniture and other household items, or loading and unloading ship and aircraft cargoes and other freight, or carrying and stacking goods in various warehouses.

#### **Tasks include:**

- packing office or household furniture, machines, appliances and related goods to be transported from one place to another;
- conveying materials from or about work area in an industrial establishment;
- assisting in tying down loads and covering them with tarpaulins;
- carrying goods to be loaded on or unloaded from vans, trucks, wagons, ships or aircraft;
- guiding truck drivers into loading bays or through confined spaces;
- loading and unloading grain, coal, sand and similar goods by placing them on conveyor-belts, pipes, etc.;
- connecting hoses between main shore installation pipes and tanks of barges, tankers and other ships to load and unload petroleum, liquefied gases and other liquids;
- carrying and stacking goods in warehouses and similar establishments;
- performing related tasks.

#### **Examples of the occupations classified here:**

**93331 *Docker***

**93332 *Handler, cargo/freight/product***

**93333 *Loader, railway and road vehicle***

**93334 *Loader, aircraft***

**93335 *Loader, boat (liquid and gases)***

**93336 *Porter, warehouse***

**93337 *Handler, material***

### **9334 SHELVES FILLERS**

Shelves fillers stock shelves and display areas and keep stock clean and in order in supermarkets and other retail and wholesale shops.

#### **Tasks include:**

- placing goods neatly in bins and on racks, and stacking bulky goods on floors;
- filling shelves with goods ensuring goods with the earliest use-by dates are at the front of shelves;
- removing goods with past due use-by dates;
- maintaining shelf order by removing stock belonging in a different location;
- noting what has been sold and collecting goods needed from the stockroom;
- obtaining articles for customers from shelf or stockroom;
- directing customers to location of articles sought;
- receiving, opening, unpacking, and inspecting for damage merchandise from manufacturer or distributor;
- performing related tasks.

## **9335 STORAGE LABOURERS**

Storage labourers assist in the operations of the warehouse.

### **Tasks include:**

- operating an electric powered forklift to transport material within the warehouse;
- loading and unloading trailers;
- ordering and refill picking, stocking, data entry, checking products to be shipped against shipping orders;
- responsible for regular maintenance of forklift;
- performing related task.

### **Examples of the occupations classified here:**

**93351** *Store attendant*

**93352** *Operator, store*

**93353** *Worker, store*

**93354** *Worker, warehouse*

**93355** *Operator, warehouse*

## **94 FOOD PREPARATION ASSISTANTS**

Food preparation assistants perform a variety of food preparation duties other than cooking, such as preparing cold foods and shellfish, slicing meat, and brewing coffee or tea.

### **This sub-major group consists of the following minor groups:**

#### **941 FOOD PREPARATION ASSISTANTS**

#### **941 FOOD PREPARATION ASSISTANTS**

Perform a variety of food preparation duties other than cooking, such as preparing cold foods and shellfish, slicing meat, and brewing coffee or tea.

## **9411 FAST FOOD PREPARERS**

Fast food preparers serves customer of fast food restaurant: requests customer order and depresses keys of multicounting machine to simultaneously record order and compute bill. Notifies kitchen personnel of shortages or special orders.

### **Tasks include:**

- serving cold drinks, using drink-dispensing machine, or frozen milk drinks or desserts, using milkshake or frozen custard machine;
- making and serving hot beverages, using automatic water heater or coffeemaker;
- pressing lids onto beverages and places beverages on serving tray or in takeout container;
- receiving payment;
- cooking or apportioning french fries or perform other minor duties to prepare food, serve customers, or maintain orderly eating or serving areas.

## **9412 KITCHEN HELPERS**

Performs any combination of following duties to maintain kitchen work areas and restaurant equipment and utensils in clean and orderly condition: Sweeps and mops floors. Washes worktables, walls, refrigerators, and meat blocks. Segregates and removes trash and garbage and places it in designated containers. Steam-cleans or hoses-out garbage cans. Sorts bottles, and breaks disposable ones in bottle-crushing machine.

### **Tasks include:**

- washing pots, pans, and trays by hand;
- scraping food from dirty dishes and washes them by hand or places them in racks or on conveyor to dishwashing machine;
- polishing silver, using burnishing-machine tumbler, chemical dip, buffing wheel, and hand cloth;
- holding inverted glasses over revolving brushes to clean inside surfaces;
- transferring supplies and equipment between storage and work areas by hand or by use of handtruck;
- setting up banquet tables;
- washing and peeling vegetables, using knife or peeling machine;
- loading or unloading trucks picking up or delivering supplies and food.

### **Examples of the occupations classified here:**

**94121    *Helper, kitchen***

## **95    STREET AND RELATED SALES AND SERVICES WORKERS**

Street and related sales and services workers perform activities concerning street and related services workers.

### **This sub-major group consists of the following minor groups:**

**951    STREET AND RELATED SERVICE WORKERS**  
**952    STREET VENDORS (EXCLUDING FOOD)**

## **951    STREET AND RELATED SERVICE WORKERS**

Street and related service workers sell goods or provide services without premise and moving from one place to another.

## **9510    STREET AND RELATED SERVICE WORKERS**

Street and related service workers sell goods or provide services without premise and moving from one place to another.

### **Tasks include:**

- selling goods;
- ordering goods;
- performing related task.

### **Examples of the occupations classified here:**

**95101    *Pedalar, ice-cream***

## **952     STREET VENDORS (EXCLUDING FOOD)**

Street vendors (excluding food) sell goods or provide services on the street.

### **9520    STREET VENDORS (EXCLUDING FOOD)**

Street vendors (excluding food) sell goods or provide services by street vending from street-corner carts or kiosks such as at arenas, rinks and ballparks.

**Tasks include:**

- setting and displaying sample merchandise at parties or stands;
- ordering or purchasing supplies and stocks cart or stands;
- delivering merchandise, serving customer, collecting money and makes change;
- performing related tasks.

**Examples of the occupations classified here:**

**95201    *Vendor, newspapers***

**95202    *Pedlar***

## **96        REFUSE WORKERS AND OTHER ELEMENTARY WORKERS**

Refuse workers and other elementary workers collect garbage from buildings, yards, streets and other public places or keep streets and other public places are always clean or perform odd jobs for households or establishments.

**This sub-major group consists of the following minor groups:**

**961       REFUSE WORKERS**

**962       OTHER ELEMENTARY WORKERS**

### **961       REFUSE WORKERS**

Refuse workers collect garbage from buildings, yards, streets and other public places, or keep streets and other public places are always clean.

#### **9611     GARBAGE COLLECTORS**

Garbage collectors collect and remove garbage from buildings, yards, streets and other public places for disposal.

**Tasks include:**

- riding on or in garbage trucks;
- collecting garbage from domestic, commercial and industrial establishments;
- loading rubbish into bins or garbage trucks;
- unloading garbage truck;
- collecting stool containers from private residences and other buildings;
- performing related tasks.

**Examples of the occupations classified here:**

**96111    *Worker, garbage disposal***



- 96112** *Soil carrier*  
**96113** *Scrap handler*

## **9612 REFUSE SORTERS**

Refuse sorters identify and sort discarded items that are suitable for recycling and place them into designated compartments for sale or later disposal. They may buy these items, look for them at disposal sites or in public places or work with a recycling enterprise.

**Tasks include:**

- collecting items for recycling from domestic, commercial and industrial premises or from public places such as streets;
- sorting paper, glass, plastic, aluminium or other recycling materials by type;
- placing these items in designated compartments;
- identifying and setting aside items of furniture, equipment, machinery, or components that are suitable for repair or re-use;
- selling recyclable or reusable materials;
- performing related task.

**Examples of the occupations classified here:**

- 96121** *Sorter, garbage*

## **9613 SWEEPERS AND RELATED LABOURERS**

Sweepers and related labourers sweep and clean streets, parks, airports, stations and other public places.

**Tasks include:**

- sweeping streets, parks, airports, stations and similar public places;
- operating a mechanical suction sweeper for cleaning roads;
- beating dust out of carpets by using a carpet-beater;
- performing related tasks.

**Examples of the occupations classified here:**

- 96131** *Sweeper, road*  
**96132** *Sweeper, park*  
**96133** *Labourer, odd-jobbing*

## **962 OTHER ELEMENTARY WORKERS**

This unit group covers other elementary workers perform activities related with messengers, porters, odd job persons, meter readers and vending-machine collectors, water and firewood collectors, attendants, watchmen, doorkeepers and related workers.

## **9621 MESSENGERS, PACKAGE DELIVERERS AND LUGGAGE PORTERS**

Messengers, package deliverers and luggage porters deliver messages, packages and other items within an establishment or between establishments, to households and elsewhere, or carry luggage especially at stations and airports.

**Tasks include:**

- delivering messages, packages and other items within an establishment or between establishments, or elsewhere;
- performing the duties of a post-runner;
- delivering various goods to and from enterprises, shops, households and other places;
- carrying and delivering luggage at stations, airports and elsewhere;
- collecting and delivering files, messages, documents and other items within or on behalf of an office, industrial or business;
- stickering poster or displaying poster and banner in prominent places to advertise entertainment, political event or product;
- performing related tasks.

**Examples of the occupations classified here:**

**96211** *Messenger/courier*  
**96212** *Porter, luggage/baggage (except hotel)*  
**96213** *Office boy*  
**96214** *Deliverer, newspaper/leaflets*  
**96215** *Caddie-golf/master*  
**96216** *Assistant, delivery*  
**96217** *General worker, office (PAP) N1*

**9622 ODD JOB PERSONS**

Odd job persons clean, paint and maintain buildings, grounds and facilities, and undertake simple repairs.

**Tasks include:**

- repairing broken windows, screens, doors, fences, barbecues, picnic tables, shelves, cupboards and other items;
- replacing defective items such as light bulbs;
- repairing and painting interior and exterior surfaces such as walls, ceilings and fences;
- adjusting doors and windows;
- replacing tap washers;
- putting up handrails and grab rails;
- unloading coal or wood and putting it into cellars of private households or establishments;
- performing related task.

**Examples of the occupations classified here:**

**96221** *Odd-job person*  
**96222** *Handyperson*

**9623 METER READERS AND VENDING – MACHINE COLLECTORS**

Meter readers and vending-machine collectors and related workers filling stocks in vending machines and collect money from the machine or from parking meters and other coin-boxes, or read electricity, gas or water meters.

**Tasks include:**

- filling storage spaces of vending machines and collecting money from their containers;
- collecting money from parking meters and similar coin-boxes;
- reading electricity, gas or water meters and recording their consumption;
- performing related tasks.

**Examples of the occupations classified here:**

**96231** *Meter reader*

**96232** *Collector, vending machine/money*

**9624 WATER AND FIREWOOD COLLECTORS**

Water and firewood collectors collect wood and water used for cook, heat, clean and others.

**Tasks include:**

- collecting wood used for cook, heat, as a fuel and others;
- collecting water used for clean, cook and others;
- performing related task.

**9625 ATTENDANTS**

Attendants are primarily concerned with the provision of services in office, industrial or business, recreational and related establishments.

**Tasks include:**

- attending to patient's needs and maintaining wards cleanliness in hospitals and related establishments;
- cleaning laboratory equipment;
- operating passenger or goods lift in buildings;
- attending to the needs of persons engaged in sports;
- collecting parking fees, issuing ticket stubs, directing customers to parking spaces and parking cars;
- collecting tickets and admitting visitors to amusement parks and rides, assisting visitors to get on and off rides, and secure and release safety belts and bars;
- assigning bowling alleys to customer, issuing score sheets, renting bowling shoes and collecting fees;
- scheduling the use of golf courses, tennis court, fitness clubs and other recreational facilities and may collect fees from players and sell or rent sports equipment;
- cleaning and keeping lavatories in buildings such as offices, theatres, restaurants and other establishments in neat and orderly condition;
- performing related tasks.

**Examples of the occupations classified here:**

**96251** *Attendant, laboratory*

**96252** *Attendant, hospital*

**96253** *Attendant, parking*

**96254** *Attendant, lift*

**96255** *Attendant, amusement park/recreation*

**96256** *Attendant, room*

**96257** *Attendant, sports*

**96258**   *Attendant, crane*

**9629   ELEMENTARY WORKERS NOT ELSEWHERE CLASSIFIED**

This unit group covers elementary workers not elsewhere classified in Minor Group 962: Elementary Workers.

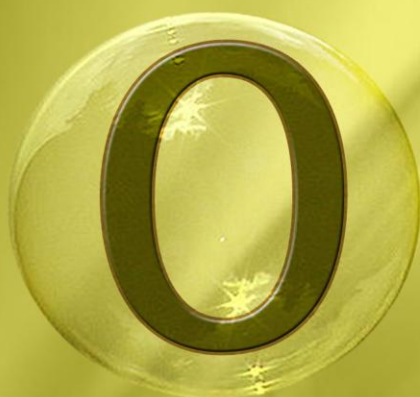
**Tasks include:**

- doing general work;
- arranging lights and screen, sets up camera at proper angle, and moves objects to secure desired background for photographers as directed;
- helping in dark room duties, such as mixing chemical solutions and developing films;
- driving transport carried camera equipment;
- cleaning kindergarten area;
- performing related task.

**Examples of the occupations classified here:**

**96291**   *General worker R1*  
**96292**   *Specialized general worker R3*  
**96293**   *General unskill worker/labourer*  
**96294**   *Worker, kindergarten*  
**96295**   *Worker, inflatable*  
**96296**   *Worker, sawing*  
**96297**   *Operator, sanding*  
**96298**   *Sub assistant, camera/driver N3*

**MAJOR GROUP**



**ARMED FORCES  
OCCUPATIONS**

**M**

**A**

**S**

**C**

**O**

**2008**

**2<sup>nd</sup> Edition**

# Major Group 0:

## ARMED FORCES OCCUPATIONS

Members of the Malaysian Armed Forces occupations are those military servicemen who currently serve in the Malaysian Armed Forces and who are not free to accept any civilian employment. They are bound to serve the Armed Forces to protect Malaysia's sovereignty, independence and territorial integrity against hostile forces. Included in the Malaysian Armed Forces occupation are regular members of the Malaysian Army, Royal Malaysian Navy and the Royal Malaysian Air Force but does not include civilian persons employed by the government under The Ministry of Defence and members of military reserves not currently on active service. Reference to a skill level has not been used in defining the scope of this major group.

### 01 THE MALAYSIAN ARMY

The Malaysian Army is part of the Malaysian Armed Forces instituted by the Federal Constitution. The sole purpose of the Malaysian Army is to provide a land force in the defence of Malaysia. In this context the roles can be divided into the primary, secondary and supporting. The primary roles are to safeguard all national frontiers and land boundaries from encroachment at all time. The secondary roles are to assist the Royal Malaysian Police and other civil authorities in the maintenance of public order and providing assistance in time of national disaster. Lastly, is to undertake supporting roles in peacekeeping operations under the auspices of the United Nation.

The Malaysian Army maintains a modern, lean, compact structure and organization, relying on high technologically advance equipments, driven with current doctrines to operate efficiently in peace time and fight a winning battle in war. The Army is organized into functional elements with each element consist of various regiments and corps to perform different functions of their job based on their skills and trades of training. The various regiments and corps are as follows:

**This sub-major group consists of the following minor groups:**

#### 011 THE MALAYSIAN ARMY COMMISSIONED OFFICERS

#### 012 THE MALAYSIAN ARMY OTHER RANKS

#### 011 THE MALAYSIAN ARMY COMMISSIONED OFFICERS

The Malaysian Army Commissioned Officers are military personnel who were commissioned by the **Seri Paduka Baginda Yang Di-Pertuan Agong** to serve in the various services of the Malaysian Armed Forces. They are officers from the rank of Second Lieutenant or equivalent right up to General. This category of military personnel is trained to lead their men and subordinates in time of war and peace.

#### 0110 THE MALAYSIAN ARMY COMMISSIONED OFFICERS

The Malaysian Army Commissioned Officers are military personnel who were commissioned by the **Seri Paduka Baginda Yang Di-Pertuan Agong** to serve in the services of The Malaysian Army. They are officers from the rank of Second Lieutenant or equivalent right up to General. This category of military personnel is trained to lead their men and subordinates in time of war and peace.

**Tasks include:**

- leading Armed Forces Officers and subordinates in time of war and peace;
- providing forces that are able to repulse any threat to the sovereign state;
- controlling the selection and training of staff;
- maintaining trained forces to provide military and technical assistance, surveillance activities, search and rescue and disaster relief operations.

**Examples of the occupations classified here:**

**01101 General, Army**  
**01102 Lieutenant General, Army**  
**01103 Major General, Army**  
**01104 Brigadier General, Army**  
**01105 Colonel, Army**  
**01106 Lieutenant Colonel, Army**  
**01107 Major, Army**  
**01108 Captain, Army**

**012 THE MALAYSIAN ARMY OTHER RANKS**

The Malaysian Army Other Ranks are military personnel who receive recruit training at the various services **Basic Recruits Training Centres**. They rose from the rank of Private Soldier and equivalent up to Warrant Officer Class 1 and serve under the leadership and command of the commissioned officers to perform any military tasking, be it in war or in peace. The rank though similar for every service may be identified under different names so as to signify the origin service of the rank holder or the nature of their jobs.

**0120 THE MALAYSIAN ARMY OTHER RANKS**

The Malaysian Army Other Ranks are military personnel who receive recruit training at The Malaysian Army **Basic Recruits Training Centres**. They rose from the rank of Private Soldier and equivalent up to Warrant Officer Class 1 and serve under the leadership and command of the commissioned officers to perform any military tasking, be it in war or in peace. The rank though similar for every service may be identified under different names so as to signify the origin service of the rank holder or the nature of their jobs.

**Tasks include:**

- operating armoured vehicles, artillery, hand-held weapons and other military combat equipment and defence systems;
- patrolling the exclusive economic zone to discourage intrusion and poaching;
- provide military and technical assistance, surveillance activities, search and rescue and disaster relief operations, whenever required;
- engaging in peacekeeping operations and enforcing cease-fire agreements;
- participating in ceremonial duties;
- performing related tasks.

**Examples of the occupations classified here:**

**01201 Warrant Officers 1, Army**  
**01202 Warrant Officers 2, Army**  
**01203 Staff Sergeant**  
**01204 Sergeant**  
**01205 Corporal**

**01206 Lance Corporal**

**01207 Private**

## **02 ROYAL MALAYSIAN NAVY**

The Royal Malaysian Navy (RMN) as part of the Malaysian Armed Forces plays an important role to provide the naval support and compliment in the achievement of the overall mission and objective in the safekeeping of national sovereignty. RMN roles can be divided into two, peacetime roles and wartime roles.

**This sub-major group consists of the following minor groups:**

**021 ROYAL MALAYSIAN NAVY COMMISSIONED OFFICERS**

**022 ROYAL MALAYSIAN NAVY OTHER RANKS**

### **021 ROYAL MALAYSIAN NAVY COMMISSIONED OFFICERS**

Royal Malaysian Navy Commissioned Officers are military personnel who were commissioned by the **Seri Paduka Baginda Yang Di-Pertuan Agong** to serve in the services of the Royal Malaysian Navy. They are officers from the rank of Midshipment or equivalent right up to Admiral. This category of military personnel is trained to lead their men and subordinates in time of war and peace.

#### **0210 ROYAL MALAYSIAN NAVY COMMISSIONED OFFICERS**

Royal Malaysian Navy Commissioned Officers are military personnel who were commissioned by the **Seri Paduka Baginda Yang Di-Pertuan Agong** to serve in the services of the Royal Malaysian Navy. They are officers from the rank of Midshipment or equivalent right up to Admiral. This category of military personnel is trained to lead their men and subordinates in time of war and peace.

#### **Tasks include:**

- leading Royal Malaysian Navy and subordinates in time of war and peace;
- providing forces that are able to repulse any threat to the sovereign state;
- controlling the selection and training of staff;
- maintaining trained forces to provide military and technical assistance, surveillance activities, search and rescue and disaster relief operations.

#### **Examples of the occupations classified here:**

**02101 Admiral**

**02102 Rear Admiral, Navy**

**02103 First Admiral, Navy**

**02104 Captain, Navy**

**02105 Commander, Navy**

**02106 Lieutenant Commander, Navy**

**02107 Lieutenant, Navy**

**02108 Acting Sub Lieutenant, Navy**

**02109 Midshipmen, Navy**



## **022     ROYAL MALAYSIAN NAVY OTHER RANKS**

Royal Malaysian Navy Other Ranks are military personnel who receive recruit training at the Royal Malaysian Navy **Basic Recruits Training Centres**. They rose from the rank of Ordinary Soldier and equivalent up to Warrant Officer Class 1 and serve under the leadership and command of the commissioned officers to perform any military tasking, be it in war or in peace. The rank though similar for every service may be identified under different names so as to signify the origin service of the rank holder or the nature of their jobs.

### **0220     ROYAL MALAYSIAN NAVY OTHER RANKS**

Royal Malaysian Navy Other Ranks are military personnel who receive recruit training at the Royal Malaysian Navy **Basic Recruits Training Centres**. They rose from the rank of Ordinary Soldier and equivalent up to Warrant Officer Class 1 and serve under the leadership and command of the commissioned officers to perform any military tasking, be it in war or in peace. The rank though similar for every service may be identified under different names so as to signify the origin service of the rank holder or the nature of their jobs.

#### **Tasks include:**

- operating naval ship or boat, artillery, hand-held weapons and other military combat equipment and defence systems;
- patrolling the exclusive economic zone to discourage intrusion and poaching;
- provide military and technical assistance, surveillance activities, search and rescue and disaster relief operations, whenever required;
- engaging in peacekeeping operations and enforcing cease-fire agreements;
- participating in ceremonial duties;
- performing related tasks.

#### **Examples of the occupations classified here:**

- 02201     Warrant Officer I, Navy*
- 02202     Warrant Officer II, Navy*
- 02203     Chief Petty Officer*
- 02204     Petty Officer*
- 02205     Leading Rate*
- 02206     Able Rate*
- 02207     Junior Able Rate*
- 02208     Ordinary-COD*

## **03     ROYAL MALAYSIAN AIR FORCE**

The Royal Malaysian Air Force (RMAF) is responsible to defend the sovereignty of Malaysian airspace against any hostile forces by using all instrument and asset including man power. The Royal Malaysian Air Force general roles including organizing, training and equipping its force for timely and sustained combat operations through offensive air support and tactical transport to the Malaysian Security Service.

#### **This sub-major group consists of the following minor groups:**

- 031     ROYAL MALAYSIAN AIR FORCE COMMISSIONED OFFICERS**
- 032     ROYAL MALAYSIAN AIR FORCE OTHER RANKS**

### **031     ROYAL MALAYSIAN AIR FORCE COMMISSIONED OFFICERS**

Royal Malaysian Air Force Commissioned Officers are military personnel who were commissioned by the **Seri Paduka Baginda Yang Di-Pertuan Agong** to serve in the services of the Royal Malaysian Air Force. They are officers from the rank of Second Lieutenant or equivalent right up to General. This category of military personnel is trained to lead their men and subordinates in time of war and peace.

#### **0310    ROYAL MALAYSIAN AIR FORCE COMMISSIONED OFFICERS**

Royal Malaysian Air Force Commissioned Officers are military personnel who were commissioned by the **Seri Paduka Baginda Yang Di-Pertuan Agong** to serve in the services of the Royal Malaysian Air Force. They are officers from the rank of Second Lieutenant, RMAF or equivalent right up to General, RMAF. This category of military personnel is trained to lead their men and subordinates in time of war and peace.

#### **Tasks include:**

- leading Royal Malaysian Air Force and subordinates in time of war and peace;
- providing forces that are able to repulse any threat to the sovereign state;
- controlling the selection and training of staff;
- maintaining trained forces to provide military and technical assistance, surveillance activities, search and rescue and disaster relief operations.

#### **Examples of the occupations classified here:**

- 03101    General, Royal Malaysian Air Force**
- 03102    Lieutenant General, Royal Malaysian Air Force**
- 03103    Major General, Royal Malaysian Air Force**
- 03104    Brigadier General, Royal Malaysian Air Force**
- 03105    Colonel, Royal Malaysian Air Force**
- 03106    Lieutenant Colonel, Royal Malaysian Air Force**
- 03107    Major, Royal Malaysian Air Force**
- 03108    Captain, Royal Malaysian Air Force**

### **032     ROYAL MALAYSIAN AIR FORCE OTHER RANKS**

Royal Malaysian Air Force Other Ranks are military personnel who receive recruit training at the Royal Malaysian Air Force **Basic Recruits Training Centres**. They rose from the rank of Private Soldier Aircraftman II (AC II) and equivalent up to Warrant Officer Class Air Force 1 and serve under the leadership and command of the commissioned officers to perform any military tasking, be it in war or in peace. The rank though similar for every service may be identified under different names so as to signify the origin service of the rank holder or the nature of their jobs.

#### **0320    ROYAL MALAYSIAN AIR FORCE OTHER RANKS**

Royal Malaysian Air Force Other Ranks are military personnel who receive recruit training at the Royal Malaysian Air Force **Basic Recruits Training Centres**. They rose from the rank of Aircraftman II (AC II) and equivalent up to Warrant Officer Class Air Force 1 and serve under the leadership and command of the commissioned officers to perform any military tasking, be it in war or in peace. The rank though similar for every service may be identified under different names so as to signify the origin service of the rank holder or the nature of their jobs.

**Tasks include:**

- operating fighter jet, artillery, hand-held weapons and other military combat equipment and defence systems;
- patrolling the exclusive economic zone to discourage intrusion and poaching;
- provide military and technical assistance, surveillance activities, search and rescue and disaster relief operations, whenever required;
- engaging in peacekeeping operations and enforcing cease-fire agreements;
- participating in ceremonial duties;
- performing related tasks.

**Examples of the occupations classified here:**

**03201 Warrant Officer Air Force I**  
**03202 Warrant Officer Air Force II**  
**03203 Flight Sergeant**  
**03204 Sergeant Air Force**  
**03205 Corporal Air Force**  
**03206 Senior Aircraftman**  
**03207 Aircraftman I (AC I)**  
**03208 Aircraftman II (AC II)**

# Occupation in Systematical Order

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 11111         | 11101         | Parliamentarian                                      |
| 11111         | 11101         | Member of parliamentarian                            |
| 11112         | 11102         | Chief minister                                       |
| 11112         | 11102         | Minister   |
| 11112         | 11102         | Prime minister                                       |
| 11112         | 11102         | Deputy minister                                      |
| 11113         | 11103         | State assemblyman                                    |
| 11113         | 11103         | Senator  |
| 11113         | 11103         | Speaker  |
| 11114         | 11104         | Mayor/Datuk Bandar                                   |
| 11115         | 11109         | Officials, legislative                               |
| 11119         | New           | Other legislator                                     |
| 11121         | 11201         | Director-general, government department              |
| 11121         | 11201         | Director-general, government administration/regional |
| 11121         | 11201         | Chief secretary, government                          |
| 11121         | 11201         | Secretary-general, government                        |
| 11121         | 11201         | Secretary-general, government administration         |
| 11121         | 11201         | Secretary-general, government administration/deputy  |
| 11121         | 11201         | Head, chancery                                       |
| 11121         | 11201         | Head, government department                          |
| 11121         | 11201         | Senior officials, government                         |
| 11121         | 11201         | Administrator, government                            |
| 11121         | 11201         | Commissioner, civil service                          |
| 11121         | 11201         | Secretary, government/non-legislative                |
| 11121         | 11201         | Deputy secretary, government                         |
| 11122         | 11201         | Senior officials, statutory board                    |
| 11123         | 11201         | Ambassador   |
| 11123         | 11201         | Consul-general                                       |
| 11123         | 11201         | High commissioner, government                        |
| 11123         | 11201         | Secretary, embassy                                   |
| 11123         | 11201         | Diplomatic representative, embassy                   |
| 11123         | 11201         | Representative, diplomatic                           |
| 11124         | 11201         | Registrar-general, government                        |
| 11124         | 11201         | Director-general, fire and rescue                    |
| 11124         | 11201         | Director-general, inland revenue                     |
| 11124         | 11201         | Director-general, prison                             |
| 11124         | 11201         | Inspector-general, police                            |
| 11125         | JPA           | Officer, administrative and diplomatic M41           |
| 11126         | JPA           | Officer, administrative N41                          |
| 11129         | 11201         | Other senior government officials                    |
| 11131         | New           | Demang   |
| 11131         | New           | Penggawa   |
| 11132         | 11302         | Chief, village                                       |
| 11132         | New           | Sidang   |
| 11133         | New           | Tribe leader (Ketua anak negeri)                     |
| 11134         | New           | Tok Batin  |
| 11134         | New           | Kapitan  |
| 11134         | New           | Tuai rumah   |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 11135         | JPA           | Penghulu NP27  |
| 11139         | New           | Other traditional chiefs and heads of village              |
| 11141         | 11410         | Secretary-general, political party                         |
| 11141         | 11410         | Senior officials, political party organization             |
| 11141         | 11410         | Leader, political party                                    |
| 11141         | 11410         | Chairman, political party                                  |
| 11141         | 11410         | President, political party                                 |
| 11142         | 11421         | Director-general, employers' organization                  |
| 11142         | 11421         | Senior officials, employers' organization                  |
| 11142         | 11421         | President, employers' organization                         |
| 11143         | 11422         | Senior officials, trade union                              |
| 11143         | 11422         | Senior officials, workers' organization                    |
| 11143         | 11422         | Leader, trade union  |
| 11144         | 11423         | Senior officials, other economic-interest organization     |
| 11145         | 11430         | Secretary-general, special-interest organization           |
| 11145         | 11430         | Secretary-general, Red Crescent Organization               |
| 11145         | 11430         | Secretary-general, human rights organization               |
| 11145         | 11430         | Secretary-general, humanitarian organization               |
| 11145         | 11430         | Secretary-general, Red Cross Organization                  |
| 11145         | 11430         | Secretary-general, environment protection organization     |
| 11145         | 11430         | Secretary-general, wild life protection organization       |
| 11145         | 11430         | Senior officials, special-interest organization            |
| 11145         | 11430         | Senior officials, humanitarian organization                |
| 11149         | New           | Other senior officials of special – interest organizations |
| 11201         | 12101         | Chief executive officer                                    |
| 11201         | New           | Chief finance officer                                      |
| 11201         | New           | Chief operating officer                                    |
| 11201         | 12101         | Chairman, enterprise                                       |
| 11201         | 12101         | Company director   |
| 11201         | 12101         | Managing director  |
| 11201         | 12101         | Director, enterprise                                       |
| 11201         | 12101         | President, enterprise                                      |
| 11201         | 12101         | Manager, airport   |
| 11201         | 12101         | Manager, harbour   |
| 11201         | 12101         | Manager, broadcasting, radio and television                |
| 11201         | 12223         | Manager, programme/radio & television                      |
| 11201         | 12101         | Manager, sports  |
| 11201         | 12101         | Director-general, enterprise                               |
| 11202         | 12102         | Chief executive, organization                              |
| 11202         | 12102         | Director-general, organization                             |
| 11202         | 12102         | Managing-director, organization                            |
| 11202         | 12102         | Director, organization                                     |
| 11202         | 12102         | Chairman, organization                                     |
| 11202         | 12102         | President, organization                                    |
| 12111         | 12312         | Manager, account   |
| 12111         | 12312         | Manager, budget  |
| 12111         | 12312         | Manager, finance   |
| 12111         | 12312         | Manager, credit  |
| 12112         | 13070         | Manager, insurance   |
| 12113         | 24202         | Manager, fund  |
| 12114         | 24203         | Manager, treasury  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 12115         | New           | Manager, financial and institution                                     |
| 12116         | New           | Manager, expenditure   |
| 12117         | New           | Manager, audit   |
| 12117         | New           | Manager, audit and risk assessment                                     |
| 12121         | 12321         | Manager, human resource/personnel                                      |
| 12121         | 12321         | Manager, human resource/training                                       |
| 12122         | 12322         | Manager, industrial relations  |
| 12123         | 12323         | Manager, occupational health and safety                                |
| 12131         | New           | Manager, policy and planning   |
| 12141         | 12250         | Manager, production and operation/business                             |
| 12142         | 13070         | Manager, business services/development                                 |
| 12151         | 12311         | Manager, administrative  |
| 12191         | New           | Business services and administration managers not elsewhere classified |
| 12211         | 12331         | Manager, sales   |
| 12211         | 12331         | Manager, sales and marketing   |
| 12211         | 12332         | Manager, marketing   |
| 12211         | 12332         | Manager, sales promotion   |
| 12212         | New           | Manager, customer service  |
| 12212         | 12332         | Manager, market research   |
| 12212         | New           | Manager, product/brand   |
| 12212         | New           | Manager, contact centre  |
| 12213         | New           | Manager, supermarket   |
| 12213         | New           | Manager, shopping centre   |
| 12221         | 12341         | Manager, advertising   |
| 12222         | New           | General affairs section chief  |
| 12222         | New           | Manager, communications  |
| 12222         | 12342         | Manager, public relations  |
| 12223         | 13070         | Manager, display   |
| 12231         | 12370         | Manager, research and development                                      |
| 13111         | 12212         | Manager, production and operation/forestry                             |
| 13111         | 13013         | Manager, forestry  |
| 13112         | 12211         | Manager, estate/plantation   |
| 13112         | 13014         | Manager, production and operation/agricultural                         |
| 13112         | 13011         | Manager, agricultural  |
| 13121         | New           | Manager, fishery farm  |
| 13121         | 12212         | Manager, production and operation/fishery                              |
| 13211         | 13020         | Manager, manufacturing   |
| 13211         | 12213         | Manager, production and operation/manufacturing                        |
| 13211         | New           | Manager, factory   |
| 13211         | New           | Manager, quality control   |
| 13211         | New           | Manager, quality assurance   |
| 13221         | 12215         | Manager, production and operation/mining and quarry                    |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 13231         | 13030         | Manager, construction   |
| 13231         | 12214         | Manager, production and operation/construction                                |
| 13232         | New           | Manager, contract   |
| 13233         | New           | Manager, operation  |
| 13233         | New           | Manager, project  |
| 13233         | New           | Manager, site   |
| 13241         | 12221         | Master, railway station   |
| 13241         | 13061         | Manager, transport  |
| 13241         | 12221         | Manager, production and operation/transport                                   |
| 13241         | 12221         | Manager, production and operation/transport (pipeline)                        |
| 13241         | 12221         | Manager, production and operation/transport (freight traffic)                 |
| 13241         | 12221         | Manager, production and operation/transport (passenger traffic)               |
| 13242         | 12350         | Manager, supplies   |
| 13242         | New           | Manager, warehouse  |
| 13242         | 12350         | Manager, distribution   |
| 13242         | 12222         | Manager, production and operation/storage                                     |
| 13242         | 13062         | Manager, storage  |
| 13243         | 12350         | Manager, purchasing   |
| 13244         | 12223         | Postmaster  |
| 13245         | New           | Manager, logistic   |
| 13301         | 12223         | Manager, production and operation/communications                              |
| 13301         | 12223         | Manager, production and operation/communications (postal services)            |
| 13301         | 12223         | Manager, production and operation/communications (telecommunication services) |
| 13302         | New           | Manager, information systems  |
| 13302         | 12361         | Manager, information technology   |
| 13303         | 12362         | Manager, computer services  |
| 13304         | 12369         | Manager, data processing  |
| 13411         | 13093         | Manager, child care centre  |
| 13421         | 12291         | Director of nursing   |
| 13421         | 12291         | Director of medical services  |
| 13421         | 12291         | Manager, production and operation/health                                      |
| 13421         | 12291         | Manager, medical (medical administration)                                     |
| 13421         | 13092         | Manager, health   |
| 13422         | 13092         | Administrator, hospital   |
| 13429         | New           | Other health services managers  |
| 13431         | New           | Manager, aged care services   |
| 13441         | 12291         | Manager, production and operation/social work                                 |
| 13441         | 13093         | Manager, social work  |
| 13451         | 13091         | Manager, education  |
| 13451         | 12291         | Manager, production and operation/education                                   |
| 13452         | 12102         | Chancellor, university  |
| 13452         | 12293         | Dean  |
| 13452         | 12293         | Dean of faculty, university   |
| 13452         | 12293         | Headmaster  |
| 13452         | 12293         | Head, college faculty   |
| 13452         | 12293         | Head, university faculty  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 13452         | 12102         | Vice Chancellor, university                                      |
| 13452         | 12102         | Director, school   |
| 13452         | 12102         | Principal, college   |
| 13452         | 12293         | Principal, school  |
| 13452         | 12102         | Principal, university  |
| 13461         | New           | Manager, financial and insurance branch                          |
| 13491         | 12291         | Manager, production and operation/extra territorial organization |
| 13492         | New           | Manager, design  |
| 13493         | New           | Manager, electricity, water and sanitary                         |
| 13493         | New           | Manager, facilities maintenance                                  |
| 13493         | New           | Manager, environmental systems                                   |
| 13493         | New           | Manager, garbage systems   |
| 14111         | 13051         | Manager, hostel  |
| 14111         | 13051         | Manager, hotel   |
| 14111         | 13051         | Manager, motel   |
| 14111         | 12231         | Manager, production and operation/hotel                          |
| 14111         | 13051         | Manager, boarding-house  |
| 14111         | 13051         | Manager, guest-house   |
| 14112         | 13051         | Manager, lodging-house   |
| 14113         | New           | Manager, front desk  |
| 14113         | New           | Manager, front office hotel                                      |
| 14114         | New           | Manager, food and beverage services                              |
| 14115         | JPA           | Manager, hostel N41  |
| 14116         | JPA           | Assistant manager, hostel N27                                    |
| 14119         | New           | Other hotel managers   |
| 14121         | 13052         | Manager (cafe, bar and snack-bar)                                |
| 14121         | 13052         | Barkeeper  |
| 14121         | 13052         | Manager, snack-bar   |
| 14121         | 13052         | Manager, cafe  |
| 14121         | 13052         | Manager, canteen   |
| 14121         | 13052         | Manager, catering  |
| 14121         | 12232         | Manager, production and operation/restaurant                     |
| 14121         | 13052         | Manager, restaurant  |
| 14121         | 13052         | Manager, self-service restaurant                                 |
| 14122         | 13053         | Manager, discotheque   |
| 14123         | 13059         | Manager, refreshment-room  |
| 14129         | New           | Other restaurant managers  |
| 14201         | 13042         | Merchant, retail trade   |
| 14201         | 12242         | Manager, production and operation/retail trade                   |
| 14201         | 12242         | Manager, production and operation/retail trade (store)           |
| 14201         | 12242         | Manager, production and operation/retail trade (supermarket)     |
| 14201         | 13042         | Manager, retail trade/shop                                       |
| 14201         | 13042         | Manager, retail trade/chain store                                |
| 14201         | 13042         | Manager, retail trade/discount store                             |
| 14201         | 13042         | Manager, retail trade/self-service store                         |
| 14201         | 13042         | Manager, retail trade/mail-order store                           |
| 14202         | 13041         | Merchant, wholesale trade  |
| 14202         | 13041         | Wholesaler   |
| 14202         | New           | Manager, export sales  |



| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 14202         | 12241         | Manager, production and operation/wholesale trade          |
| 14202         | 12241         | Manager, production and operation/wholesale trade (export) |
| 14202         | 12241         | Manager, production and operation/wholesale trade (import) |
| 14202         | 13041         | Manager, wholesale trade                                   |
| 14202         | 13041         | Manager, wholesale trade/export                            |
| 14202         | 13041         | Manager, wholesale trade/import                            |
| 14311         | 12291         | Manager, production and operation/sporting activities      |
| 14311         | 12291         | Manager, production and operation/recreation               |
| 14312         | 13094         | Manager, cultural activities                               |
| 14312         | 12291         | Manager, production and operation/cultural activities      |
| 14313         | 13095         | Manager, travel agency                                     |
| 14313         | 13095         | Manager, sporting activities                               |
| 14313         | 13095         | Manager, environment, parks and land care                  |
| 14313         | 13095         | Manager, ice-skating rink                                  |
| 14313         | 13095         | Manager, entertainment                                     |
| 14313         | 13099         | Manager, casino  |
| 14313         | 13095         | Manager, club  |
| 14313         | 13095         | Manager, racecourse  |
| 14313         | 13051         | Manager, caravan park                                      |
| 14313         | New           | Manager, cruise  |
| 14313         | 12291         | Manager, production and operation/travel agency            |
| 14313         | 13095         | Manager, gaming  |
| 14313         | 13095         | Manager, sports centre                                     |
| 14313         | 13095         | Manager, recreation  |
| 14313         | 13095         | Manager, stadium   |
| 14313         | 13095         | Manager, sports and recreation                             |
| 14313         | 13051         | Manager, camping site                                      |
| 14314         | 12292         | Manager, production and operation/stage                    |
| 14314         | 12292         | Manager, stage   |
| 14315         | JPA           | Manager, park/estate G41                                   |
| 14316         | JPA           | Assistant manager, park/estate G27                         |
| 14321         | 13082         | Manager, cleaning  |
| 14321         | 13082         | Manager, laundering, dry-cleaning and ironing              |
| 14321         | 12261         | Manager, production and operation/cleaning                 |
| 14322         | 12262         | Manager, production and operation/personal care services   |
| 14322         | 13081         | Manager, personal care services                            |
| 14322         | New           | Housekeeping administrator                                 |
| 14331         | New           | Manager, legal and risk management                         |
| 14341         | 13096         | Manager, maintenance                                       |
| 14342         | 13096         | Manager, property  |
| 14351         | New           | Manager, occupational safety                               |
| 14352         | 12319         | Manager, security  |
| 21111         | 21111         | Physicist  |
| 21111         | 21111         | Physicist, theoretical                                     |
| 21112         | 21112         | Aerodynamicist   |
| 21112         | 21112         | Ballistician   |
| 21112         | 21112         | Physicist, ballistics                                      |
| 21112         | 21112         | Physicist, hydrodynamics                                   |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 21112         | 21112         | Physicist, solid-state                                      |
| 21112         | 21112         | Physicist, mechanics  |
| 21112         | 21112         | Hydrodynamics   |
| 21112         | 21112         | Thermodynamics  |
| 21113         | 21113         | Physicist, acoustics  |
| 21113         | 21113         | Physicist, sound  |
| 21113         | 21113         | Physicist, light  |
| 21113         | 21113         | Physicist, heat   |
| 21113         | New           | Physicist, medical  |
| 21113         | 21113         | Physicist, thermodynamics                                   |
| 21114         | 21114         | Physicist, electricity and magnetism                        |
| 21115         | 21115         | Physicist, electronics                                      |
| 21116         | 21116         | Physicist, nuclear/atomic/molecular                         |
| 21117         | 21117         | Astrophysicist  |
| 21117         | 21117         | Astronomer  |
| 21117         | 21117         | Astronomer, radio   |
| 21117         | 21117         | Physicist, astronomer                                       |
| 21118         | 21118         | Cosmologist   |
| 21119         | New           | Other physicist and astronomers                             |
| 21119         | 21119         | Physicist, rheology   |
| 21119         | 21119         | Rheologist  |
|               |               |   |
| 21121         | 21121         | Meteorologist   |
| 21121         | 21121         | Officer, meteorological                                     |
| 21122         | 21122         | Climatologist   |
| 21122         | 21122         | Meteorologist-climatology                                   |
| 21123         | 21123         | Meteorologist-weather forecasting                           |
| 21123         | 21145         | Seismologist  |
| 21123         | 21123         | Forecaster-weather  |
| 21124         | JPA           | Officer, meteorology C41                                    |
| 21125         | New           | Agrometeorologist   |
| 21126         | New           | Meteorologist, marine                                       |
| 21127         | New           | Meteorologist, environmental                                |
| 21128         | New           | Meteorologist, Numerical Weather Prediction Modeling (NWP)  |
| 21129         | New           | Other meteorologist   |
|               |               |   |
| 21131         | 21131         | Chemist   |
| 21132         | 21132         | Chemist, rubber   |
| 21132         | 21132         | Chemist, organic  |
| 21133         | 21133         | Chemist, inorganic  |
| 21133         | 21133         | Chemist, glass  |
| 21133         | 21133         | Chemist, metallurgical                                      |
| 21133         | 21133         | Chemist, corrosion  |
| 21133         | 21133         | Chemist, plastics   |
| 21133         | 21133         | Chemist, polymer  |
| 21134         | 21134         | Chemist, physical   |
| 21135         | 21135         | Chemist, analysis   |
| 21135         | 21135         | Chemist, research development (chemical or related product) |
| 21136         | 21136         | Chemist, water purification                                 |
| 21137         | 21137         | Chemist, detergent  |
| 21137         | 21137         | Chemist, leather  |
| 21137         | 21137         | Chemist, paint  |
| 21137         | 21137         | Chemist, quality control                                    |
| 21137         | 21137         | Chemist, food   |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                          |
|---------------|---------------|------------------------------------|
| 21137         | 21137         | Chemist, industrial                |
| 21137         | 21137         | Chemist, petroleum                 |
| 21137         | 21137         | Chemist, dye                       |
| 21137         | 21137         | Chemist, textile                   |
| 21138         | JPA           | Officer, geochemist C41            |
| 21139         | New           | Other chemist                      |
| 21139         | 21138         | Chemist, pharmaceutical            |
| 21139         | 21139         | Chemist, crystallography           |
| 21139         | 21139         | Chemist, nuclear                   |
| 21141         | New           | Geophysicist                       |
| 21141         | 21141         | Geologist                          |
| 21142         | 21142         | Geologist, engineering             |
| 21143         | 21143         | Geologist, mining                  |
| 21143         | 21143         | Mineralogist                       |
| 21144         | 21144         | Geologist, oil                     |
| 21144         | 21144         | Geologist, petroleum               |
| 21144         | 21144         | Geologist, petrology               |
| 21144         | 21144         | Petrologist                        |
| 21145         | 21146         | Geophysicist, oceanography         |
| 21145         | 21146         | Geologist, marine                  |
| 21145         | 21146         | Geologist, oceanography            |
| 21145         | 21146         | Oceanographer                      |
| 21145         | 21146         | Oceanographer, geophysical         |
| 21145         | 21146         | Oceanographer, geological          |
| 21146         | 21147         | Geodesist                          |
| 21146         | 21147         | Geophysicist, geomagnetic          |
| 21146         | 21147         | Geophysicist, geomorphology        |
| 21146         | 21147         | Geophysicist, seismology           |
| 21146         | 21147         | Geomagnetician                     |
| 21146         | 21147         | Geomorphologies                    |
| 21147         | 21148         | Geophysicist, hydrology            |
| 21147         | 21148         | Hydrogeologist                     |
| 21147         | 21148         | Hydrologist                        |
| 21148         | JPA           | Officer, geophysics/geology C41    |
| 21149         | 21148         | Other geologists and geophysicists |
| 21149         | 21149         | Geologist, micropalaeontology      |
| 21149         | 21149         | Geologist, palaeontology           |
| 21149         | 21149         | Geologist, stratigraphy            |
| 21149         | 21149         | Palaeontologist                    |
| 21149         | 21149         | Stratigraph                        |
| 21149         | 21149         | Micropalaeontology                 |
| 21201         | 21211         | Mathematician                      |
| 21201         | 21211         | Mathematician, applied mathematics |
| 21201         | 21211         | Mathematician, pure mathematics    |
| 21201         | 21213         | Mathematician, actuarial science   |
| 21202         | JPA           | Officer, actuary W41               |
| 21203         | 39211         | Officer, statistical               |
| 21203         | 21221         | Statistician                       |
| 21203         | 21221         | Statistician, applied statistics   |
| 21203         | 21221         | Statistics, survey                 |
| 21203         | New           | Superintendent, statistician       |
| 21204         | JPA           | Statistician E41                   |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                            |
|---------------|---------------|--------------------------------------|
| 21205         | 21223         | Biometrician                         |
| 21205         | 21223         | Statistician, biological             |
| 21205         | 21223         | Statistician, health                 |
| 21206         | 21224         | Statistician, economics              |
| 21206         | 21224         | Statistician, finance                |
| 21206         | 21224         | Statistician, market research        |
| 21206         | 21224         | Statistician, business and economics |
| 21207         | 21225         | Statistician, education              |
| 21207         | 21225         | Statistician, social science         |
| 21208         | 21226         | Statistician, engineering            |
| 21208         | 21227         | Statistician, mathematical           |
| 21208         | 21226         | Statistician, science physics        |
| 21209         | 21222         | Demographer                          |
| 21209         | 21229         | Other statisticians                  |
| 21209         | 21222         | Statistician, demography             |
| 21209         | 21229         | Statistician, opinion-polling        |
| 21209         | 21229         | Statistician, agricultural           |
| 21311         | 22111         | Biologist                            |
| 21311         | 22111         | Biologist, fresh water               |
| 21311         | 22111         | Biologist, aquatic                   |
| 21311         | 22111         | Biologist, marine                    |
| 21311         | 22111         | Biotechnologist                      |
| 21311         | 22111         | Hydrobiologist                       |
| 21311         | 22111         | Taxonomist                           |
| 21312         | 22112         | Botanist                             |
| 21312         | 22112         | Botanist, economic                   |
| 21312         | 22112         | Botanist, histology                  |
| 21312         | 22112         | Botanist, mycology                   |
| 21312         | 22112         | Botanist, taxonomy                   |
| 21312         | 22112         | Botanist, soil                       |
| 21312         | 22112         | Geneticist, plant                    |
| 21312         | 22112         | Histologist, plant                   |
| 21312         | 22112         | Mycologist                           |
| 21312         | 22112         | Cystologist, plant                   |
| 21312         | 22112         | Taxonomist, plant                    |
| 21313         | 22113         | Geneticist, animal                   |
| 21313         | 22113         | Herpetologist                        |
| 21313         | 22113         | Ichthyologist                        |
| 21313         | 22113         | Mammalogist                          |
| 21313         | 22113         | Ornithologist                        |
| 21313         | 22113         | Parasitologist                       |
| 21313         | 22113         | Pisciculturist                       |
| 21313         | 22113         | Cystologist, animal                  |
| 21313         | 22113         | Taxonomist, animals                  |
| 21313         | 22113         | Zoologist                            |
| 21313         | 22113         | Zoologist, embryology                |
| 21313         | 22113         | Zoologist, entomology                |
| 21313         | 22113         | Zoologist, histology                 |
| 21313         | 22113         | Zoologist, ichthyology               |
| 21313         | 22113         | Zoologist, mammalogy                 |
| 21313         | 22113         | Zoologist, ornithology               |
| 21313         | 22113         | Zoologist, parasitology              |
| 21313         | 22113         | Zoologist, pisciculture              |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 21313         | 22113         | Zoologist, taxonomy  |
| 21314         | 22114         | Entomologist   |
| 21315         | 22115         | Botanist, ecology  |
| 21315         | 22115         | Ecologist  |
| 21315         | 22115         | Ecologist, animal  |
| 21315         | 22115         | Ecologist, plant   |
| 21315         | 22115         | Zoologist, ecology   |
| 21316         | 22116         | Bacteriologist   |
| 21316         | 22116         | Bacteriologist, pharmaceutical                                 |
| 21316         | 22116         | Bacteriologist, food   |
| 21316         | 22116         | Bacteriologist, molecular                                      |
| 21316         | 22116         | Bacteriologist, fishery  |
| 21316         | 22116         | Bacteriologist, industrial                                     |
| 21316         | 22116         | Bacteriologist, agricultural                                   |
| 21316         | 22116         | Bacteriologist, medical  |
| 21316         | 22116         | Bacteriologist, soil   |
| 21316         | 22116         | Bacteriologist, dairy  |
| 21316         | 22116         | Bacteriologist, veterinary                                     |
| 21316         | 22116         | Geneticist   |
| 21316         | 22116         | Immunologist   |
| 21316         | 22116         | Microbiologist   |
| 21316         | 22116         | Serologist   |
| 21316         | 22116         | Virologist   |
| 21316         | 22116         | Histologist  |
| 21316         | 22116         | Engineer, genetics   |
| 21319         | New           | Other biologist, botanist, zoologist and related professionals |
| 21321         | 22131         | Officer, agricultural  |
| 21321         | 32131         | Adviser, planting  |
| 21321         | 32131         | Adviser, farming   |
| 21321         | 32131         | Adviser, agricultural  |
| 21321         | 32133         | Farm, demonstrator   |
| 21322         | New           | Officer, forestry  |
| 21322         | New           | Conservator, forestry  |
| 21322         | 32132         | Adviser, forestry  |
| 21323         | JPA           | Officer, fishery G41   |
| 21324         | JPA           | Conservationist, forestry G41                                  |
| 21325         | JPA           | Officer, agricultural G41                                      |
| 21331         | 22131         | Agronomist   |
| 21332         | 22132         | Scientist, crop research                                       |
| 21332         | 22132         | Scientist, agricultural  |
| 21333         | 22133         | Floriculturist   |
| 21333         | 22133         | Horticulturist   |
| 21333         | 22133         | Olericulturist   |
| 21333         | 22133         | Pomologist   |
| 21334         | 22134         | Wood anatomist   |
| 21334         | 22134         | Arboriculturist  |
| 21334         | 22134         | Soil conservationist   |
| 21334         | 22134         | Scientist, forestry  |
| 21334         | 22134         | Scientist, soil  |
| 21334         | 22134         | Silviculturist   |
| 21334         | 22134         | Wood analyst   |
| 21335         | 22135         | Scientist, animal  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                    |
|---------------|---------------|--|
| 21336         | 22136         | Scientist, environmental research            |
| 21337         | JPA           | Officer, wild life G41                       |
| 21338         | JPA           | Officer, environmental control C41           |
| 21339         | New           | Other environmental protection professionals |
| 21341         | 22121         | Anatomist                                    |
| 21342         | 22122         | Biochemist                                   |
| 21342         | 22122         | Biochemist, enzymes                          |
| 21342         | 22122         | Biochemist, clinical                         |
| 21342         | 22122         | Biochemist, proteins                         |
| 21342         | 22122         | Biochemist, steroids                         |
| 21342         | 22122         | Chemist, biological                          |
| 21343         | 22123         | Biophysicist                                 |
| 21344         | 22124         | Endocrinologists                             |
| 21345         | 22125         | Physiologists                                |
| 21345         | 22125         | Physiologist, endocrinology                  |
| 21345         | 22125         | Physiologist, epidemiology                   |
| 21345         | 22125         | Physiologist, animal                         |
| 21345         | 22125         | Physiologist, neurology                      |
| 21345         | 22125         | Physiologist, plant                          |
| 21346         | 22126         | Pharmacologists                              |
| 21346         | 22126         | Pharmacologist, toxicology                   |
| 21346         | 22126         | Pharmacologist, veterinary                   |
| 21346         | 22126         | Toxicologist                                 |
| 21347         | 22127         | Histopathologist                             |
| 21347         | 22127         | Neuropathologist                             |
| 21347         | 22127         | Pathologist                                  |
| 21347         | 22127         | Pathologist, forensic                        |
| 21347         | 22127         | Pathologist, animal                          |
| 21347         | 22127         | Pathologist, histopathology                  |
| 21347         | 22127         | Pathologist, clinical                        |
| 21347         | 22127         | Pathologist, neuropathology                  |
| 21347         | 22127         | Pathologist, surgical                        |
| 21347         | 22127         | Pathologist, medical                         |
| 21347         | 22127         | Pathologist, plant                           |
| 21347         | 22127         | Pathologist, veterinary                      |
| 21348         | 22127         | Epidemiologist                               |
| 21411         | 21491         | Engineer, automation                         |
| 21411         | 21491         | Engineer, robotics                           |
| 21412         | 21492         | Engineer, industrial                         |
| 21412         | 21492         | Engineer, industrial layout                  |
| 21413         | 21493         | Analyst, communication/except computer       |
| 21413         | 21493         | Analyst, systems/except computers            |
| 21413         | 21493         | Engineer, organization and methods           |
| 21413         | 21493         | Engineer, planning                           |
| 21413         | 21493         | Engineer, systems/except computers           |
| 21413         | 21493         | Designer, systems/except computers           |
| 21414         | 21494         | Engineer, work study                         |
| 21414         | 21494         | Engineer, industrial efficiency              |
| 21414         | 21494         | Engineer, time and motion                    |
| 21414         | 21494         | Engineer, cost evaluation                    |
| 21415         | 21495         | Engineer, industrial safety                  |
| 21415         | 21495         | Engineer, industrial health and safety       |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                       |
|---------------|---------------|---|
| 21415         | 21495         | Engineer, industrial health                     |
| 21416         | 21496         | Technologist, leather                           |
| 21416         | 21496         | Technologist, glass                             |
| 21416         | 21496         | Technologist, packaging                         |
| 21416         | 21496         | Technologist, printing                          |
| 21416         | 21496         | Technologist, ceramics                          |
| 21416         | 21496         | Technologist, cement                            |
| 21416         | 21496         | Technologist, textile                           |
| 21416         | 21496         | Engineer, production                            |
| 21417         | 21498         | Technologist, wood                              |
| 21419         | New           | Other industry and production engineer          |
| 21421         | 21421         | Technologist, engineering civil                 |
| 21421         | 21421         | Engineer, civil                                 |
| 21421         | New           | Engineer, site                                  |
| 21422         | 21422         | Technologist, building materials                |
| 21422         | 21422         | Engineer, civil/building construction           |
| 21422         | 21422         | Engineer, civil/aerodome construction           |
| 21422         | 21422         | Engineer, civil/construction                    |
| 21422         | 21422         | Engineer, civil/dock and harbour construction   |
| 21422         | 21422         | Engineer, civil/tower construction              |
| 21422         | 21422         | Engineer, civil/chimney construction            |
| 21422         | 21422         | Engineer, civil/building structure              |
| 21422         | 21422         | Engineer, civil/structural                      |
| 21422         | 21422         | Engineer, resident/civil engineering            |
| 21423         | 21423         | Engineer, civil/highways and road               |
| 21423         | 21423         | Engineer, civil/road construction               |
| 21423         | 21423         | Engineer, civil/railway construction            |
| 21423         | 21423         | Engineer, civil/highway and street construction |
| 21424         | JPA           | Engineer, civil J41                             |
| 21425         | 21424         | Engineer, civil/geotechnic                      |
| 21425         | 21425         | Engineer, civil/bridge construction             |
| 21425         | 21425         | Engineer, civil/tunnel construction             |
| 21426         | 21426         | Engineer, civil/soil mechanics                  |
| 21426         | 21426         | Engineer, civil/irrigation                      |
| 21426         | 21426         | Engineer, civil/dredging                        |
| 21427         | 21427         | Engineer, civil/hydraulics                      |
| 21427         | 21427         | Engineer, civil/hydrology                       |
| 21428         | 21428         | Engineer, civil/public health                   |
| 21428         | 21428         | Engineer, civil/sanitary                        |
| 21428         | 21428         | Engineer, sewerage and sanitation               |
| 21429         | New           | Other civil engineers                           |
| 21429         | New           | Engineer, facilities                            |
| 21429         | 21429         | Engineer, maintenance                           |
| 21431         | New           | Engineer, environment                           |
| 21441         | 21451         | Technologist, engineering/mechanical            |
| 21441         | 21451         | Engineer, mechanical                            |
| 21442         | 21452         | Engineer, industrial machinery and tools        |
| 21442         | New           | Engineer, lift                                  |
| 21442         | 21452         | Engineer, mechanical/instruments                |
| 21443         | 21453         | Engineer, cryogenic                             |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 21443         | 21453         | Engineer, nuclear power  |
| 21443         | 21453         | Engineer, mechanical/nuclear power                                 |
| 21444         | 21454         | Engineer, heating, ventilation, air-conditioning and refrigeration |
| 21445         | 21455         | Engineer, diesel   |
| 21445         | 21455         | Engineer, engines  |
| 21445         | 21455         | Engineer, jet engine   |
| 21445         | 21455         | Engineer, locomotive engine  |
| 21445         | 21455         | Engineer, internal combustion engine                               |
| 21445         | 21455         | Engineer, mechanical/automotive                                    |
| 21445         | 21455         | Engineer, mechanical/diesel  |
| 21445         | 21455         | Engineer, mechanical/motors and engine (except marine)             |
| 21445         | 21455         | Engineer, mechanical/motors and engines (marine)                   |
| 21445         | 21455         | Engineer, mechanical/gas turbine                                   |
| 21445         | 21455         | Engineer, motor  |
| 21445         | 21459         | Engineer, lubrication  |
| 21445         | New           | Engineer, steam  |
| 21445         | 21455         | Engineer, gas turbine  |
| 21445         | 21455         | Designer, motor-car  |
| 21446         | JPA           | Engineer, mechanical J41   |
| 21449         | 21459         | Technologist, welding  |
| 21449         | New           | Other mechanical engineers   |
| 21449         | 21459         | Engineer, mechanical/agriculture                                   |
| 21449         | 21459         | Engineer, agricultural   |
| 21451         | 21461         | Technologist, engineering/chemical                                 |
| 21451         | 21461         | Technologist, chemical process                                     |
| 21451         | 21461         | Engineer, chemical   |
| 21451         | 21461         | Engineer, chemical process   |
| 21452         | 21462         | Technologist, fuel   |
| 21452         | 21462         | Engineer, chemical/petroleum and gas                               |
| 21452         | 21462         | Engineer, natural gas production and distribution                  |
| 21453         | 21463         | Technologist, paint  |
| 21453         | 21463         | Engineer, chemical/paints and varnish                              |
| 21454         | 21464         | Engineer, chemical/fertilizer                                      |
| 21455         | 21465         | Engineer, chemical/pharmaceutical products                         |
| 21456         | 21466         | Technologist, alcohol  |
| 21456         | 21466         | Technologist, brewing  |
| 21456         | 21466         | Technologist, food and drinks                                      |
| 21456         | 21466         | Engineer, chemical/food  |
| 21457         | 21467         | Technologist, fiber  |
| 21457         | 21467         | Technologist, plastics   |
| 21457         | 21467         | Technologist, polymer  |
| 21458         | 21468         | Technologist, rubber   |
| 21458         | 21468         | Technologist, paper  |
| 21458         | 21468         | Technologist, tire   |
| 21459         | 21468         | Other chemical engineers   |
| 21461         | 21471         | Engineer, mining   |
| 21462         | 21472         | Metallurgist, radioactive minerals                                 |
| 21462         | 21472         | Metallurgist, assayer  |
| 21462         | 21472         | Engineer, mining/metal   |
| 21462         | 21472         | Assayer  |
| 21463         | 21473         | Engineer, mining/coal  |
| 21463         | 21473         | Engineer, mining/non metal   |



| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 21463         | 21473         | Engineer, mining/diamonds                        |
| 21464         | 21473         | Engineer, mining/petroleum and natural gas       |
| 21465         | 21474         | Metallurgist, extractive                         |
| 21465         | 21474         | Metallurgist, foundry                            |
| 21465         | 21474         | Technologist, extractive                         |
| 21465         | 21474         | Engineer, metal testing                          |
| 21466         | 21476         | Metallurgist, physics                            |
| 21469         | New           | Other mining engineers and metallurgist          |
| 21491         | 21499         | Engineer, project                                |
| 21491         | New           | Engineer, process                                |
| 21492         | New           | Engineer, quality assurance                      |
| 21492         | 21499         | Engineer, quality control                        |
| 21493         | 21499         | Adviser, technical service                       |
| 21494         | 21499         | Engineer, research                               |
| 21495         | New           | Engineering executive, store                     |
| 21511         | 21431         | Technologist, engineering/electrical             |
| 21511         | 21431         | Engineer, electrical                             |
| 21511         | 21431         | Engineer, electrical systems                     |
| 21511         | New           | Engineer, electrical testing                     |
| 21512         | 21432         | Engineer, electrical/electric power generation   |
| 21512         | 21432         | Engineer, electrical/high voltage                |
| 21512         | 21432         | Engineer, power generation                       |
| 21513         | 21433         | Engineer, electrical/electric power distribution |
| 21513         | 21433         | Engineer, electrical/electric power transmission |
| 21513         | 21433         | Engineer, electrical/electric traction           |
| 21513         | 21433         | Engineer, power distribution and transmission    |
| 21513         | 21433         | Engineer, transmission/electric power            |
| 21514         | 21434         | Engineer, electrical illumination                |
| 21515         | 21435         | Engineer, electrical/electromechanical equipment |
| 21516         | JPA           | Engineer, electrical J41                         |
| 21519         | 21439         | Other electrical engineer                        |
| 21521         | 21441         | Technologist, engineering/electronics            |
| 21521         | 21441         | Engineer, electronics                            |
| 21522         | 21442         | Engineer, signal/railway                         |
| 21523         | 21443         | Engineer, computer applications                  |
| 21523         | 21443         | Engineer, electronics/information engineering    |
| 21523         | 21443         | Engineer, electronics/computer hardware design   |
| 21523         | 21443         | Engineer, computer                               |
| 21523         | 21443         | Engineer, computer software                      |
| 21523         | 21443         | Engineer, computer hardware                      |
| 21523         | 21443         | Engineer, network                                |
| 21523         | 21443         | Engineer, systems                                |
| 21523         | 21443         | Engineer, computer systems                       |
| 21523         | 21443         | Engineer, management information systems (MIS)   |
| 21523         | 21443         | Engineer, information technology (IT)            |
| 21524         | 21444         | Engineer, audio and video equipment              |
| 21524         | 21444         | Engineer, sound systems                          |
| 21525         | 21445         | Engineer, electronics/semiconductors             |
| 21525         | 21445         | Engineer, semiconductor                          |
| 21526         | 21446         | Engineer, electronics/instrumentation            |
| 21526         | 21446         | Engineer, mechantronics                          |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                     |
|---------------|---------------|---|
| 21527         | JPA           | Engineer, electronics J41                     |
| 21529         | New           | Other electronics engineers                   |
| 21531         | 21442         | Engineer, aerospace (telecommunications)      |
| 21531         | 21442         | Engineer, telecommunications/aerospace        |
| 21531         | 21442         | Engineer, telecommunications/radar            |
| 21531         | 21442         | Engineer, telecommunications/signal systems   |
| 21532         | 21442         | Technologist, engineering, telecommunications |
| 21533         | 21442         | Engineer, telecommunications/microwave        |
| 21533         | 21442         | Engineer, telecommunications/radio            |
| 21533         | 21442         | Engineer, telecommunications/telegraph        |
| 21533         | 21442         | Engineer, telecommunications/telephone        |
| 21533         | 21442         | Engineer, telecommunications/television       |
| 21539         | New           | Other telecommunication engineers             |
| 21611         | JPA           | Architect J41                                 |
| 21612         | 21415         | Architect, interior                           |
| 21613         | 21411         | Architect, building                           |
| 21619         | New           | Other building architects                     |
| 21621         | 21413         | Architect, landscape                          |
| 21622         | JPA           | Architect, landscape J41                      |
| 21629         | New           | Other landscape architect                     |
| 21631         | 39514         | Designer, commercial products                 |
| 21631         | 39514         | Designer, industrial products                 |
| 21632         | 39514         | Designer, fashion                             |
| 21632         | 39514         | Designer, cloth                               |
| 21632         | 39514         | Designer, dress                               |
| 21632         | 39514         | Designer, textile                             |
| 21639         | New           | Other product and garment designers           |
| 21641         | 21412         | Planner, town                                 |
| 21641         | 21412         | Planner, urban and rural                      |
| 21642         | 21414         | Engineer, traffic                             |
| 21642         | 21414         | Planner, traffic                              |
| 21643         | JPA           | Officer, land planning G41                    |
| 21644         | JPA           | Officer, urban and rural planning J41         |
| 21649         | New           | Other town and traffic planners               |
| 21651         | 21482         | Cartographer                                  |
| 21651         | 21485         | Cartographer marine                           |
| 21651         | New           | Map maker                                     |
| 21652         | 21481         | Surveyor                                      |
| 21652         | 21497         | Surveyor, quantity                            |
| 21653         | 21484         | Surveyor, mine                                |
| 21653         | 21483         | Surveyor, soil                                |
| 21653         | 21483         | Surveyor, topographic                         |
| 21654         | JPA           | Cartographer J41                              |
| 21655         | JPA           | Surveyor J41                                  |
| 21656         | JPA           | Surveyor, quantity J41                        |
| 21657         | JPA           | Surveyor, building J41                        |
| 21658         | 21487         | Photogrammetrist                              |
| 21658         | 21487         | Surveyor, photographic                        |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                              |
|---------------|---------------|--|
| 21658         | 21489         | Surveyor, geodesic                     |
| 21658         | 21485         | Surveyor, hydrographic                 |
| 21658         | 21489         | Surveyor, cadastral                    |
| 21658         | 21485         | Surveyor, marine                       |
| 21658         | 21486         | Surveyor, aerial                       |
| 21659         | New           | Other cartographer and surveyors       |
| 21661         | JPA           | Designer B41                           |
| 21662         | 21313         | Designer, web                          |
| 21663         | 21313         | Specialist graphics and sound/computer |
| 21664         | 21311         | Designer, systems/computer             |
| 21665         | 39511         | Designer, graphic                      |
| 21665         | 39511         | Designer, typographical                |
| 21711         | 31411         | Engineer, chief/ship                   |
| 21712         | 31412         | Engineer, ship                         |
| 21712         | New           | Engineer, marine                       |
| 21712         | 21457         | Engineer, mechanical/naval             |
| 21712         | 21457         | Engineer, ship construction            |
| 21713         | 31413         | Marine superintendent, technical       |
| 21714         | New           | Architect, hovercraft                  |
| 21714         | 21457         | Architect, naval                       |
| 21714         | New           | Architect, marine                      |
| 21719         | New           | Other ship's engineers                 |
| 21721         | 31421         | Ship captain/master                    |
| 21722         | 31422         | Pilot, hovercraft                      |
| 21722         | 31422         | Pilot, ship                            |
| 21723         | 31423         | Captain, port                          |
| 21723         | 31423         | Harbour master                         |
| 21724         | 31424         | Ship navigator                         |
| 21724         | 31424         | Officer, ship/deck                     |
| 21725         | 31425         | Ferry captain                          |
| 21726         | 31426         | Marine superintendent (deck)           |
| 21727         | JPA           | Officer, marine A41                    |
| 21729         | New           | Other ship's deck officers and pilot   |
| 21731         | JPA           | Pilot A41                              |
| 21732         | 31434         | Pilot, helicopter                      |
| 21732         | 31431         | Pilot, aircraft/airline                |
| 21733         | 31433         | Navigator, flight                      |
| 21734         | 31436         | Instructor, flight                     |
| 21735         | New           | Astronaut                              |
| 21736         | JPA           | Inspector, aircraft A41                |
| 21737         | 21456         | Engineer, aeronautical                 |
| 21737         | 21456         | Engineer, mechanical/aeronautics       |
| 21737         | 21456         | Engineer, mechanical/aerospace         |
| 21737         | 31432         | Engineer, flight                       |
| 21737         | New           | Engineer, aircraft                     |
| 21737         | 21456         | Designer, aircraft                     |
| 21738         | JPA           | Examiner, pilot A41                    |
| 21741         | 31440         | Controller, air traffic                |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                       |
|---------------|---------------|---|
| 21742         | JPA           | Officer, air traffic control A41                |
| 21743         | 31491         | Officer, air cargo                              |
| 21751         | 31495         | Officer/controller, LRT/ ERL/monorail operation |
| 21752         | 31129         | Permanent-way inspector, railways               |
| 21791         | 31492         | Officer, load sheet                             |
| 21792         | New           | Executive, shipping                             |
| 21799         | New           | Other transport controllers                     |
| 21811         | JPA           | Officer, mining C41                             |
| 21821         | New           | Executive, manufacturing                        |
| 21822         | New           | Executive, quality assurance                    |
| 21822         | New           | Officer/executive, quality control              |
| 21823         | New           | Executive, production                           |
| 21824         | New           | Executive, warehouse                            |
| 21824         | New           | Executive, store                                |
| 21825         | New           | Executive, maintenance                          |
| 21826         | New           | Officer, logs                                   |
| 21826         | New           | Controller, sawmill                             |
| 21826         | New           | Controller, bundling                            |
| 21826         | New           | Assistant superintendent, sawmill               |
| 21826         | New           | Log yard exchange, sawmill                      |
| 21826         | New           | Superintendent, sawmill                         |
| 21827         | New           | Assistant superintendent, boiler                |
| 21827         | New           | Superintendent, boiler                          |
| 21831         | New           | Executive, contract                             |
| 21832         | New           | Executive, project                              |
| 21833         | New           | Executive, property                             |
| 22111         | 22211         | Doctor, medical                                 |
| 22111         | 22211         | Officer, medical                                |
| 22111         | 22211         | Medical practitioner                            |
| 22112         | JPA           | Officer, medical UD41                           |
| 22113         | JPA           | Officer, medical rehabilitation U41             |
| 22119         | New           | Other general medical practitioners             |
| 22121         | 22219         | Specialist ear, nose and throat                 |
| 22121         | 22216         | Specialist, heart                               |
| 22121         | 22215         | Specialist, eye                                 |
| 22122         | 22213         | Anaesthetist                                    |
| 22122         | 22213         | Anaesthetist, cardiac anaesthesia               |
| 22123         | 22219         | Oncologist, medical                             |
| 22123         | 22219         | Oncologist, radiotherapy                        |
| 22124         | 22214         | Psychiatrist                                    |
| 22125         | 22215         | Ophthalmologist                                 |
| 22126         | 22216         | Cardiologist                                    |
| 22127         | 22217         | Gynaecologist                                   |
| 22128         | 22218         | Neurologist                                     |
| 22128         | JPA           | Officer, science C41                            |
| 22129         | 22219         | Doctor medical insurance consultancy            |
| 22129         | 22213         | Doctor medical/anaesthetic                      |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 22129         | 22217         | Doctor medical/gynaecology                            |
| 22129         | 22216         | Doctor medical/cardiology                             |
| 22129         | 22218         | Doctor medical/neurology                              |
| 22129         | 22217         | Doctor medical/obstetrics                             |
| 22129         | 22215         | Doctor medical/ophthalmology                          |
| 22129         | 22214         | Doctor medical/psychiatry                             |
| 22129         | 22219         | Doctor medical/radiology                              |
| 22129         | 22219         | Doctor, skin  |
| 22129         | 22217         | Obstetrician and gynaecologist                        |
| 22129         | 22217         | Obstetrician and gynaecologist, fertility             |
| 22129         | 22217         | Obstetrician and gynaecologist, oncology              |
| 22129         | 22217         | Obstetrician and gynaecologist, fetomaternal medicine |
| 22129         | 22212         | Surgeon   |
| 22129         | 22212         | Surgeon, hepatic                                      |
| 22129         | 22212         | Surgeon, cardiology                                   |
| 22129         | 22212         | Surgeon, cardiothoracic                               |
| 22129         | 22212         | Surgeon, ophthalmology                                |
| 22129         | 22212         | Surgeon, orthopedic                                   |
| 22129         | 22212         | Surgeon, osteopathic                                  |
| 22129         | 22212         | Surgeon, paediatric                                   |
| 22129         | 22212         | Surgeon, transplant                                   |
| 22129         | 22212         | Surgeon, plastic and reconstructive                   |
| 22129         | 22212         | Surgeon, neurosurgery                                 |
| 22129         | 22212         | Surgeon, ear, nose and throat                         |
| 22129         | 22212         | Surgeon, thoracic                                     |
| 22129         | 22212         | Surgeon, traumatology                                 |
| 22129         | 22212         | Surgeon, urology                                      |
| 22129         | 22212         | Surgeon, vascular                                     |
| 22129         | 22219         | Dermatologist   |
| 22129         | 22219         | Orthopaedist  |
| 22129         | 22219         | Osteopath   |
| 22129         | 22219         | Otolaryngologist                                      |
| 22129         | 22219         | Paediatrician   |
| 22129         | 22219         | Paediatrician, gastroenterology                       |
| 22129         | 22219         | Paediatrician, haematology                            |
| 22129         | 22219         | Paediatrician, cardiology                             |
| 22129         | 22219         | Paediatrician, nephrology                             |
| 22129         | 22219         | Paediatrician, neurology                              |
| 22129         | 22219         | Paediatrician, oncology                               |
| 22129         | 22219         | Paediatrician, respiratory                            |
| 22129         | 22211         | Physician   |
| 22129         | 22219         | Physician, dermatology                                |
| 22129         | 22219         | Physician, endocrinology                              |
| 22129         | 22219         | Physician, gastroenterology                           |
| 22129         | 22219         | Physician, haematology                                |
| 22129         | 22216         | Physician, cardiology                                 |
| 22129         | 22219         | Physician, nephrology                                 |
| 22129         | 22218         | Physician, neurology                                  |
| 22129         | 22219         | Physician, internal medicine                          |
| 22129         | 22219         | Physician, family medicine                            |
| 22129         | 22219         | Physician, respiratory medicine                       |
| 22129         | 22219         | Physician, rheumatology                               |
| 22129         | 32264         | Podiatrist  |
| 22129         | New           | Prosthetist   |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 22129         | 22219         | Radiologist   |
| 22129         | 22219         | Radiologist, diagnostic   |
| 22129         | 22219         | Radiologist, interventional   |
| 22129         | 22219         | Radiologist, nuclear medicine   |
| 22129         | 22219         | Radiologist, radiotherapy   |
| 22129         | 22219         | Urologist   |
| 22129         | 22219         | Venereologist   |
| -             | -             | -   |
| 22211         | New           | Nurse, professional   |
| 22221         | New           | Midwife, professional   |
| 22401         | New           | Paramedic, emergency  |
| 22501         | 22231         | Veterinarian  |
| 22501         | 22231         | Veterinarian, epidemiology  |
| 22502         | 22232         | Surgeon, veterinary   |
| 22502         | 22232         | Veterinarian, surgery   |
| 22503         | 22233         | Veterinarian, public health   |
| 22503         | 22233         | Veterinarian, abattoir (government services)                          |
| 22504         | JPA           | Officer, veterinary G41   |
| 22509         | New           | Other veterinarian  |
| 22611         | 22221         | Dentist   |
| 22612         | 22222         | Dentist, pedodontistry  |
| 22612         | 22222         | Pedodontist   |
| 22613         | 22223         | Dentist, orthodontistry   |
| 22613         | 22223         | Orthodontist  |
| 22614         | 22224         | Dentist, prosthodontistry   |
| 22614         | 22224         | Prosthodontistry  |
| 22615         | 22225         | Dentist, periodontistry   |
| 22615         | 22225         | Periodontist  |
| 22616         | 22226         | Dentist, oral surgery   |
| 22616         | 22226         | Surgeon, oral/dentistry   |
| 22617         | JPA           | Officer, dental U41   |
| 22619         | 22229         | Other dentists  |
| 22621         | 22241         | Pharmacist  |
| 22622         | 22242         | Pharmacist, industrial  |
| 22623         | 22243         | Pharmacist, retail  |
| 22624         | 22244         | Pharmacist, hospital  |
| 22625         | JPA           | Officer, pharmacy U41   |
| 22629         | New           | Other pharmacist  |
| 22631         | 31521         | Officer, occupational safety and health                               |
| 22631         | 32221         | Sanitarian  |
| 22632         | JPA           | Officer, environmental U41  |
| 22633         | JPA           | Inspector, factory and machinery J41                                  |
| 22639         | New           | Other environmental and occupational health and hygiene professionals |
| 22641         | 32261         | Physiotherapist   |
| 22642         | New           | Therapist, massage  |
| 22642         | 32261         | Therapist, physical   |
| 22642         | New           | Therapist, muscular   |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                 |
|---------------|---------------|---|
| 22642         | 32265         | Masseur, physiotherapy                    |
| 22642         | 32263         | Masseur, therapeutic                      |
| 22643         | 32265         | Chiropractor                              |
| 22651         | 32231         | Dietician                                 |
| 22651         | 32233         | Dietician, hospital                       |
| 22651         | 32233         | Dietician, public health                  |
| 22651         | 32233         | Dietician, therapeutic                    |
| 22652         | 32232         | Nutritionist                              |
| 22652         | 32232         | Nutritionist, animal                      |
| 22652         | 32234         | Nutritionist, public health               |
| 22652         | 32234         | Nutritionist, research                    |
| 22653         | 32235         | Consultant, dietetic/food processing      |
| 22654         | JPA           | Officer, food technology C41              |
| 22655         | New           | Officer, health                           |
| 22655         | New           | Educator, health                          |
| 22656         | JPA           | Officer, dietetic U41                     |
| 22659         | New           | Other dieticians and nutritionists        |
| 22661         | 32292         | Audiologists                              |
| 22662         | 32293         | Therapist, orientation of the blind       |
| 22662         | 32293         | Therapist, speech                         |
| 22663         | 32299         | Orthoepist                                |
| 22663         | 32299         | Orthophonist                              |
| 22671         | 32242         | Optometrists                              |
| 22672         | 32241         | Optician                                  |
| 22672         | 32241         | Optician, ophthalmic                      |
| 22672         | 32241         | Orthoptist                                |
| 22673         | JPA           | Optometrists U41                          |
| 22681         | 32262         | Therapist, occupational                   |
| 23101         | 23101         | Lecturer, college                         |
| 23101         | 23101         | Lecturer, polytechnic                     |
| 23102         | 23102         | Leader, university                        |
| 23102         | 23102         | Lecturer, university                      |
| 23103         | 23103         | Professor, university/college             |
| 23104         | 23104         | Tutor, university                         |
| 23105         | JPA           | Lecturer, university DS45                 |
| 23106         | JPA           | Lecturer, medical DU45                    |
| 23107         | JPA           | Lecturer, UiTM DM41                       |
| 23108         | JPA           | Assistant lecturer, UiTM DM29             |
| 23109         | JPA           | Lecturer, dental DUG45                    |
| 23201         | 23201         | Teacher, technical                        |
| 23201         | 23203         | Teacher, vocational                       |
| 23202         | 23203         | Teacher, commercial                       |
| 23209         | New           | Other vocational education teacher        |
| 23301         | 23202         | Teacher, secondary education              |
| 23301         | New           | Officer, graduate teacher                 |
| 23302         | 23201         | Teacher, pre-university                   |
| 23303         | JPA           | Officer, education graduate services DG41 |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 23411         | 33100         | Teacher, primary education                                |
| 23412         | JPA           | Officer, non-graduate teacher DGA29                       |
| 23421         | 33200         | Teacher, pre-primary                                      |
| 23421         | 33200         | Teacher, kindergarten                                     |
| 23421         | 33200         | Teacher, nursery  |
| 23511         | New           | Teacher, music  |
| 23521         | 33902         | Teacher, fine arts  |
| 23531         | 33904         | Teacher, modeling   |
| 23601         | 23991         | Teacher for the exceptionally intelligent                 |
| 23601         | New           | Teacher, language   |
| 23602         | 23992         | Teacher, remedial/professional                            |
| 23701         | 33907         | Teacher, Islamic religion                                 |
| 23701         | 33907         | Ustaz/Ustazah   |
| 23709         | New           | Other religion teachers                                   |
| 23801         | JPA           | Officer, vocational training J41                          |
| 23802         | JPA           | Assistant officer, vocational training J29                |
| 23803         | JPA           | Sub assistant, vocational training J17                    |
| 23804         | JPA           | Officer, training E41                                     |
| 23805         | New           | Trainer, skill training                                   |
| 23911         | 23920         | Inspector, school   |
| 23912         | 33903         | Teacher, home economics                                   |
| 23913         | 33905         | Teacher, correspondence                                   |
| 23914         | 33901         | Teacher, adult education                                  |
| 23915         | 23913         | Specialist, teaching aids                                 |
| 23915         | 23913         | Specialist, visual teaching aids                          |
| 23915         | 23913         | Specialist, audio-visual and other teaching aids          |
| 23915         | 23913         | Specialist, audio-visual teaching                         |
| 23921         | 23301         | Teacher, special education/for the deaf                   |
| 23922         | 23302         | Teacher, special education/for the dumb                   |
| 23923         | 23303         | Teacher, special education/for the blind                  |
| 23924         | 23304         | Teacher, special education/for the mentally handicapped   |
| 23925         | 23305         | Teacher, special education/for the physically handicapped |
| 23931         | 23993         | Satellite-instruction facilitator                         |
| 23991         | 23911         | Evaluator and researcher, education systems               |
| 23992         | 23912         | Adviser, education methods                                |
| 23993         | 23914         | Curricula developer                                       |
| 23994         | JPA           | Officer, higher learning education services DH41          |
| 24111         | 24101         | Accountant  |
| 24112         | JPA           | Accountant W41  |
| 24113         | 24103         | Accountant, cost  |
| 24113         | 24102         | Accountant, auditing                                      |
| 24113         | New           | Executive, audit  |



| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                  |
|---------------|---------------|--|
| 24113         | New           | Executive, audit and risk assessment       |
| 24113         | 24102         | Auditor                                    |
| 24114         | 24104         | Accountant, tax                            |
| 24114         | 24104         | Tax consultant                             |
| 24115         | 24105         | Liquidator                                 |
| 24116         | 24101         | Accountant, public                         |
| 24116         | 24101         | Accountant, chartered                      |
| 24116         | New           | Accountant, group                          |
| 24116         | New           | Accountant, management                     |
| 24116         | 24101         | Accountant, municipal                      |
| 24116         | 24101         | Accountant, company                        |
| 24116         | New           | Officer/executive, account                 |
| 24117         | JPA           | Auditor W41                                |
| 24119         | New           | Other accountants                          |
| 24121         | New           | Corporate financial                        |
| 24121         | New           | Adviser, financial and investment          |
| 24121         | New           | Planner, financial                         |
| 24122         | New           | Adviser, E-commerce                        |
| 24131         | 24201         | Financial analyst                          |
| 24132         | New           | Executive, finance                         |
| 24132         | New           | Financial controller                       |
| 24133         | JPA           | Officer, finance W41                       |
| 24139         | New           | Other financial analysts                   |
| 24211         | New           | Analyst, organization and methods          |
| 24211         | New           | Analyst, research and information          |
| 24211         | 21212         | Analyst, operation research                |
| 24211         | 24901         | Analyst, market research/business          |
| 24211         | 24903         | Specialist, sales promotion method         |
| 24211         | 24901         | Specialist, business efficiency            |
| 24211         | New           | Consultant, management                     |
| 24211         | New           | Consultant, business                       |
| 24212         | 24905         | Officer, press                             |
| 24212         | 24905         | Officer, press liaison                     |
| 24213         | JPA           | Officer, information S41                   |
| 24214         | JPA           | Officer, evaluation W41                    |
| 24215         | JPA           | Officer, appraiser W41                     |
| 24216         | JPA           | Officer, research Q41                      |
| 24217         | 24907         | Home economist                             |
| 24217         | 24908         | Officer, tourist                           |
| 24219         | New           | Other management and organization analysts |
| 24221         | 24903         | Media planner                              |
| 24222         | 24908         | Patent agent                               |
| 24223         | New           | Analyst, policy                            |
| 24223         | New           | Officer, intelligence                      |
| 24229         | New           | Other policy administration professional   |
| 24231         | 24301         | Specialist, personnel                      |
| 24231         | 24305         | Officer, personnel safety                  |
| 24231         | 24301         | Officer, personnel                         |
| 24231         | 24301         | Officer/executive, human resource          |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 24232         | 24302         | Analyst, job   |
| 24232         | 24302         | Analyst, occupational  |
| 24232         | 24302         | Job evaluator  |
| 24233         | New           | Counselor  |
| 24233         | 24304         | Student counselor, vocational  |
| 24233         | 24304         | Counselor, vocational guidance   |
| 24233         | 24304         | Counselor, employment  |
| 24233         | New           | Counselor, education   |
| 24233         | New           | Counselor, marriage  |
| 24233         | 24304         | Officer, occupational guidance   |
| 24233         | 24304         | Adviser, career  |
| 24233         | 24304         | Conciliator, labour management relations                               |
| 24234         | 24308         | Consultant, personnel  |
| 24239         | New           | Other personnel and careers professionals                              |
| 24241         | 24307         | Officer, staff training  |
| 24241         | New           | Officer, staff vocational training                                     |
| 24251         | 39224         | Executive, administrative  |
| 24252         | 23994         | Registrar, college or university                                       |
| 24311         | 24903         | Executive account, advertising   |
| 24319         | New           | Other advertising and marketing professional                           |
| 24321         | New           | Executive, corporate affairs   |
| 24321         | 24306         | Officer, industrial relations  |
| 24321         | 24904         | Officer/executive, public relations                                    |
| 24321         | New           | Officer/executive, customer service                                    |
| 24322         | 24904         | Publicity agent  |
| 24323         | New           | Executive, corporate communication                                     |
| 24324         | JPA           | Officer, industrial relations S41                                      |
| 24329         | New           | Other public relation professional                                     |
| 24331         | 34151         | Sales representatives, medical   |
| 24332         | New           | Sales representatives, medical devices                                 |
| 24332         | New           | Sales representatives, hospital hardware                               |
| 24333         | New           | Sales representatives, active implantable devices                      |
| 24334         | New           | Sales representatives, anaesthetic and respiratory devices             |
| 24335         | New           | Sales representatives, dental devices                                  |
| 24336         | New           | Sales representatives, electromechanical medical devices               |
| 24337         | New           | Sales representatives, ophthalmic and optical devices                  |
| 24339         | New           | Other technical and medical sales                                      |
| 24341         | New           | Sales representatives, information and communications technology (ICT) |
| 24342         | New           | Sales representatives, computer  |
| 24411         | JPA           | Superintendent, customs W41  |
| 24412         | JPA           | Superintendent, immigration KP41                                       |
| 24451         | New           | Superintendent, police   |
| 24452         | JPA           | Senior officer, police (inspector) YY41                                |
| 24461         | JPA           | Officer, Kesatria S41  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                       |
|---------------|---------------|---|
| 24462         | 39119         | Officer, civil defence                          |
| 24463         | JPA           | Officer, civil defence KP41                     |
| 24491         | JPA           | Superintendent, fireman KB41                    |
| 24492         | JPA           | Officer, security KP41                          |
| 24493         | JPA           | Superintendent, prison KX41                     |
| 24494         | JPA           | Officer, enforcement N41                        |
| 24495         | JPA           | Inspector, patent Q41                           |
| 24496         | JPA           | Superintendent officer, maritime X13            |
| 24497         | JPA           | Officer, registration KP41                      |
| 25111         | 21314         | Analyst, communications/computer                |
| 25111         | 21317         | Analyst, electronic data processing (PDE)       |
| 25111         | 21312         | Analyst, management information systems (MIS)   |
| 25111         | 21311         | Analyst, systems/computer                       |
| 25111         | New           | Consultant, computer                            |
| 25111         | New           | Consultant, systems                             |
| 25111         | New           | Consultant, information technology              |
| 25112         | New           | Analyst, business (information technology)      |
| 25119         | New           | Other systems analysts                          |
| 25121         | 21316         | Software developer                              |
| 25121         | 21316         | Multi-media software developer                  |
| 25122         | New           | Analyst, programmer                             |
| 25123         | New           | Designer, software                              |
| 25129         | New           | Other software developer                        |
| 25131         | 21313         | Developer, web site/Internet/Intranet           |
| 25132         | New           | Architect, website                              |
| 25133         | New           | Programmer, animation/computer games/multimedia |
| 25139         | New           | Other web and multimedia developer              |
| 25141         | 21321         | Programmer, computer                            |
| 25141         | New           | Programmer, software                            |
| 25141         | 21321         | Programmer, technical                           |
| 25141         | New           | Programmer, information technology              |
| 25142         | 21322         | Programmer, communication                       |
| 25143         | 21323         | Programmer, data-base                           |
| 25144         | 21324         | Programmer, systems                             |
| 25145         | 21325         | Programmer, analyst                             |
| 25145         | 21325         | Programmer, applications                        |
| 25146         | 21326         | Programmer, multimedia                          |
| 25147         | 21391         | Researcher, information technology              |
| 25149         | New           | Other programmers                               |
| 25191         | New           | Analyst, quality assurance                      |
| 25192         | New           | Tester, software                                |
| 25193         | New           | Tester, systems                                 |
| 25211         | New           | Architect, database                             |
| 25211         | 21315         | Analyst, database/computer                      |
| 25211         | 21394         | Administrator, database                         |
| 25211         | 21315         | Designer, database                              |
| 25212         | 21392         | Auditor computer                                |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                       |
|---------------|---------------|---|
| 25213         | 21394         | Administrator, electronic data processing (PDE) |
| 25219         | New           | Other database designers and administrators     |
| 25221         | New           | Executive, network communications               |
| 25221         | New           | Officer, information system                     |
| 25221         | New           | Officer, information technology support         |
| 25221         | New           | Administrator, network                          |
| 25221         | New           | Administrator, systems                          |
| 25221         | New           | Administrator, computer systems                 |
| 25222         | JPA           | Officer, information technology F41             |
| 25231         | New           | Analyst, Network                                |
| 25232         | New           | Administrator/Netapps                           |
| 25233         | New           | Consultant, network services                    |
| 25291         | New           | Security specialist, ICT                        |
| 26111         | 25017         | Barrister                                       |
| 26111         | 25015         | Federal counsel (government service)            |
| 26111         | 25015         | Officer/executive, legal                        |
| 26111         | 25011         | Lawyer  |
| 26111         | 25013         | Attorney general                                |
| 26111         | 25011         | Lawyer, criminal                                |
| 26111         | 25011         | Lawyer, litigation                              |
| 26111         | 25011         | Lawyer, conveyancing                            |
| 26111         | 25011         | Lawyer, civil                                   |
| 26111         | 25016         | Advocate  |
| 26111         | 25014         | Solicitor                                       |
| 26111         | 25015         | Adviser, legal                                  |
| 26111         | 25012         | Prosecutor                                      |
| 26112         | JPA           | Prosecutor L41                                  |
| 26113         | JPA           | Solicitor L41                                   |
| 26114         | JPA           | Adviser, legal L41                              |
| 26115         | JPA           | Legal drafter L41                               |
| 26116         | JPA           | Legal officer, legal aid bureau L41             |
| 26117         | JPA           | Advocate L41                                    |
| 26119         | New           | Other lawyer                                    |
| 26121         | New           | Judge, native court                             |
| 26121         | 25021         | Judge, federal court                            |
| 26121         | 25022         | Judge, sessions court                           |
| 26121         | 25021         | Judge, high court                               |
| 26122         | JPA           | Officer, Syariah LS41                           |
| 26123         | 25023         | Magistrate                                      |
| 26124         | 25024         | President/Chairman industrial court             |
| 26125         | JPA           | Magistrate L41                                  |
| 26126         | JPA           | Officer, Islamic affair S41                     |
| 26129         | New           | Other judges                                    |
| 26191         | 25091         | Notary  |
| 26191         | 25091         | Commissioner for oaths                          |
| 26192         | 25092         | Registrar of court                              |
| 26193         | 25094         | Officer, trust                                  |
| 26193         | 25093         | Public trustee                                  |
| 26194         | JPA           | Officer, anti-drug S41                          |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 26195         | 25095         | Officials assignee (high court)                              |
| 26196         | 25096         | Officer, bankruptcy  |
| 26197         | 25097         | Coroner  |
| 26197         | 25097         | Court receiver and liquidator                                |
| 26198         | 25099         | Handwriting expert   |
| 26198         | 25099         | Drafter, parliamentary                                       |
| 26198         | 25099         | Arbitrator, insurance claims                                 |
| 26198         | 25099         | Appeals referee, social security claims                      |
| 26199         | New           | Other legal professionals not elsewhere classified           |
| 26211         | 29111         | Archivist  |
| 26211         | 29111         | Curator  |
| 26212         | 29112         | Curator, museum  |
| 26213         | 29113         | Curator, art gallery   |
| 26214         | JPA           | Officer, archivist S41                                       |
| 26215         | JPA           | Curator S41  |
| 26221         | New           | Executive, library   |
| 26221         | 29121         | Librarian  |
| 26222         | 29122         | Librarian, children's  |
| 26223         | 29123         | Librarian, audio-visual                                      |
| 26223         | 29123         | Librarian, film  |
| 26224         | 29124         | Bibliographer  |
| 26225         | 29125         | Documentalist  |
| 26225         | 29125         | Cataloguer   |
| 26226         | 29126         | Information scientist, technical information                 |
| 26226         | 29126         | Information scientist, business services                     |
| 26227         | JPA           | Librarian S41  |
| 26229         | New           | Other librarians and related professionals                   |
| 26311         | 29212         | Econometrician   |
| 26311         | 29212         | Economist  |
| 26311         | 29212         | Economist, econometrician                                    |
| 26312         | JPA           | Officer, economy affairs E41                                 |
| 26319         | New           | Other economists   |
| 26321         | 29241         | Social ecologist   |
| 26321         | 29241         | Sociologist  |
| 26321         | 29241         | Sociologist, social pathology                                |
| 26322         | 29242         | Anthropologist   |
| 26323         | 29243         | Archaeologist  |
| 26324         | 29244         | Geographer   |
| 26325         | 29245         | Penologist   |
| 26325         | 29245         | Criminologist  |
| 26326         | 29246         | Ethnologist  |
| 26327         | JPA           | Officer, social research N41                                 |
| 26329         | New           | Other sociologist, anthropologists and related professionals |
| 26331         | 29221         | Philosopher  |
| 26331         | 29221         | Philosopher, political                                       |
| 26332         | 29222         | Historian  |
| 26333         | 29223         | Political scientist  |
| 26339         | New           | Other philosopher, historian and political scientists        |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                      |
|---------------|---------------|--|
| 26341         | 29230         | Psychologists                                  |
| 26342         | JPA           | Psychologists S41                              |
| 26351         | 29250         | Social worker, professional                    |
| 26352         | JPA           | Officer, cultural B41                          |
| 26353         | JPA           | Officer, social development S41                |
| 26354         | JPA           | Officer, youth and sport S41                   |
| 26361         | New           | Officer, religious                             |
| 26362         | 29402         | Mufti  |
| 26363         | 29403         | Imam   |
| 26364         | 29404         | Kadhi  |
| 26365         | 29406         | Priest, church                                 |
| 26366         | 29407         | Priest, temple                                 |
| 26369         | New           | Other religious professional                   |
| 26411         | 29311         | Author   |
| 26411         | 29311         | Biographer                                     |
| 26411         | 29311         | Novelist                                       |
| 26412         | 29312         | Humorist                                       |
| 26412         | 29312         | Playwright                                     |
| 26412         | 29312         | Essayist                                       |
| 26412         | 29312         | Versifier                                      |
| 26412         | 29312         | Critic   |
| 26412         | 29312         | Writer, comedy                                 |
| 26412         | 29312         | Poet   |
| 26413         | 29313         | Copywriter, advertising                        |
| 26414         | 29319         | Lyricist                                       |
| 26414         | 29314         | Writer, fiction                                |
| 26414         | 29314         | Writer, song                                   |
| 26414         | 29314         | Writer, publicity                              |
| 26414         | 29314         | Writer, script                                 |
| 26414         | 29314         | Writer, technical                              |
| 26415         | 29316         | Editor   |
| 26415         | 29316         | Editor, book                                   |
| 26419         | New           | Other author and related writers               |
| 26416         | 29316         | Proofreader                                    |
| 26421         | 29315         | Reporter, news                                 |
| 26421         | 29319         | Columnist                                      |
| 26421         | 29315         | Journalist                                     |
| 26422         | New           | Political editor                               |
| 26422         | 29316         | Editor, radio and television news broadcasting |
| 26423         | JPA           | Journalist S41                                 |
| 26429         | New           | Other journalist                               |
| 26431         | 39401         | Translator                                     |
| 26432         | 39402         | Interpreter                                    |
| 26433         | 39403         | Philologist                                    |
| 26433         | 39403         | Lexicographer                                  |
| 26434         | JPA           | Officer, language planner S41                  |
| 26435         | JPA           | Interpreter L17                                |
| 26436         | JPA           | Simultaneous linguist N41                      |
| 26437         | JPA           | Assistant officer, language planner S27        |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 26511         | 29321         | Sculptor  |
| 26512         | 29323         | Cartoonist  |
| 26513         | 29323         | Animator  |
| 26514         | 29324         | Restorer painting   |
| 26514         | 29324         | Engraver-etcher, artistic                                     |
| 26515         | 29322         | Artist  |
| 26515         | 29328         | Artist, computer/visualizer                                   |
| 26515         | 29327         | Artist, landscape   |
| 26515         | 29326         | Artist, painting  |
| 26516         | 39516         | Artist, tattoo  |
| 26516         | 39516         | Tattooist   |
| 26519         | New           | Other visual artists  |
| 26522         | 39532         | Musician  |
| 26521         | 29331         | Instrumentalist   |
| 26522         | New           | Adiguru - ancient Malay dance-theatre                         |
| 26522         | New           | Adiguru - shadow puppet theatre                               |
| 26521         | 29338         | Musicologist  |
| 26522         | 29333         | Orchestrator  |
| 26522         | 39531         | Band leader   |
| 26522         | 29337         | Director, music   |
| 26522         | 29332         | Composer, music   |
| 26522         | 29333         | Arranger, music   |
| 26523         | 29335         | Conductor, vocal group  |
| 26523         | 29334         | Conductor, orchestra  |
| 26523         | 29334         | Conductor, band   |
| 26524         | 29336         | Singer/vocalist   |
| 26525         | JPA           | Musician B41  |
| 26529         | New           | Other musician, singers and composers                         |
| 26531         | 29342         | Dancer  |
| 26531         | 39532         | Dancer, night club  |
| 26532         | 29341         | Choreographer   |
| 26533         | 29343         | Director, dance   |
| 26534         | 29344         | Arranger, dance   |
| 26539         | New           | Other dancers and choreographers                              |
| 26541         | 29355         | Director, motion picture                                      |
| 26541         | 29354         | Director, photography (motion picture)                        |
| 26541         | 29356         | Director, stage   |
| 26541         | 29353         | Director, radio and television broadcasting                   |
| 26541         | 29353         | Director, radio and television                                |
| 26541         | 29352         | Director, theatrical  |
| 26541         | 12292         | Producer, motion picture                                      |
| 26542         | 29316         | Editor, press   |
| 26542         | 29357         | Editor, film and video  |
| 26543         | 12292         | Producer, stage   |
| 26543         | 12292         | Producer, theatre   |
| 26543         | 12292         | Producer, television  |
| 26544         | JPA           | Officer, publication N41                                      |
| 26545         | JPA           | Officer, film laboratory C41                                  |
| 26546         | JPA           | Producer B41  |
| 26549         | New           | Other film, stage and related producers, directors and actors |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 26551         | 29351         | Actor  |
| 26551         | 29359         | Impersonator   |
| 26552         | 29359         | Story teller   |
| 26552         | 29359         | Story teller, radio or television                        |
| 26553         | JPA           | Artist, cultural B27                                     |
| 26559         | New           | Other actor  |
| 26561         | 39525         | Deejay   |
| 26561         | 39521         | Announcers, radio and television                         |
| 26561         | 39522         | Master of ceremonies                                     |
| 26561         | 39522         | Compere  |
| 26562         | 39524         | Newscaster/commentator                                   |
| 26562         | 39522         | Prompter   |
| 26562         | 39524         | Interviewer, media                                       |
| 26563         | 39526         | Presentation support assistant                           |
| 26563         | 39527         | Programme preparer                                       |
| 26569         | New           | Other announcers on radio, television and other media    |
| 26571         | 39541         | Acrobat  |
| 26572         | 39542         | Contortionist  |
| 26573         | 39543         | Magician   |
| 26574         | 39544         | Clown  |
| 26574         | 39544         | Mimic  |
| 26574         | 39544         | Ventriloquist  |
| 26575         | 39548         | Aerialist/trapeze performer                              |
| 26575         | 39547         | Snake charmer  |
| 26575         | 39546         | Circus performer, animal                                 |
| 26575         | 39545         | Juggler  |
| 26579         | New           | Other creative or performing artists                     |
| 26581         | 39552         | Performer/trainer in zoological, bird and aquatic parks  |
| 26582         | 39553         | Performer/trainer in crocodile farm                      |
| 26583         | 39559         | Trainer, dog   |
| 26584         | 39559         | Trainer, horse   |
| 26589         | 39559         | Other animal keepers and trainers                        |
| 26591         | New           | Creative and performing artists not elsewhere classified |
| 27111         | New           | Food and beverage administrative captain                 |
| 27111         | New           | Food and beverage officer/executive                      |
| 27111         | New           | Food and beverage administrator                          |
| 27112         | New           | Food and beverage guest services executive               |
| 27112         | New           | Food and beverage captain                                |
| 27112         | New           | Food and beverage coordinator                            |
| 27113         | New           | Food and beverage personnel                              |
| 27114         | New           | Officer, guest service                                   |
| 27115         | New           | Executive, hotel operations                              |
| 27116         | New           | Officer, food preparer C41                               |
| 27121         | New           | Kitchen administrator                                    |
| 31111         | 31113         | Technician, physics                                      |
| 31111         | 31113         | Technician, geophysics                                   |



| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 31111         | 31112         | Technician, chemistry  |
| 31111         | 31112         | Technician, laboratory (science physics)                         |
| 31111         | 31113         | Technician, science physics                                      |
| 31111         | 31113         | Laboratory assistant, physics                                    |
| 31111         | 31113         | Laboratory assistant, chemistry                                  |
| 31111         | 31111         | Laboratory assistant, science physics                            |
| 31112         | JPA           | Assistant officer, meteorology C27                               |
| 31113         | JPA           | Sub assistant, meteorology C17                                   |
| 31114         | 31114         | Technician, soil   |
| 31114         | 31114         | Laboratory assistant, soil                                       |
| 31115         | 31115         | Technician, meteorological                                       |
| 31115         | 31115         | Assistant, meteorological  |
| 31116         | 31116         | Technician, geological   |
| 31116         | 31116         | Laboratory assistant, geological                                 |
| 31117         | 31117         | Conductor, laboratory research estate/plantation                 |
| 31118         | JPA           | Sub assistant, laboratory C17                                    |
| 31119         | New           | Other chemical and physical science technicians                  |
| 31119         | 31119         | Technician, astronomy  |
| 31119         | 31119         | Technician, oceanography   |
| 31121         | New           | Technician, industrial instrument                                |
| 31121         | 31121         | Technician, engineering/civil                                    |
| 31121         | 31121         | Engineering assistant, civil                                     |
| 31121         | 31124         | Estimator, engineering/civil                                     |
| 31121         | 31122         | Clerk-of-work  |
| 31122         | JPA           | Sub technical assistant, architecture J29                        |
| 31123         | JPA           | Sub technical assistant, civil J29                               |
| 31124         | JPA           | Technician, civil J17  |
| 31125         | JPA           | Technician, architecture J17                                     |
| 31131         | 31131         | Technician, engineering/electrical                               |
| 31131         | New           | Technician, wire cutting   |
| 31131         | 31131         | Engineering assistant, electrical                                |
| 31131         | 31131         | Technical assistant, electrical                                  |
| 31131         | New           | Supervisor, electrical   |
| 31131         | New           | Supervisor, electrical and instrument                            |
| 31132         | 31132         | Technician, engineering/electrical (high voltage)                |
| 31132         | 31132         | Engineering assistant, electrical (high voltage system)          |
| 31133         | 31133         | Technician, engineering/electrical (electric power transmission) |
| 31134         | 31134         | Estimator, engineering/electrical                                |
| 31135         | JPA           | Sub technical assistant, electrical J29                          |
| 31136         | JPA           | Technician, electrical J17                                       |
| 31139         | New           | Other electrical engineering technicians                         |
| 31141         | 31141         | Technician, engineering/electronics                              |
| 31141         | 31141         | Engineering assistant, electronics                               |
| 31142         | 31146         | Estimator, engineering/electronics                               |
| 31143         | JPA           | Sub technical assistant, electronics J29                         |
| 31144         | JPA           | Technician, electronics J17                                      |
| 31149         | New           | Other electronics engineering technicians                        |
| 31151         | 31154         | Technician, engineering/aerospace (mechanical)                   |
| 31151         | 31154         | Technician, engineering/aeronautical (mechanical)                |
| 31151         | 31153         | Technician, engineering/automobile                               |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 31151         | 31151         | Technician, engineering/mechanical   |
| 31151         | 31151         | Technician, engineering/mechanical (industrial machinery and tools)                    |
| 31151         | 31152         | Technician, engineering/mechanical (motors and engines)                                |
| 31151         | 31151         | Technician, engineering/mechanical (lubrication)                                       |
| 31151         | 31151         | Technician, engineering/mechanical (instruments)                                       |
| 31151         | 31151         | Technician, engineering/mechanical (agriculture)                                       |
| 31151         | 31155         | Technician, engineering/refrigeration and air-conditioning system and equipment        |
| 31151         | New           | Technician, rotary   |
| 31151         | 31154         | Engineering assistant, aeronautical (mechanical) and equipment                         |
| 31151         | 31153         | Engineering assistant, automobile  |
| 31151         | 31151         | Engineering assistant, mechanical  |
| 31151         | 31152         | Engineering assistant, mechanical, motors and engines (except marine and aeronautical) |
| 31151         | 31157         | Estimator, engineering/mechanical  |
| 31152         | JPA           | Sub technical assistant, mechanical J29  |
| 31153         | JPA           | Technician, mechanical J17   |
| 31154         | 31156         | Dockmaster, dry dock   |
| 31154         | 31156         | Dockmaster, graving dock   |
| 31155         | 31156         | Technician, engineering/marine   |
| 31155         | New           | Engineering assistant, marine  |
| 31156         | 31156         | Technician, engineering/mechanical (ship construction)                                 |
| 31157         | JPA           | Sub technical assistant, aircraft A29  |
| 31158         | New           | Technician, hydraulic hose   |
| 31158         | 31158         | Technician, test   |
| 31159         | New           | Other mechanical engineering technicians   |
| 31161         | 31161         | Technician, engineering/chemical   |
| 31161         | 31161         | Technician, engineering/process  |
| 31161         | 31161         | Engineering assistant, chemical  |
| 31162         | 31162         | Technologist, oil  |
| 31162         | 31162         | Technician, engineering/chemical (petroleum)   |
| 31162         | 31162         | Technician, engineering/petroleum  |
| 31162         | 31162         | Technician, petroleum refining   |
| 31162         | 31162         | Engineering assistant, chemical (petroleum)  |
| 31162         | 31162         | Laboratory assistant, petroleum refining   |
| 31163         | 31163         | Core analyst (petroleum and natural gas)   |
| 31164         | 31164         | Estimator, engineering/chemical  |
| 31165         | JPA           | Assistant officer, geochemist C27  |
| 31169         | New           | Other chemical engineering technicians   |
| 31171         | 31171         | Technician, metallurgy   |
| 31171         | 31171         | Technician, metallurgy/extractive  |
| 31171         | 31171         | Metallurgy assistant, extractive   |
| 31171         | 31171         | Laboratory assistant, metallurgy   |
| 31172         | 31172         | Technician, metallurgy/assaying  |
| 31172         | 31172         | Technician, metallurgy/physics   |
| 31172         | 31172         | Technician, metallurgy/foundry   |
| 31172         | 31172         | Technician, metallurgy/radioactive minerals  |
| 31172         | 31172         | Metallurgy assistant, physics  |
| 31173         | 31173         | Technician, engineering/mining   |
| 31173         | 31173         | Mining assistant, general  |
| 31174         | 31174         | Technician, shoot, oil and gas wells   |
| 31174         | 31174         | Technician, petroleum and natural gas extraction                                       |
| 31174         | 31174         | Assistant, petroleum and natural gas extraction  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 31174         | 31174         | Acidiser, oil and gas well                                  |
| 31174         | 31174         | Treater, well acidising                                     |
| 31175         | JPA           | Assistant officer, mining C27                               |
| 31176         | JPA           | Sub assistant, mining C17                                   |
| 31179         | New           | Other mining and metallurgical technicians                  |
| 31181         | 31181         | Technician, draughting                                      |
| 31181         | 31181         | Draughtsperson  |
| 31181         | 31189         | Draughtsperson, die   |
| 31181         | 31188         | Draughtsperson, geological                                  |
| 31181         | 31189         | Draughtsperson, illustration technique                      |
| 31181         | 31189         | Draughtsperson, jig & tool                                  |
| 31181         | 31187         | Draughtsperson, cartographical                              |
| 31181         | 31189         | Draughtsperson, engineering/aeronautical                    |
| 31181         | 31182         | Draughtsperson, engineering/civil                           |
| 31181         | 31185         | Draughtsperson, engineering/electrical                      |
| 31181         | 31185         | Draughtsperson, engineering/electronics                     |
| 31181         | 31184         | Draughtsperson, engineering/marine                          |
| 31181         | 31186         | Draughtsperson, engineering/mechanical                      |
| 31181         | 31189         | Draughtsperson, engineering/heating and ventilation systems |
| 31181         | 31189         | Draughtsperson, lithographic                                |
| 31181         | 31188         | Draughtsperson, mining                                      |
| 31181         | 31183         | Draughtsperson, architectural                               |
| 31181         | 31183         | Draughtsperson, structural                                  |
| 31181         | 31181         | Draughtsperson, technical                                   |
| 31181         | 31187         | Draughtsperson, topographical                               |
| 31181         | 31181         | Tracer  |
| 31182         | JPA           | Draughtsperson J17  |
| 31183         | JPA           | Technician, landscape J17                                   |
| 31184         | JPA           | Assistant architect, landscape J29                          |
| 31185         | JPA           | Assistant officer, architecture J29                         |
| 31186         | JPA           | Assistant officer, land planning G27                        |
| 31187         | JPA           | Assistant officer, urban and rural planning J29             |
| 31188         | JPA           | Technician, urban and rural planning J17                    |
| 31189         | 31189         | Illustrator, engineering                                    |
| 31189         | 31189         | Illustrator, technical                                      |
| 31191         | 31192         | Technician, automation/robot                                |
| 31191         | 31191         | Technician, CAD/CAM   |
| 31191         | 31194         | Technician, quantity surveyor                               |
| 31191         | 31195         | Technician, engineering/methods                             |
| 31191         | 31195         | Technician, engineering/work study                          |
| 31191         | 31195         | Technician, engineering/time and motion study               |
| 31191         | 31195         | Technician, engineering/industrial efficiency               |
| 31191         | 31197         | Technician, engineering/safety                              |
| 31191         | 31196         | Technician, engineering/value                               |
| 31191         | 31195         | Technician, engineering/production                          |
| 31191         | 31195         | Technician, engineering/planning                            |
| 31191         | 31195         | Technician, engineering/systems (except computers)          |
| 31191         | 31195         | Technician, engineering/industrial layout                   |
| 31191         | 31193         | Technician, mechatronics                                    |
| 31191         | 31195         | Engineering assistant, time and motion study                |
| 31191         | 31195         | Engineering assistant, production                           |
| 31191         | 31123         | Technical assistant, surveyor                               |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 31191         | 31123         | Assistant, surveyor   |
| 31191         | 31198         | Designer, engineering   |
| 31191         | New           | Assistant surveyor, building  |
| 31192         | JPA           | Assistant surveyor, quantity J29  |
| 31193         | JPA           | Sub technical assistant surveyor, quantity J29                              |
| 31194         | JPA           | Sub assistant, geology C17  |
| 31195         | JPA           | Sub technical assistant, surveyor J29                                       |
| 31196         | JPA           | Sub technical assistant surveyor, building J29                              |
| 31197         | JPA           | Technician, quantity surveyor J17   |
| 31198         | JPA           | Technician, surveyor J17  |
| 31199         | New           | Other physical and engineering science technicians not elsewhere classified |
| 31211         | New           | Supervisor, mining  |
| 31221         | New           | Supervisor, compounding   |
| 31222         | New           | Technician, cutting   |
| 31222         | New           | Supervisor, finished goods  |
| 31222         | New           | Supervisor, finishing   |
| 31222         | New           | Supervisor, packaging   |
| 31222         | New           | Supervisor, cutter  |
| 31223         | New           | Technician, maintenance   |
| 31223         | New           | Supervisor, maintenance   |
| 31224         | New           | Technician, warehouse   |
| 31224         | New           | Technician, material store  |
| 31224         | New           | Supervisor, manufacturing   |
| 31224         | New           | Supervisor, production  |
| 31224         | New           | Supervisor, store   |
| 31224         | New           | Supervisor, shift   |
| 31225         | New           | Technician, log yard  |
| 31225         | New           | Supervisor, sawmill   |
| 31225         | New           | Supervisor, plywood inspection  |
| 31225         | New           | Supervisor, sawyer  |
| 31226         | New           | Supervisor, chief hookman   |
| 31227         | New           | Supervisor, boiler  |
| 31228         | New           | Technician, quality control   |
| 31228         | New           | Supervisor, quality control   |
| 31231         | New           | Supervisor, operation   |
| 31231         | New           | Supervisor, project   |
| 31232         | New           | Supervisor, construction  |
| 31232         | New           | Supervisor, site  |
| 31291         | New           | Supervisor, environmental   |
| 31292         | New           | Supervisor, facilities  |
| 31293         | New           | Supervisor, general   |
| 31294         | New           | Supervisor, logistic  |
| 31311         | 81610         | Load dispatcher, electric power   |
| 31312         | 81610         | Operator, electrical switchboard  |
| 31313         | 81610         | Operator, hydroelectric station   |
| 31314         | 81610         | Operator, power generating plant  |
| 31315         | 81610         | Operator, turbine   |
| 31321         | 81691         | Operator, stationary engine   |
| 31322         | 81692         | Operator, compressor  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 31322         | 81692         | Operator, compressor/gas  |
| 31323         | 81693         | Operator, incinerator plant   |
| 31324         | 81694         | Operator, pumping station   |
| 31325         | 81695         | Operator, heating and ventilation equipment                                       |
| 31326         | 81696         | Operator, refrigeration system  |
| 31327         | JPA           | Operator, plant R3  |
| 31328         | 81698         | Operator, sewage plant  |
| 31328         | 81697         | Operator, water treatment plant   |
| 31329         | 81699         | Incinerator, water treatment and related plant operators not elsewhere classified |
| 31329         | 81699         | Machine operator, ice production  |
| 31329         | 81699         | Operator, hopper  |
| 31331         | New           | Supervisor, plant   |
| 31341         | 81551         | Pumpman (petroleum refining)  |
| 31342         | 81552         | Stillman (petroleum refining)   |
| 31343         | 81553         | Controlman (petroleum refining)   |
| 31344         | 81554         | Desulphuriser operator, petroleum refining  |
| 31344         | 81554         | Operator, acetylene plant   |
| 31344         | 81554         | Operator, gas plant   |
| 31344         | 81554         | Operator, chlorine plant  |
| 31344         | 81554         | Operator, oxygen plant  |
| 31345         | 81555         | Operator, paraffin plant  |
| 31346         | 81556         | Blender (petroleum refining)  |
| 31347         | 81557         | Operator, treater/petroleum and natural gas refining                              |
| 31348         | 81558         | Operator, pumping-station/petroleum and natural gas                               |
| 31349         | 81591         | Other petroleum and natural gas refining plant operators                          |
| 31349         | 81591         | Operator, liquefaction plant/gases  |
| 31349         | 81591         | Cylinder filler & tester (compressed & liquefied gases)                           |
| 31351         | 81228         | Manipulator, rolling-mill, metal  |
| 31351         | 81228         | Guide setter  |
| 31391         | JPA           | Assistant officer, food technology C27  |
| 31392         | JPA           | Assistant officer, food preparer C27  |
| 31393         | New           | Technician, food processing   |
| 31411         | 32111         | Technician, biological  |
| 31412         | 32112         | Technician, entomological   |
| 31412         | 32112         | Assistant, entomological  |
| 31413         | 32113         | Technician, botanical   |
| 31413         | 32113         | Laboratory assistant, research/botanical  |
| 31414         | 32114         | Technician, artificial breeding   |
| 31414         | 32114         | Laboratory assistant, research, artificial breeding                               |
| 31415         | 32115         | Technician, zoological  |
| 31415         | 32115         | Laboratory assistant, research/zoological   |
| 31416         | 32116         | Taxidermist   |
| 31417         | JPA           | Assistant officer, wild life G27  |
| 31421         | 32121         | Technician, agronomy  |
| 31422         | 32121         | Technician, crop research   |
| 31423         | 32123         | Technician, soil science  |
| 31424         | 32124         | Technician, floriculture  |
| 31424         | 32124         | Technician, horticulture  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 31424         | 32124         | Technician, olericulture                         |
| 31424         | 32124         | Technician, pomology                             |
| 31424         | New           | Technician, plant nursery                        |
| 31424         | New           | Superintendent/ground master                     |
| 31424         | New           | Technical, turf/golf                             |
| 31425         | 35011         | Conductor, field and factory/rubber plantation   |
| 31425         | 35012         | Conductor, field and factory/oil palm plantation |
| 31426         | JPA           | Assistant officer, agricultural G27              |
| 31431         | 32122         | Technician, arboriculture                        |
| 31431         | 32122         | Technician, forestry                             |
| 31431         | 32122         | Technician, silviculture                         |
| 31432         | JPA           | Assistant conservation, forestry G27             |
| 31441         | JPA           | Assistant officer, fishery G27                   |
| 31442         | New           | Technician, hatchery/prawn                       |
| 31442         | New           | Supervisor, hatchery/prawn                       |
| 31511         | 31493         | Technician, air traffic safety                   |
| 31512         | JPA           | Assistant officer, air traffic control A29       |
| 31521         | 31427         | Berthing master                                  |
| 31522         | 31428         | Skipper, yacht                                   |
| 31523         | 31453         | Traffic supervisor (ships cargo)                 |
| 31524         | JPA           | Assistant officer, marine A29                    |
| 31525         | New           | Technician, engine (boat)                        |
| 31531         | New           | Supervisor, railway services                     |
| 31532         | New           | Supervisor, LRT railway                          |
| 31533         | New           | Inspector, railway                               |
| 31591         | 31451         | Station master                                   |
| 31592         | 31452         | Supervisor, road transport service               |
| 31599         | 31452         | Other transport technicians                      |
| 31601         | JPA           | Assistant officer, science C27                   |
| 32111         | JPA           | Technician, x-ray U29                            |
| 32121         | 32111         | Technician, anatomy                              |
| 32121         | 32111         | Technician, bacteriology                         |
| 32121         | 32111         | Technician, blood-bank                           |
| 32121         | 32111         | Technician, biophysics                           |
| 32121         | 32111         | Technician, biochemistry                         |
| 32121         | 32111         | Technician, ecology                              |
| 32121         | 32111         | Technician, pharmacology                         |
| 32121         | 32111         | Technician, genetics                             |
| 32121         | 32111         | Technician, haematology                          |
| 32121         | 32111         | Technician, histology                            |
| 32121         | 32111         | Technician, cytology                             |
| 32122         | 32111         | Technician, physiology                           |
| 32122         | 32111         | Technician, pathology                            |
| 32122         | 32111         | Technician, medical science                      |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 32122         | 32111         | Technician, serology                                    |
| 32122         | 32111         | Technician, tissue                                      |
| 32123         | 32112         | Assistant, parasitological                              |
| 32124         | JPA           | Technologist, medical laboratoryU29                     |
| 32125         | JPA           | Technician, medical U19                                 |
| 32126         | JPA           | Assistant officer, medical U29                          |
| 32129         | 32112         | Other life science technicians                          |
| 32131         | 32280         | Assistant, pharmaceutical                               |
| 32132         | 32280         | Laboratory assistant, pharmaceutical                    |
| 32133         | JPA           | Sub assistant, pharmacist U29                           |
| 32141         | JPA           | Technologist, dental U29                                |
| 32151         | 32266         | Osteopath, lay  |
| 32152         | 32291         | Technician, orthopedic                                  |
| 32152         | 32291         | Technician, prosthetic                                  |
| 32211         | 32311         | Nurse instructor  |
| 32211         | 32311         | Nurse   |
| 32211         | 32311         | Sister  |
| 32211         | 32311         | Nurse, public health (medical)                          |
| 32211         | 32311         | Matron, medical   |
| 32211         | 32311         | Nurse tutor   |
| 32212         | 32312         | Nurse, operation theatre                                |
| 32212         | 32312         | Nurse, specialized                                      |
| 32212         | 32312         | Nurse, orthopedic                                       |
| 32212         | 32312         | Nurse, paediatric                                       |
| 32212         | 32312         | Nurse, psychiatric                                      |
| 32213         | 32313         | Nurse, occupational health                              |
| 32213         | 32313         | Nurse, industrial                                       |
| 32213         | New           | Factory medic   |
| 32214         | JPA           | Nurse U29   |
| 32219         | 32313         | Other nursing associate professionals (except dental)   |
| 32221         | 32320         | Midwife   |
| 32222         | JPA           | Nurse, community U19                                    |
| 32301         | 32411         | Practitioner, Malay traditional medicine                |
| 32302         | 32416         | Dispenser, Chinese traditional medicine                 |
| 32302         | 32412         | Practitioner, Chinese traditional medicine              |
| 32303         | 32413         | Practitioner, Indian traditional medicine (ayurvedic)   |
| 32304         | 32414         | Practitioner, Indian traditional medicine (homeopathic) |
| 32305         | 32415         | Acupuncturist   |
| 32306         | 32294         | Homeopath   |
| 32307         | New           | Village healer  |
| 32307         | 32295         | Naturopath  |
| 32308         | 32420         | Faith healers   |
| 32309         | 32420         | Other traditional medicine practitioner                 |
| 32401         | 32271         | Assistant, veterinary                                   |
| 32402         | 32272         | Assistant, veterinary/artificial insemination           |
| 32403         | 32273         | Vaccinator, veterinary                                  |
| 32404         | JPA           | Assistant officer, veterinary G27                       |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 32405         | JPA           | Sub assistant, veterinary G17                           |
| 32511         | 32251         | Nurse, public health/dental                             |
| 32511         | 32251         | Nurse, dental   |
| 32511         | 32251         | Nurse, school/dental                                    |
| 32512         | 32252         | Assistant, dental                                       |
| 32513         | JPA           | Nurse, dental U29                                       |
| 32521         | New           | Technician, medical record                              |
| 32531         | New           | Feldchers   |
| 32531         | 32210         | Laboratory assistant, medical                           |
| 32531         | 32210         | Assistant, hospital                                     |
| 32531         | 32210         | Assistant, medical                                      |
| 32532         | New           | Assistant, clinic                                       |
| 32532         | New           | Instructor, clinical                                    |
| 32533         | JPA           | Sub assistant, medical U29                              |
| 32541         | 32241         | Optician, contact-lens dispensing                       |
| 32551         | New           | Electrotherapist  |
| 32552         | JPA           | Physiotherapist U29                                     |
| 32559         | New           | Other physiotherapy technician and assistants           |
| 32561         | New           | Operator, radiograph equipment                          |
| 32561         | 31392         | Operator, radiograph equipment, medical, general        |
| 32561         | 31391         | Operator, medical x-ray equipment                       |
| 32562         | 31392         | Operator, electrocardiograph equipment                  |
| 32563         | 31393         | Operator, electroencephalograph equipment               |
| 32563         | 31393         | Operator, scanning equipment                            |
| 32564         | 31394         | Operator, sonographic                                   |
| 32565         | New           | Operator, ultrasonographic                              |
| 32569         | New           | Other medical assistant                                 |
| 32571         | 31521         | Inspector, occupational health and safety               |
| 32571         | 31524         | Inspector, quality product                              |
| 32571         | New           | Technician, health and safety                           |
| 32572         | JPA           | Assistant officer, environmental health U29             |
| 32573         | 32222         | Inspector, safety and health/pollution                  |
| 32573         | 31526         | Inspector, safety and health/consumer protection        |
| 32573         | 31525         | Inspector, public health                                |
| 32573         | New           | Inspector, sanitary                                     |
| 32574         | JPA           | Assistant officer, environmental control C27            |
| 32575         | 31523         | Inspector, safety/vehicles                              |
| 32576         | JPA           | Assistant inspector, factory & machinery J29            |
| 32577         | JPA           | Examiner, motor/vehicles A17                            |
| 32581         | New           | Ambulance worker  |
| 32591         | New           | Health associate professionals not elsewhere classified |
| 33111         | 34121         | Broker, securities                                      |
| 33112         | 34122         | Broker, stock and shares                                |
| 33113         | 34123         | Broker, foreign exchange                                |



| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 33114         | 34124         | Jobber/stock broker  |
| 33115         | 34125         | Broker, investment   |
| 33119         | 34125         | Other securities and finance dealers and brokers                   |
| 33121         | New           | Officer, mortgage  |
| 33121         | New           | Officer, loan  |
| 33121         | New           | Officer/executive, credit control                                  |
| 33121         | New           | Supervisor, credit   |
| 33122         | New           | Executive, claims  |
| 33122         | New           | Officer, general ledger  |
| 33122         | New           | Officer/executive, costing   |
| 33122         | New           | Cost controller  |
| 33131         | New           | Assistant, financial   |
| 33131         | 34110         | Assistant officer, account   |
| 33132         | JPA           | Assistant, auditor W27   |
| 33133         | New           | Supervisor, financial  |
| 33134         | JPA           | Assistant, accountant W27  |
| 33141         | JPA           | Assistant officer, statistical E27                                 |
| 33142         | 39212         | Assistant, mathematical  |
| 33143         | 39213         | Assistant, actuarial   |
| 33144         | 39214         | Assistant, research  |
| 33149         | New           | Other statistical, mathematical and actual associate professionals |
| 33151         | 34171         | Auctioneer   |
| 33151         | 34172         | Appraiser  |
| 33152         | JPA           | Assistant officer, appraiser W27                                   |
| 33153         | 34172         | Valuer   |
| 33153         | New           | Revenue Assessor   |
| 33154         | JPA           | Assistant officer, evaluation W27                                  |
| 33155         | 34172         | Inspector, claims  |
| 33155         | 34172         | Assessor, claims   |
| 33156         | 34173         | Adjuster, insurance  |
| 33157         | 34174         | Assessor, insurance  |
| 33158         | JPA           | Assistant officer, research Q27                                    |
| 33159         | New           | Other appraisers and valuers                                       |
| 33211         | 34131         | Agent, insurance   |
| 33212         | 34132         | Broker, insurance  |
| 33213         | 34133         | Underwriter, insurance   |
| 33221         | New           | Dealer   |
| 33221         | New           | Retailer   |
| 33222         | 34154         | Adviser, after sales service                                       |
| 33223         | 34155         | Canvasser  |
| 33224         | 34156         | Representative, sales  |
| 33225         | 34156         | Salesperson, traveling   |
| 33225         | 34152         | Salesperson, technical   |
| 33225         | 34152         | Agent, sales/engineering   |
| 33225         | 34152         | Agent, sales/technical   |
| 33225         | 34153         | Adviser, technical   |
| 33225         | 34152         | Representatives, technical sales                                   |
| 33226         | 34201         | Salesperson, business services/advertising                         |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 33227         | New           | Executive, export                                      |
| 33227         | New           | Executive, sales                                       |
| 33227         | New           | Executive, marketing                                   |
| 33227         | New           | Executive, business development                        |
| 33227         | New           | Executive, sales administrative                        |
| 33227         | New           | Executive, product/brand                               |
| 33227         | New           | Analyst/executive, marketing research                  |
| 33227         | New           | Sales engineer   |
| 33227         | New           | Engineer, application (sales)                          |
| 33227         | New           | Field consultant                                       |
| 33227         | New           | Pre-sales support                                      |
| 33227         | New           | Area support engineer (sales)                          |
| 33227         | 34201         | Representative, business services (except advertising) |
| 33228         | New           | Salesperson, car                                       |
| 33228         | New           | Salesperson, motor vehicle                             |
| 33228         | New           | Salesperson, motorcycle                                |
| 33229         | New           | Officer commercial, railway                            |
| 33229         | New           | Other commercial sales representative                  |
| 33231         | New           | Executive, planning and distribution                   |
| 33231         | New           | Officer/executive, purchasing                          |
| 33231         | 34161         | Buyer  |
| 33231         | New           | Buyer, purchasing                                      |
| 33231         | New           | Buyer, production purchasing                           |
| 33232         | 34162         | Agent, procurement                                     |
| 33239         | New           | Other buyers and purchasing officers                   |
| 33241         | 34202         | Broker, commodity                                      |
| 33311         | 34203         | Agent, clearing and forwarding                         |
| 33312         | 34203         | Agent, shipping  |
| 33321         | 34191         | Consultant, exhibition and convention                  |
| 33322         | 34192         | Organizer, exhibition and convention                   |
| 33323         | 34192         | Consultant, travel                                     |
| 33324         | 34192         | Organizer, travel                                      |
| 33331         | 34204         | Agent, employment                                      |
| 33332         | 34204         | Officer, job placement                                 |
| 33341         | 34141         | Agent, real estate                                     |
| 33341         | New           | Planner, estate  |
| 33342         | 34142         | Agent, property  |
| 33343         | 34143         | Realtor (property)                                     |
| 33344         | 34144         | Negotiator (property)                                  |
| 33391         | 34205         | Agent, literary  |
| 33392         | 34205         | Agent, musical performance                             |
| 33393         | 34205         | Agent, sports  |
| 33394         | 34205         | Agent, theatrical                                      |
| 33395         | 34205         | Promoter, sports                                       |
| 33399         | New           | Other business services agents                         |
| 33411         | New           | Supervisor, account                                    |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 33411         | New           | Supervisor, data entry                             |
| 33411         | New           | Supervisor, hospital admitting clerks              |
| 33411         | New           | Supervisor, filling clerks                         |
| 33411         | New           | Supervisor, administrative                         |
| 33411         | New           | Supervisor, clerical                               |
| 33411         | New           | Supervisor, medical records unit                   |
| 33412         | New           | Supervisor, personnel clerks                       |
| 33412         | New           | Supervisor, human resource                         |
| 33413         | New           | Management trainee                                 |
| 33414         | New           | Factory administrator                              |
| 33415         | JPA           | Assistant officer, training E27                    |
| 33416         | JPA           | Assistant officer, administrative N27              |
| 33417         | JPA           | Assistant officer, land administrative N27         |
| 33421         | New           | Secretary, legal                                   |
| 33431         | New           | Verbatim reporter                                  |
| 33431         | New           | Chief secretary, office                            |
| 33431         | New           | Correspondence assistant                           |
| 33431         | New           | Executive secretary                                |
| 33431         | 39221         | Executive secretary, committee                     |
| 33431         | 39221         | Executive secretary, non-government administration |
| 33431         | New           | Secretary, administrative                          |
| 33431         | 24902         | Secretary, company                                 |
| 33432         | 39222         | Executive secretary, government administration     |
| 33433         | 39223         | Consul   |
| 33433         | 39223         | Courier, diplomatic                                |
| 33433         | 39223         | Officials, consular                                |
| 33434         | 39111         | Executive officer, government                      |
| 33435         | 39112         | Executive officer, statutory board                 |
| 33436         | JPA           | Meeting herald N27                                 |
| 33437         | JPA           | Parliament herald N11                              |
| 33441         | New           | Secretary, medical                                 |
| 33491         | New           | Secretary, school                                  |
| 33511         | 39114         | Inspector, custom                                  |
| 33511         | 39114         | Inspector, custom and border                       |
| 33511         | 39114         | Inspector, border                                  |
| 33512         | 39114         | Officer, passport checking                         |
| 33513         | JPA           | Assistant superintendent, customs W27              |
| 33521         | New           | Assistant officer, tax/estimator                   |
| 33531         | New           | Officer, social benefits                           |
| 33532         | New           | Officer, social security claims                    |
| 33541         | New           | Inspector, licensing                               |
| 33541         | New           | Officer, licensing                                 |
| 33541         | New           | Officer, passport issuing                          |
| 33542         | JPA           | Assistant superintendent, immigration KP27         |
| 33551         | 39121         | Inspector, police                                  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                  |
|---------------|---------------|--|
| 33552         | 39122         | Detective, police                          |
| 33553         | JPA           | Assistant officer, investigation KR29      |
| 33561         | 39119         | Inspector, civil service                   |
| 33562         | 39119         | Inspector, government administration       |
| 33563         | 39119         | Officer, civil service commission          |
| 33564         | JPA           | Assistant officer, Kesatria S27            |
| 33565         | New           | Officer, RELA                              |
| 33566         | New           | Territorial army                           |
| 33567         | JPA           | Assistant officer, civil defence KP27      |
| 33568         | JPA           | Officer, civilian relation KP19            |
| 33591         | 31511         | Inspector, building                        |
| 33591         | 39117         | Inspector, price                           |
| 33591         | 31512         | Inspector, fire and safety                 |
| 33591         | 39118         | Inspector, weight and measures             |
| 33591         | 31513         | Specialist, fire prevention                |
| 33592         | JPA           | Assistant officer, registration KP27       |
| 33593         | JPA           | Assistant superintendent, prison KX27      |
| 33594         | JPA           | Assistant officer, enforcement N27         |
| 33595         | 39119         | Inspector, wage                            |
| 33596         | 39119         | Officials, electoral                       |
| 33597         | JPA           | Assistant superintendent, fireman KB29     |
| 33598         | JPA           | Assistant officer, security KP27           |
| 34111         | JPA           | Sub assistant, legal L29                   |
| 34112         | JPA           | Assistant officer, Syariah LS27            |
| 34113         | JPA           | Assistant officer, Islamic affairs S27     |
| 34114         | JPA           | Assistant officer, anti-drug S27           |
| 34115         | JPA           | Superintendent, water supply J17           |
| 34121         | 39302         | Welfare officer, industry                  |
| 34121         | 39305         | Welfare officer, probation                 |
| 34121         | 39305         | Parole officer, associate professional     |
| 34121         | 39305         | Probation officer, associate professional  |
| 34121         | 39304         | Officer, family planning                   |
| 34121         | 39302         | Social welfare worker                      |
| 34121         | 39302         | Social welfare worker, case work           |
| 34121         | 39301         | Social worker                              |
| 34121         | 39302         | Social worker, child welfare               |
| 34121         | 39301         | Social worker, group work                  |
| 34121         | 39305         | Social worker, delinquency                 |
| 34121         | 39304         | Social worker, community                   |
| 34121         | 39304         | Social worker, medical                     |
| 34121         | 39303         | Social worker, psychiatric                 |
| 34121         | 39302         | Welfare organizer, women                   |
| 34121         | New           | Community development supervisor           |
| 34122         | JPA           | Assistant officer, social development S27  |
| 34123         | JPA           | Assistant officer, psychologist S27        |
| 34124         | JPA           | Assistant officer, information S27         |
| 34125         | JPA           | Assistant officer, social research N27     |
| 34126         | JPA           | Assistant officer, industrial relation S27 |
| 34127         | JPA           | Assistant officer, economy affairs E27     |
| 34128         | JPA           | Assistant officer, youth and sport S27     |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 34129         | New           | Assistant, counselor   |
| 34129         | New           | Other social work associate professionals                        |
| 34131         | 39601         | Monk, associate professional                                     |
| 34132         | 39602         | Nun, associate professional                                      |
| 34133         | 39603         | Preacher   |
| 34134         | 29405         | Bilal  |
| 34139         | 39603         | Other religious associate professionals                          |
| 34211         | 39561         | Sportsperson   |
| 34212         | 39561         | Athlete  |
| 34219         | New           | Other athletes, sportsperson and related associate professionals |
| 34221         | 39562         | Officials, sports  |
| 34221         | 39562         | Umpire   |
| 34222         | JPA           | Instructor, march S17  |
| 34223         | 39563         | Team manager, sports/games                                       |
| 34223         | New           | Coach, aerobics  |
| 34224         | New           | Coach, judo  |
| 34224         | New           | Coach, karate  |
| 34224         | 39563         | Coach, silat   |
| 34224         | New           | Coach, taekwondo   |
| 34225         | 39563         | Coach, tennis  |
| 34226         | New           | Coach, tai chi   |
| 34226         | New           | Coach, yoga  |
| 34227         | New           | Coach, swimming  |
| 34228         | New           | Coach, instructor and other sports officials (indoor)            |
| 34229         | New           | Coach, instructor and other sports officials (outdoor)           |
| 34231         | 39564         | Instructor, physical fitness                                     |
| 34232         | 39565         | Instructor, billiard   |
| 34233         | 39565         | Instructor, bridge   |
| 34234         | 39565         | Instructor, chess  |
| 34235         | 39566         | Jockey   |
| 34236         | 33909         | Instructor, sailing  |
| 34237         | New           | Instructor, horse riding   |
| 34238         | New           | Outdoor adventure guides   |
| 34239         | New           | Supervisor, clubhouse  |
| 34311         | 31311         | Photographer   |
| 34312         | 31312         | Photographer, commercial illustration                            |
| 34313         | 31313         | Photographer, news   |
| 34313         | 31313         | Photographer, press  |
| 34313         | New           | Photo-journalist   |
| 34314         | 31314         | Photographer, aerial   |
| 34314         | 31314         | Microphotographer  |
| 34315         | 31314         | Photographer, microphotography                                   |
| 34315         | 31314         | Photographer, medical  |
| 34315         | 31314         | Photographer, scientific   |
| 34316         | JPA           | Photographer B27   |
| 34319         | New           | Other photographer   |
| 34321         | 39511         | Artist, graphic  |
| 34321         | 39511         | Artist, design   |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 34321         | 39511         | Illustrator, book  |
| 34321         | 39511         | Illustrator, advertising                                   |
| 34321         | 39511         | Designer, poster   |
| 34322         | 39512         | Artist, display  |
| 34322         | 39512         | Decorator, display   |
| 34322         | 39512         | Decorator, display/windows                                 |
| 34322         | 39512         | Visual merchandiser  |
| 34322         | 39512         | Designer, armorial   |
| 34322         | 39512         | Designer, display  |
| 34322         | 39512         | Designer, display, windows                                 |
| 34322         | 39512         | Designer, scenery  |
| 34322         | 39512         | Designer, exhibition                                       |
| 34323         | 39513         | Decorator, interior  |
| 34323         | 39513         | Designer, interior decoration                              |
| 34324         | 39514         | Designer, jewellery  |
| 34324         | 39514         | Designer, package  |
| 34324         | 39514         | Designer, shoe   |
| 34324         | 39514         | Designer, metalwork/ornamental                             |
| 34324         | 39514         | Designer, furniture  |
| 34325         | 39515         | Decorator, motion picture set                              |
| 34325         | 39515         | Designer, theatrical set                                   |
| 34326         | 39517         | Decorator, flower  |
| 34329         | New           | Other interior designer and decorators                     |
| 34331         | JPA           | Assistant officer, archives S27                            |
| 34332         | JPA           | Assistant, curator S27                                     |
| 34333         | JPA           | Assistant officer, librarian S27                           |
| 34334         | JPA           | Assistant officer, publication N27                         |
| 34341         | New           | Chief chef   |
| 34342         | New           | Executive chef   |
| 34343         | 51221         | Chefs  |
| 34343         | New           | Barbeque chef  |
| 34343         | New           | Dim sum chef   |
| 34343         | New           | Sous chef  |
| 34343         | New           | Malay cuisine chef   |
| 34343         | New           | Pastry chef  |
| 34343         | 51221         | Chefs de party   |
| 35111         | 31143         | Technician, computer                                       |
| 35111         | 41421         | Operator, computer peripheral equipment                    |
| 35111         | 41421         | Operator, computer peripheral equipment/console            |
| 35111         | 41421         | Operator, computer peripheral equipment/high-speed printer |
| 35111         | 41421         | Operator, computer   |
| 35111         | 41421         | Operator, console  |
| 35111         | 41422         | Operator, Electronic Data Processing (EDP)                 |
| 35111         | New           | Engineering assistant, computer                            |
| 35111         | New           | Assistant supervisor, Electronic Data Processing (EDP)     |
| 35111         | New           | Supervisor, Electronic Data Processing (EDP)               |
| 35112         | 31145         | Technician, semi-conductor                                 |
| 35113         | New           | Technician, information systems                            |
| 35113         | New           | Assistant, information technology                          |
| 35114         | JPA           | Technician, computer FT17                                  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 35121         | 31201         | Technician, help desk                                 |
| 35121         | 31201         | Technician, personal computer support                 |
| 35121         | 31201         | Technician, information technology                    |
| 35121         | New           | Assistant officer, information technology             |
| 35122         | New           | Operator, computer help desk                          |
| 35122         | New           | Assistant, computer engineering                       |
| 35122         | New           | Assistant, computer                                   |
| 35122         | New           | Assistant, communications                             |
| 35122         | New           | Assistant, computer database                          |
| 35122         | New           | Assistant, computer programming                       |
| 35122         | 31202         | Assistant, computer/user services                     |
| 35122         | New           | Assistant analyst, computer systems                   |
| 35123         | JPA           | Assistant officer, information technology F29         |
| 35131         | New           | Technician, computer network                          |
| 35131         | 31202         | Technician, network support                           |
| 35131         | 31202         | Assistant, computer/systems analyst                   |
| 35141         | New           | Technician, website                                   |
| 35141         | New           | Webmaster   |
| 35141         | New           | Administrator, website                                |
| 35211         | 31315         | Cinematographer                                       |
| 35211         | New           | Operator, audio/visual                                |
| 35211         | New           | Assistant, production                                 |
| 35211         | 31315         | Assistant, motion picture                             |
| 35212         | 31318         | Technician, sound-effects                             |
| 35212         | 31318         | Dubbing mixer   |
| 35212         | 31318         | Sound mixer   |
| 35212         | 31318         | Editor, sound   |
| 35213         | 31328         | Projectionist, cinema                                 |
| 35214         | 31324         | Officer, ships radio                                  |
| 35215         | JPA           | Assistant officer, film laboratory C27                |
| 35216         | New           | Technician, broadcast                                 |
| 35216         | 31145         | Technician, audio and video equipment                 |
| 35216         | New           | Operator, broadcasting equipment                      |
| 35216         | 31327         | Operator, broadcasting equipment/radio and television |
| 35216         | 31323         | Operator, radio equipment/land-base                   |
| 35216         | 31325         | Operator, radio equipment/flight                      |
| 35216         | 31321         | Operator, telecommunications equipment                |
| 35216         | 31326         | Operator, transmitting equipment/radio and television |
| 35219         | New           | Other broadcasting technicians                        |
| 35221         | 31142         | Technician, engineering/aerospace (telecommunication) |
| 35221         | 31142         | Technician, engineering/telecommunications            |
| 35221         | 31142         | Engineering assistant, telecommunications             |
| 35229         | New           | Other telecommunications engineering technicians      |
| 41101         | New           | General office clerk                                  |
| 41101         | New           | Clerk, office   |
| 41101         | 44197         | Clerk, publication                                    |
| 41101         | New           | Clerk, administrative                                 |
| 41101         | 51212         | Clerk, room service                                   |
| 41101         | New           | Clerk, confidential                                   |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 41101         | 41201         | Clerk, correspondence                                  |
| 41101         | New           | Clerk, information technology                          |
| 41101         | 41201         | Chief, clerk   |
| 41101         | New           | Chief, office  |
| 41101         | New           | Worker, politic  |
| 41101         | New           | Assistant, administrator                               |
| 41101         | New           | Supervisor, management information systems             |
| 41102         | New           | Clerk, management information systems                  |
| 41103         | JPA           | Assistant, administrative clerical/operation N17       |
| 41104         | JPA           | Assistant officer, land NT27                           |
| 41105         | JPA           | Assistant, youth and sport S17                         |
| 41106         | JPA           | Assistant, land administrative N17                     |
| 41107         | JPA           | Assistant, publication N17                             |
| 41108         | JPA           | Supervisor, land planning G17                          |
| 41109         | New           | Other general office clerks                            |
| 41201         | New           | Assistant, administrative (secretarial)                |
| 41201         | 41111         | Secretary  |
| 41201         | 41111         | Secretary, word processing                             |
| 41201         | 41111         | Secretary, typing                                      |
| 41201         | 41111         | Secretary, confidential                                |
| 41201         | 41111         | Secretary, stenography                                 |
| 41201         | 41111         | Secretary, stenography/typing                          |
| 41202         | 41111         | Verbatim/hansard reporter                              |
| 41203         | New           | Personal assistant                                     |
| 41203         | 41111         | Assistant, reporter/reporter                           |
| 41203         | New           | Secretary, admission                                   |
| 41204         | New           | Secretary, sales                                       |
| 41205         | New           | Secretary, golf  |
| 41206         | JPA           | Sub assistant secretary, office/ Secretary, office N27 |
| 41207         | JPA           | Sub assistant, reporter/Journalist S17                 |
| 41209         | New           | Other secretaries not elsewhere classified             |
| 41311         | 41122         | Typist   |
| 41311         | 41121         | Typist, audio  |
| 41311         | 41121         | Typist, statistical                                    |
| 41311         | 41121         | Typist, shorthand                                      |
| 41311         | 41121         | Typist, stenography                                    |
| 41311         | 41123         | Tele-typist  |
| 41311         | 41121         | Stenographer   |
| 41311         | 41121         | Justowriter  |
| 41312         | 41122         | Clerk, word processing                                 |
| 41319         | New           | Other word processor and related operators             |
| 41321         | 41131         | Clerk, data entry/computer                             |
| 41321         | 41133         | Clerk, data entry/electronic mail                      |
| 41322         | JPA           | Machine operator, data processing F11                  |
| 41323         | 41207         | Clerk, index   |
| 41324         | 41207         | Records custodian                                      |
| 41329         | New           | Other data entry operators                             |
| 42111         | 42122         | Bank teller  |
| 42112         | 42121         | Clerk, cash counter                                    |
| 42113         | 42124         | Clerk, postal  |



| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 42114         | 42123         | Money changer  |
| 42115         | 42123         | Currency sorter  |
| 42116         | 41209         | Clerk, safe deposit  |
| 42119         | New           | Other bank teller and related clerks                               |
| 42121         | 42127         | Clerk, betting counter   |
| 42121         | 42127         | Clerk, bookmaker   |
| 42122         | 42126         | Croupier   |
| 42123         | 42125         | Clerk, casino  |
| 42129         | New           | Other bookmakers, croupiers and gaming workers                     |
| 42131         | 42131         | Pawnbroker   |
| 42132         | 42132         | Money-lender   |
| 42139         | New           | Other pawnbrokers and money-lenders                                |
| 42141         | 42191         | Collector, payment   |
| 42141         | 42191         | Collector, bill  |
| 42142         | 42192         | Collector, charity   |
| 42143         | 42193         | Collector, debt  |
| 42144         | 42194         | Collector, rent  |
| 42145         | 41208         | Clerk, rental  |
| 42145         | 41208         | Clerk, rental/heavy vehicles                                       |
| 42145         | 41208         | Clerk, rental/car/limousine  |
| 42145         | 41208         | Clerk, rental/costume  |
| 42145         | 41208         | Clerk, rental/audio visual equipment                               |
| 42145         | 41208         | Clerk, rental/video tapes  |
| 42149         | New           | Other debt-collectors and related workers not elsewhere classified |
| 42211         | 42211         | Clerk, ticket issuing/travel                                       |
| 42212         | 42212         | Clerk, travel/air lines  |
| 42213         | 42213         | Clerk, travel agency   |
| 42213         | 42213         | Clerk, travel  |
| 42214         | 42219         | Clerk, booking   |
| 42219         | New           | Other travel consultants and related clerks                        |
| 42221         | 42226         | Clerk, appointments  |
| 42221         | 42226         | Clerk, information   |
| 42222         | New           | Supervisor, customer service                                       |
| 42223         | JPA           | Assistant, information S17   |
| 42224         | New           | Telemarketer, salesperson  |
| 42225         | New           | Clerk, call centre   |
| 42226         | 42224         | Stewardess, floor  |
| 42227         | JPA           | Officer, customer service N17                                      |
| 42229         | New           | Other contact centre information clerks                            |
| 42231         | 42231         | Operator, telephone (private branch exchange)                      |
| 42231         | 42231         | Operator, telephone (telephone exchange)                           |
| 42231         | 42231         | Telephonist  |
| 42232         | 42232         | Switchboard-operator, telephone                                    |
| 42233         | 42239         | Telecommunication service operator                                 |
| 42239         | New           | Other telephone switchboard operators                              |
| 42241         | 42222         | Receptionist, hotel  |
| 42242         | New           | Clerk, hotel front desk  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 42243         | New           | Assistant, reservation                                    |
| 42243         | New           | Assistant supervisor, reservation                         |
| 42243         | New           | Supervisor, reservation                                   |
| 42249         | New           | Other hotel receptionist                                  |
| 42251         | 42290         | Clerk, customer-complaints                                |
| 42252         | New           | Clerk, counter enquiries                                  |
| 42253         | New           | Clerk, inquiries  |
| 42259         | New           | Other enquiry clerks                                      |
| 42261         | 42222         | Receptionist  |
| 42262         | 42223         | Receptionist, medical                                     |
| 42263         | 42225         | Receptionist, dental                                      |
| 42264         | New           | Receptionist, telephone                                   |
| 42265         | New           | Receptionist, front office                                |
| 42266         | New           | Officer, front office                                     |
| 42266         | New           | Assistant, front office                                   |
| 42266         | New           | Assistant supervisor, front office                        |
| 42266         | New           | Supervisor, front office                                  |
| 42266         | New           | Personnel, front office                                   |
| 42267         | New           | Agent, guest service                                      |
| 42269         | New           | Other receptionists                                       |
| 42271         | New           | Market research interviewer                               |
| 42272         | New           | Public opinion interviewer                                |
| 42273         | New           | Survey interviewer  |
| 42291         | New           | Clerk, hospital admissions                                |
| 42292         | New           | Interviewer, eligibility                                  |
| 42293         | New           | Specialist, eligibility                                   |
| 42299         | New           | Other client information workers not elsewhere classified |
| 43111         | 41301         | Clerk, ledger   |
| 43111         | 41301         | Clerk, bookkeeping machine                                |
| 43111         | 41301         | Clerk, bookkeeping  |
| 43111         | 41301         | Bookkeeper  |
| 43111         | 41301         | Bookkeeper, ledger  |
| 43112         | 41302         | Accounting analyst, bank                                  |
| 43112         | 41301         | Night auditor   |
| 43112         | 41302         | Clerk, account  |
| 43112         | New           | Clerk, accounting payable                                 |
| 43112         | New           | Clerk, accounting receivable                              |
| 43112         | New           | Clerk, account and promotion                              |
| 43112         | 41302         | Clerk, invoice  |
| 43112         | 41302         | Clerk, auction  |
| 43112         | 41301         | Clerk, accounting machine                                 |
| 43112         | New           | Clerk, administrative and accounting                      |
| 43113         | JPA           | Sub assistant, appraiser W17                              |
| 43114         | JPA           | Sub assistant, auditor W17                                |
| 43115         | 41305         | Clerk, actuarial  |
| 43115         | 41304         | Clerk, audit  |
| 43115         | 41303         | Clerk, bank   |
| 43115         | 41305         | Clerk, bond   |
| 43115         | 41305         | Clerk, brokerage  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                    |
|---------------|---------------|--|
| 43115         | 41305         | Clerk, collateral                            |
| 43115         | 41305         | Clerk, tax                                   |
| 43115         | 41305         | Clerk, mortgage                              |
| 43115         | New           | Clerk, credit control                        |
| 43115         | 41305         | Clerk, securities                            |
| 43115         | 41305         | Clerk, finance                               |
| 43115         | New           | Clerk, estate/plantation financial           |
| 43115         | 41305         | Clerk, credit                                |
| 43115         | 41305         | Clerk, investment                            |
| 43115         | 41305         | Clerk, adjustment                            |
| 43115         | 41305         | Clerk, stockbroker                           |
| 43115         | 41305         | Clerk, share and stock registration          |
| 43115         | 41305         | Clerk, rating                                |
| 43115         | 41303         | Clerk, clearing house, banking               |
| 43115         | 41303         | Assistant, bank                              |
| 43115         | 41305         | Assistant, broker                            |
| 43115         | New           | Assistant, credit control                    |
| 43116         | JPA           | Sub assistant, accountant W17                |
| 43117         | 41308         | Clerk, billing                               |
| 43117         | New           | Clerk, property                              |
| 43117         | 41307         | Clerk, cost                                  |
| 43117         | 41306         | Clerk, times                                 |
| 43117         | 41307         | Clerk, estimating                            |
| 43117         | 41307         | Clerk, cost computing                        |
| 43117         | 41306         | Clerk, office cash                           |
| 43117         | New           | Assistant, costing                           |
| 43118         | JPA           | Sub assistant administrative, finance W17    |
| 43119         | New           | Other accounting and bookkeeping clerk       |
| 43121         | 41411         | Clerk, statistical                           |
| 43122         | New           | Clerk, grading                               |
| 43123         | 41413         | Enumerator, social and economics data        |
| 43123         | New           | Enumerator, field                            |
| 43123         | 41413         | Enumerator, opinion polling                  |
| 43123         | 41413         | Enumerator, market research                  |
| 43124         | JPA           | Sub assistant, statistician E17              |
| 43125         | JPA           | Sub assistant, economic affair E17           |
| 43126         | JPA           | Sub assistant, evaluation W17                |
| 43127         | JPA           | Sub assistant, research Q17                  |
| 43128         | New           | Clerk, insurance underwriting                |
| 43128         | New           | Clerk, book-loan                             |
| 43128         | New           | Clerk, claim                                 |
| 43128         | New           | Assistant supervisor, insurance/underwriting |
| 43128         | 41203         | Assistant, insurance/adjustment              |
| 43128         | New           | Assistant, insurance/underwriting            |
| 43128         | New           | Assistant, insurance/policy                  |
| 43128         | 41203         | Assistant, insurance/claims                  |
| 43131         | 41306         | Clerk, payroll                               |
| 43131         | 41306         | Clerk, wages                                 |
| 43132         | New           | Paymaster                                    |
| 43211         | New           | Clerk, raw material                          |
| 43211         | 41511         | Clerk, supply                                |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                             |
|---------------|---------------|---------------------------------------|
| 43211         | 41511         | Clerk, warehouse                      |
| 43211         | New           | Clerk, receiving                      |
| 43211         | New           | Clerk, delivery and receiving         |
| 43211         | 41511         | Clerk, store                          |
| 43211         | New           | Clerk, raw material store             |
| 43211         | New           | Store hand                            |
| 43211         | New           | Assistant, warehouse                  |
| 43211         | New           | Assistant, store receiving            |
| 43211         | New           | Assistant, store                      |
| 43211         | New           | Controller, store                     |
| 43211         | 41511         | Storekeeper                           |
| 43211         | New           | Storekeeper, material                 |
| 43211         | New           | Storekeeper, finished goods           |
| 43211         | New           | Coordinator, store                    |
| 43212         | New           | Clerk, stock control                  |
| 43212         | 41512         | Clerk, control/food and beverage      |
| 43212         | 41512         | Clerk, stock                          |
| 43212         | New           | Clerk, estate/plantation stock        |
| 43212         | 41512         | Clerk, stock record                   |
| 43212         | New           | Handler, stock                        |
| 43212         | New           | Filler, stock                         |
| 43213         | 41513         | Clerk, weighing                       |
| 43213         | 41513         | Clerk, weighbridge                    |
| 43213         | New           | Controller, weighbridge-security      |
| 43214         | 41514         | Clerk, shipping                       |
| 43215         | 41515         | Clerk, tally                          |
| 43216         | 41516         | Clerk, linen supply/hotel and lodging |
| 43216         | 41516         | Clerk, kitchen/hotel                  |
| 43216         | 41516         | Clerk, inventory                      |
| 43216         | New           | Clerk, inventory purchasing           |
| 43217         | 41517         | Clerk, freight                        |
| 43217         | 41517         | Clerk, freight/inward                 |
| 43217         | 41517         | Clerk, freight/routing                |
| 43217         | 41517         | Clerk, freight/despaching             |
| 43217         | 41517         | Clerk, freight/receiving              |
| 43217         | 41517         | Clerk, freight/traffic                |
| 43217         | 41517         | Clerk, cargo                          |
| 43218         | 41518         | Clerk, import-export                  |
| 43219         | New           | Other stock clerks                    |
| 43221         | New           | Clerk, estate/plantation              |
| 43221         | New           | Clerk, production control             |
| 43221         | New           | Clerk, engineering                    |
| 43221         | New           | Clerk, quality and ecology            |
| 43221         | New           | Clerk, operation                      |
| 43221         | New           | Clerk, mill office                    |
| 43221         | New           | Clerk, logging                        |
| 43221         | 41523         | Clerk, purchasing/material            |
| 43221         | New           | Clerk, packing                        |
| 43221         | 41523         | Clerk, procurement                    |
| 43221         | New           | Clerk, order management               |
| 43221         | New           | Clerk, production administrative      |
| 43221         | New           | Clerk, maintenance                    |
| 43221         | New           | Clerk, motor maintenance              |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 43221         | 41524         | Clerk, research/food and beverage                          |
| 43221         | 41522         | Clerk, planning/material                                   |
| 43221         | 41523         | Clerk, order/material                                      |
| 43221         | New           | Coordinator, site  |
| 43222         | New           | Clerk, tooling   |
| 43221         | New           | Clerk, service   |
| 43221         | New           | Clerk, site  |
| 43223         | New           | Clerk, power plant   |
| 43224         | 41521         | Clerk, planning/production                                 |
| 43225         | 41524         | Clerk, sales   |
| 43225         | New           | Clerk, sales and marketing                                 |
| 43225         | New           | Clerk, local sales   |
| 43225         | New           | Clerk, sales counter                                       |
| 43225         | New           | Clerk, marketing   |
| 43225         | New           | Clerk, sales admin   |
| 43225         | New           | Clerk, production sales administrative                     |
| 43225         | New           | Clerk, telesales   |
| 43225         | 41524         | Clerk, sales order   |
| 43225         | New           | Co-coordinator, sales                                      |
| 43226         | New           | Clerk, technician  |
| 43226         | New           | Clerk, facilities maintenance                              |
| 43226         | New           | Clerk, technical   |
| 43227         | New           | Clerk, quality assurance                                   |
| 43227         | New           | Clerk, quality control                                     |
| 43228         | JPA           | Sub assistant inspector, factory and machinery J17         |
| 43229         | New           | Other production clerks                                    |
| 43231         | New           | Clerk, logistic  |
| 43231         | 44001         | Clerk, transport   |
| 43232         | 44002         | Inspector clerical/railway transport service               |
| 43232         | 44002         | Clerk, goods transportation/railway                        |
| 43232         | 44002         | Officer claims, railway                                    |
| 43232         | 44002         | Controller, clerical/train                                 |
| 43232         | 44002         | Controller, clerical/railway service                       |
| 43232         | 44002         | Dispatcher, clerical/train                                 |
| 43232         | 44002         | Dispatcher, clerical/railway                               |
| 43232         | 44002         | Yardmaster railway   |
| 43233         | 44003         | Inspector, clerical/road transport services                |
| 43233         | 44003         | Inspector, bus services                                    |
| 43233         | 44003         | Controller, clerical/road transport services               |
| 43233         | 44003         | Dispatcher, clerical/bus                                   |
| 43233         | 44003         | Dispatcher, clerical/road transport (except bus and truck) |
| 43233         | 44003         | Dispatcher, clerical/truck                                 |
| 43234         | 44004         | Clerk, air transport operations                            |
| 43234         | 44004         | Clerk, flight operation                                    |
| 43234         | 44004         | Clerk, dispatch/air transport                              |
| 43234         | 44004         | Clerk, traffic   |
| 43234         | 44004         | Controller, clerical/air transport service                 |
| 43234         | 44004         | Dispatcher, clerical/aircraft                              |
| 43235         | 44005         | Wharfinger   |
| 43235         | New           | Clerk, shipping and purchasing                             |
| 43235         | 44005         | Officer, ferry   |
| 43235         | 44005         | Float master   |
| 43235         | 44005         | Controller, clerk/sea transport services                   |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 43235         | 44005         | Dispatcher, clerical/boat                                   |
| 43235         | 44006         | Dispatcher, clerical/gas pipeline                           |
| 43235         | 44006         | Dispatcher, clerical/oil pipeline                           |
| 43236         | JPA           | Supervisor, jetty N3  |
| 43237         | New           | Coordinator, shipping                                       |
| 43238         | JPA           | Sub assistant, air traffic control A17                      |
| 43239         | New           | Others transport clerks                                     |
| 44111         | 41206         | Clerk, library  |
| 44112         | 41206         | Assistant, library  |
| 44113         | New           | Filer, library  |
| 44114         | JPA           | Sub assistant, librarian S17                                |
| 44119         | New           | Other library clerks  |
| 44121         | 43001         | Postman   |
| 44122         | 43004         | Clerk, mail/dispatch  |
| 44122         | New           | Assistant, mail/dispatch                                    |
| 44123         | 43003         | Process server  |
| 44123         | 43003         | Summon server   |
| 44124         | 43004         | Clerk, mail/sorting   |
| 44124         | 43004         | Controller, clerical/mail depot                             |
| 44124         | 43004         | Controller, clerical/mail                                   |
| 44124         | 43004         | Controller, clerical/postal service                         |
| 44125         | 43002         | Clerk, mail   |
| 44125         | 41207         | Clerk, list/address   |
| 44125         | 41207         | Clerk, list/mail  |
| 44126         | JPA           | Notice server N3  |
| 44129         | New           | Other mail carriers and sorting clerks                      |
| 44131         | 49002         | Proof-reader, clerical                                      |
| 44132         | 41412         | Clerk, coding (data-processing)                             |
| 44132         | 41412         | Clerk, coding/statistics                                    |
| 44139         | New           | Other coding, proof-reading and related clerks              |
| 44141         | 49001         | Petition writer   |
| 44142         | 49001         | Public writer   |
| 44143         | 49001         | Scribes   |
| 44149         | New           | Other scribes and related workers                           |
| 44151         | 41207         | Clerk, filing   |
| 44151         | 41207         | Clerk, compilation/directory (compiler, clerical/directory) |
| 44151         | New           | Compiler, directory   |
| 44152         | 41209         | Clerk, photocopying   |
| 44153         | 41209         | Clerk, document copyist                                     |
| 44154         | New           | Officer, document controller                                |
| 44155         | New           | Controller, document  |
| 44156         | New           | Coordinator, document                                       |
| 44157         | New           | Officer, document   |
| 44159         | New           | Other filing and copying clerks                             |
| 44161         | JPA           | Sub assistant, pupils management N17                        |
| 44162         | JPA           | Sub assistant, industrial relation N17                      |
| 44163         | JPA           | Sub assistant, registration KP17                            |
| 44164         | JPA           | Sub assistant, social development S17                       |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 44165         | JPA           | Sub assistant, social research N17                      |
| 44166         | JPA           | Inspector, fingerprint N17                              |
| 44167         | 41205         | Clerk, employment                                       |
| 44167         | New           | Clerk, general affairs                                  |
| 44167         | 41202         | Clerk, personnel  |
| 44167         | 41202         | Clerk, records/personnel                                |
| 44167         | 41202         | Clerk, human resource                                   |
| 44167         | New           | Assistant, personnel                                    |
| 44168         | 41207         | Clerk, addressing machine                               |
| 44168         | 41207         | Clerk, registry   |
| 44168         | 41207         | Clerk, classification                                   |
| 44168         | 41204         | Clerk, probate  |
| 44169         | New           | Other personnel clerks                                  |
| 44191         | JPA           | Sub assistant, Islamic affairs S17                      |
| 44192         | 41204         | Bailif  |
| 44193         | JPA           | Sub assistant, conservation S17                         |
| 44194         | JPA           | Sub assistant, anti-drug S17                            |
| 44195         | JPA           | Sub assistant, legal administrative L17                 |
| 44196         | JPA           | Sub assistant, Syariah LS17                             |
| 44197         | JPA           | Sub assistant, archives S17                             |
| 44198         | JPA           | Sub assistant, museum S17                               |
| 44199         | New           | Clerk, golf   |
| 44199         | 41204         | Clerk, judge  |
| 44199         | 41204         | Clerk, court  |
| 44199         | New           | Clerk, service assistant sewing                         |
| 44199         | New           | Clerk, advertising                                      |
| 44199         | New           | Clerk, classified advertising                           |
| 44199         | 41204         | Clerk, law/legal  |
| 44199         | New           | Other clerical support workers not elsewhere classified |
| 44199         | 41204         | Assistant, barrister                                    |
| 44199         | 41204         | Assistant, solicitor                                    |
| 44199         | New           | Clipper, press  |
| 51111         | 51111         | Attendant, ship's cabin                                 |
| 51111         | 51111         | Purser, ship  |
| 51112         | 51112         | Chief steward, ship                                     |
| 51112         | 51112         | Chief stewardess, ship                                  |
| 51112         | New           | Assistant, chief steward                                |
| 51112         | New           | Steward, coordinator                                    |
| 51112         | New           | Steward, supervisor                                     |
| 51113         | New           | Steward, floor  |
| 51114         | New           | Attendant, flight                                       |
| 51114         | 51113         | Steward, ship/mess/cabin                                |
| 51114         | 51113         | Stewardess, ship/cabin                                  |
| 51114         | 51234         | Stewardess, ship/mess                                   |
| 51115         | 51114         | Steward, flight   |
| 51115         | 51114         | Air hostess   |
| 51115         | 51114         | Stewardess, flight                                      |
| 51116         | 51115         | Steward, train  |
| 51116         | 51115         | Stewardess, train                                       |
| 51117         | 51119         | Attendant, airport                                      |
| 51119         | New           | Other travel attendants and travel stewards             |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                      |
|---------------|---------------|--|
| 51121         | 51121         | Conductor, bus                                 |
| 51121         | 51127         | Conductor, ferry boat                          |
| 51121         | 51128         | Conductor, hovercraft                          |
| 51121         | 51125         | Conductor, cable car                           |
| 51121         | 51122         | Conductor, train                               |
| 51121         | 51127         | Conductor, tram                                |
| 51122         | 51124         | Inspector, ticket                              |
| 51123         | 51113         | Guard, passenger train                         |
| 51123         | 51129         | Guard, railway                                 |
| 51124         | 51122         | Attendant, sleeping car                        |
| 51125         | JPA           | Manager, station N19                           |
| 51129         | New           | Other transport conductors and related workers |
| 51131         | 51131         | Guide, tourist                                 |
| 51131         | 51132         | Guide, travel                                  |
| 51132         | 51133         | Guide, art gallery                             |
| 51132         | 51133         | Guide, museum                                  |
| 51133         | 51134         | Guide, plant                                   |
| 51133         | 51134         | Guide, factory tour                            |
| 51134         | 51136         | Guide, travel/sightseeing                      |
| 51134         | 51135         | Guide, travel/game park                        |
| 51139         | New           | Other travel guides                            |
| 51201         | 51221         | Chief cook                                     |
| 51201         | New           | Helper, barbeque                               |
| 51201         | New           | Commis   |
| 51201         | New           | Assistant, cook                                |
| 51201         | New           | Assistant, chef                                |
| 51201         | New           | Assistant chef, dim sum                        |
| 51201         | New           | Assistant, executive chef                      |
| 51201         | New           | Demi chef                                      |
| 51201         | New           | Kitchen coordinator                            |
| 51202         | 51229         | Cook, ship                                     |
| 51202         | 51222         | Cook, hotels and catering services             |
| 51203         | 51223         | Cook, private service                          |
| 51204         | 51224         | Cook, food canning & preserving                |
| 51205         | JPA           | Cook N1  |
| 51209         | New           | Other cooks                                    |
| 51311         | 51233         | Waiter, head                                   |
| 51311         | 51231         | Waiter   |
| 51311         | 51235         | Waiter, railway dining car                     |
| 51312         | New           | Dang pawara                                    |
| 51312         | 51231         | Waitress                                       |
| 51312         | 51235         | Waitress, railway dining car                   |
| 51312         | 51233         | Waitress, head                                 |
| 51313         | New           | Waiter and waitress, food and beverage         |
| 51314         | New           | Waiter, banquet                                |
| 51314         | New           | Supervisor, food and beverage                  |
| 51314         | New           | Supervisor, outlet                             |
| 51314         | New           | Supervisor, restaurant                         |
| 51315         | New           | Food and beverage worker, banquet              |
| 51316         | New           | Food and beverage room worker, service         |
| 51317         | New           | Food and beverage worker                       |



| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 51319         | New           | Other waiter and waitress  |
| 51321         | New           | Bartender  |
| 51322         | New           | Assistant, bartender   |
| 51323         | New           | Food and beverage barmen   |
| 51329         | New           | Other bartender  |
| 51411         | New           | Coiffeur   |
| 51411         | 51312         | Hairdresser  |
| 51412         | 51311         | Barber   |
| 51413         | 51312         | Hairstylist  |
| 51419         | New           | Other hairdresser  |
| 51421         | 51314         | Beautician   |
| 51422         | 51315         | Make-up artist   |
| 51422         | New           | Mak andam  |
| 51423         | 51313         | Manicurist   |
| 51424         | 51313         | Pedicurist   |
| 51425         | 51314         | Aesthetician   |
| 51426         | JPA           | Beautician B11   |
| 51429         | New           | Other beauticians and related workers  |
| 51511         | 51214         | Supervisor, banquet/hotel & lodging  |
| 51511         | 51214         | Supervisor, floor/hotel & lodging  |
| 51512         | New           | Assistant supervisor, housekeeping   |
| 51512         | New           | Assistant supervisor, laundry  |
| 51512         | New           | Supervisor, laundry  |
| 51513         | 51212         | Executive, housekeeper   |
| 51513         | 51233         | Captain, floor   |
| 51514         | 51319         | Assistant, wardrobe  |
| 51515         | New           | Housekeeper, hotel   |
| 51516         | JPA           | Supervisor, wardrobe N17   |
| 51517         | 51213         | Matron, housekeeping   |
| 51517         | 51211         | Steward, house   |
| 51518         | JPA           | Supervisor, hostel N17   |
| 51519         | New           | Other cleaning and housekeeping supervisors in offices, hotel and other establishments |
| 51521         | 51214         | Steward, floor/hotel and lodging   |
| 51522         | New           | Maid, linen  |
| 51522         | New           | Supervisor, camp   |
| 51522         | 51215         | Warden, hostel   |
| 51522         | 51215         | Warden, dormitory  |
| 51522         | 51215         | Warden, camp   |
| 51523         | New           | Assistant, linen housekeeping  |
| 51523         | 51216         | Housekeeper (private service)  |
| 51523         | 51214         | Chief steward, hotel   |
| 51524         | New           | Worker, housekeeping room  |
| 51524         | New           | Worker, housekeeping   |
| 51524         | New           | Worker, public area housekeeping   |
| 51524         | New           | Supervisor, housekeeping   |
| 51529         | New           | Other domestic housekeeper   |
| 51531         | 91311         | Concierge, building  |
| 51531         | 91311         | Cleaner, building  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 51531         | 91311         | Janitor   |
| 51532         | New           | Assistant supervisor, recreation                                      |
| 51532         | New           | Supervisor, recreation  |
| 51533         | New           | Chief, concierge  |
| 51534         | 91312         | Sexton  |
| 51534         | 91312         | Siak/nuja   |
| 51539         | New           | Other building caretakers   |
| 51611         | 51501         | Astrologer  |
| 51612         | 51502         | Palmist   |
| 51613         | 51503         | Fortune-teller  |
| 51614         | 51504         | Numerologist  |
| 51619         | New           | Other astrologers, fortune-tellers and related workers                |
| 51621         | New           | Companion   |
| 51621         | 51398         | Companion, social   |
| 51622         | New           | Valet/ Personal maid  |
| 51629         | New           | Other companions and valets   |
| 51631         | 51322         | Attendant, mortuary   |
| 51631         | 51322         | Undertaker  |
| 51632         | 51321         | Embalmer  |
| 51633         | 51323         | Attendant, crematorium  |
| 51639         | New           | Other undertakers and embalmers                                       |
| 51641         | 51397         | Aide, veterinary  |
| 51642         | 39551         | Caretaker, animal   |
| 51643         | 39551         | Keeper in zoo, bird and aquatic parks                                 |
| 51649         | New           | Other pet groomers and animal care workers                            |
| 51651         | New           | Instructor, driving   |
| 51659         | New           | Other instructors   |
| 51691         | 51491         | Attendant, swimming pool  |
| 51691         | 51491         | Lifeguard   |
| 51692         | 51493         | Bodyguard   |
| 51693         | 51494         | Diver   |
| 51694         | 51494         | Rescue diver  |
| 51695         | 51491         | Coastguard  |
| 51696         | JPA           | Lifeguard N1  |
| 51699         | New           | Other protective service and related workers not elsewhere classified |
| 52111         | 52204         | Salesperson, street stall   |
| 52112         | 52202         | Salesperson, market   |
| 52113         | 52201         | Salesperson, kiosk  |
| 52114         | New           | Assistant, counter sales/promoter                                     |
| 52115         | 39517         | Florist   |
| 52119         | New           | Other stall and market salespersons                                   |
| 52121         | 91101         | Hawker (prepared food and drinks)                                     |
| 52121         | 91103         | Hawker (prepared food and non-food)                                   |
| 52121         | 91101         | Vendor, refreshments theatre  |
| 52122         | 91101         | Vendor, street/food   |
| 52129         | New           | Other street food salespersons  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                             |
|---------------|---------------|---------------------------------------|
| 52211         | 52101         | Shopkeeper                            |
| 52219         | New           | Other shopkeeper                      |
| 52221         | 52101         | Supervisor, sales                     |
| 52229         | New           | Other sales supervisor                |
| 52231         | New           | Assistant, sales                      |
| 52231         | 52102         | Assistant, shop                       |
| 52232         | 52102         | Salesperson, wholesale and retail     |
| 52233         | New           | Sales associate                       |
| 52239         | New           | Other shop sales assistants           |
| 52301         | New           | Cashier                               |
| 52301         | New           | Cashier, head checker                 |
| 52301         | New           | Cashier, office/supervisor            |
| 52301         | New           | Cashier, assistant                    |
| 52301         | New           | Cashier, parker                       |
| 52302         | 42112         | Cashier, box office                   |
| 52303         | 42113         | Cashier, store                        |
| 52303         | New           | Cashier, petrol pump/station          |
| 52304         | 42114         | Cashier, theatre                      |
| 52305         | 42115         | Cashier, cafeteria                    |
| 52305         | New           | Cashier, food and beverage            |
| 52305         | 42115         | Cashier, restaurant                   |
| 52306         | 42116         | Cashier, booking-office               |
| 52306         | 42116         | Cashier, race track                   |
| 52307         | 42117         | Clerk, ticket issuing (except travel) |
| 52309         | New           | Other cashiers and ticket clerks      |
| 52309         | 42119         | Cashier, check-out/self service store |
| 52309         | 42119         | Cashier, cash desk                    |
| 52309         | 42123         | Cashier, change-booth                 |
| 52309         | 42123         | Cashier, currency exchange            |
| 52309         | 42119         | Clerk, toll collection                |
| 52411         | 52301         | Model, fashion                        |
| 52412         | 52302         | Model, advertising                    |
| 52413         | 52303         | Model, artist                         |
| 52419         | New           | Other fashion and models              |
| 52421         | 52103         | Demonstrator                          |
| 52422         | New           | Sales promoter                        |
| 52422         | New           | Safety promoter                       |
| 52422         | 52104         | Telemarketer                          |
| 52423         | 52109         | Rollerboy                             |
| 52429         | New           | Other sales demonstrators             |
| 52431         | New           | Salesperson, marketing                |
| 52432         | New           | Salesperson, traveling                |
| 52433         | New           | Salesperson, direct selling           |
| 52439         | New           | Other door to door salespersons       |
| 52441         | New           | Salesperson, customer relation centre |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 52451         | 52203         | Attendant, petrol pump                                 |
| 52452         | New           | Attendant, service station                             |
| 52459         | New           | Other service station attendants                       |
| 52469         | New           | Other food service counter attendants                  |
| 53111         | 51391         | Worker, child care                                     |
| 53112         | New           | Sub assistant, nursery school                          |
| 53113         | 51391         | Attendant, nursery school                              |
| 53114         | New           | Worker, nursery  |
| 53115         | 51393         | Baby amah  |
| 53115         | 51393         | Nanny  |
| 53115         | 51393         | Baby sitter  |
| 53116         | 51392         | Masseur (non-medical)                                  |
| 53119         | New           | Other child care workers                               |
| 53121         | New           | Teachers aide  |
| 53122         | JPA           | Sub assistant officer, training E17                    |
| 53129         | New           | Other teachers aide                                    |
| 53211         | New           | Nursing aids   |
| 53211         | 51395         | Aide, nursing/medical                                  |
| 53211         | 51395         | Aide, nursing/home                                     |
| 53211         | 51396         | Aide, dental   |
| 53212         | JPA           | Aide, dental surgery U17                               |
| 53213         | 51396         | Aide, pharmacy   |
| 53214         | New           | Aide, hospital   |
| 53215         | New           | Worker, hospital                                       |
| 53216         | JPA           | Aide, public health U11                                |
| 53217         | JPA           | Assistant, nurse U11                                   |
| 53218         | JPA           | Attendant, health U3                                   |
| 53219         | New           | Other health care assistants                           |
| 53221         | 51317         | Attendant, bath  |
| 53229         | New           | Other home-based personal care workers                 |
| 53291         | New           | Other service centre-based personal care workers       |
| 54111         | 51411         | Fireman (fire brigade)                                 |
| 54112         | 51412         | Fire-fighter (air port)                                |
| 54113         | JPA           | Officer, fireman KB17                                  |
| 54114         | New           | Fire watch   |
| 54119         | New           | Other fire-fighters                                    |
| 54121         | 51421         | Constable, police Y14                                  |
| 54122         | 51423         | Officer, police  |
| 54123         | New           | Traffic controller                                     |
| 54123         | 51422         | Patrol, police   |
| 54123         | New           | Volunteer, police                                      |
| 54124         | New           | Auxiliary police                                       |
| 54124         | 51429         | Warden, traffic  |
| 54125         | JPA           | Junior police officer and constable YY1- YY10          |
| 54126         | JPA           | Junior police officer and support constable YT1- 10    |
| 54127         | JPA           | Junior police officer and aborigines constable YP1- 10 |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                |
|---------------|---------------|--|
| 54128         | JPA           | Sub assistant, Kesatria S17              |
| 54129         | New           | Other police officers                    |
| 54131         | 51430         | Guard, prison                            |
| 54132         | 51430         | Warden, prison                           |
| 54133         | JPA           | Officer, prison KX11                     |
| 54139         | New           | Other prison guards                      |
| 54141         | 51441         | Guard, gambling activities               |
| 54141         | 51442         | Guard, departmental/store/industrial     |
| 54141         | 51442         | Guard, security/private                  |
| 54142         | JPA           | Sub assistant, security KP17             |
| 54143         | New           | Chief, security guard                    |
| 54143         | New           | Sergeant major, security                 |
| 54144         | JPA           | Security guard KP11                      |
| 54145         | New           | Guard                                    |
| 54145         | New           | Security guard, internal                 |
| 54146         | New           | Guard, office                            |
| 54147         | 92034         | Attendant, cloakroom                     |
| 54147         | 92035         | Concierge                                |
| 54147         | 92031         | Watchman                                 |
| 54147         | New           | Night watchman                           |
| 54147         | 92033         | Collector, ticket usher                  |
| 54147         | New           | Gate keeper                              |
| 54147         | 92032         | Doorman                                  |
| 54149         | New           | Other security guards                    |
| 54151         | JPA           | Officer, immigration KP17                |
| 54152         | JPA           | Sub assistant superintendent, custom W17 |
| 54153         | JPA           | Sub assistant, civil defence KP17        |
| 54154         | JPA           | Sub assistant, enforcer N17              |
| 54191         | 51492         | Game ranger                              |
| 54192         | New           | Warden park, animal/recreation           |
| 54192         | 51492         | Warden, wild life                        |
| 54193         | JPA           | Sub assistant, park/estate G17           |
| 54194         | 51441         | Detective, hotel                         |
| 54194         | 51441         | Detective, store                         |
| 54195         | JPA           | Sub assistant, investigation KR17        |
| 54196         | 51450         | Detective, private                       |
| 54196         | 51441         | Investigator, industrial                 |
| 54196         | 51450         | Investigator, private                    |
| 54197         | JPA           | Rehabilitation workers N1                |
| 54198         | JPA           | Sub assistant, wildlife G17              |
| 54199         | JPA           | Junior assistant, wildlife G11           |
| 61111         | New           | Grower, abaca                            |
| 61111         | New           | Grower, dragon fruit                     |
| 61111         | New           | Grower, pineapple                        |
| 61112         | New           | Grower, groundnut                        |
| 61112         | New           | Grower, intercrop                        |
| 61113         | 61319         | Irrigator                                |
| 61114         | New           | Inspector quality, estate/plantation     |
| 61114         | New           | Mandore, estate/plantation               |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 61114         | New           | Checker, estate/plantation                         |
| 61114         | New           | Grader, oil palm                                   |
| 61114         | New           | Supervisor, estate/plantation                      |
| 61115         | JPA           | Sub assistant, agricultural G17                    |
| 61116         | New           | Grower, rubber                                     |
| 61117         | New           | Grower, coconut                                    |
| 61117         | New           | Grower, palm-tree                                  |
| 61121         | New           | Grower, shrub trees                                |
| 61122         | New           | Grower, coco                                       |
| 61122         | New           | Grower, tea  |
| 61123         | New           | Grower, pomegranate                                |
| 61124         | New           | Grower, coffee                                     |
| 61125         | New           | Grower, grape                                      |
| 61125         | New           | Grower, cluster fruit                              |
| 61131         | New           | Grower, flower                                     |
| 61131         | 61332         | Grower, horticultural                              |
| 61131         | New           | Worker, hydroponics                                |
| 61132         | New           | Grower, mushroom                                   |
| 61139         | New           | Other gardeners, horticultural and nursery growers |
| 61141         | 61110         | Mixed crop grower (no husbandry)                   |
| 61149         | New           | Other market gardeners and crop growers            |
| 61151         | New           | Grower, vegetable                                  |
| 61152         | New           | Grower, bean-sprout                                |
| 61211         | 61342         | Farm worker, pig                                   |
| 61211         | 61343         | Farm worker, diary                                 |
| 61211         | 61341         | Farm worker, livestock                             |
| 61211         | 61345         | Breeder, rabbit                                    |
| 61211         | 61344         | Breeder, cattle                                    |
| 61211         | New           | Milker   |
| 61212         | 61370         | Farm worker, skilled/mixed animal husbandry        |
| 61213         | 92121         | Shepherd, buffalo / cow / sheep                    |
| 61219         | New           | Other livestock and dairy producers                |
| 61221         | 61351         | Farm worker, poultry                               |
| 61221         | 61351         | Farmer, goose                                      |
| 61221         | 61351         | Farmer, chicken                                    |
| 61221         | 61351         | Farmer, turkey                                     |
| 61221         | 61351         | Farmer, bird                                       |
| 61221         | 61351         | Farmer, ostrich                                    |
| 61221         | 61351         | Farmer, duck                                       |
| 61222         | 61352         | Hatchery work, poultry                             |
| 61222         | 61355         | Operator, incubator                                |
| 61223         | 61353         | Inseminator, poultry                               |
| 61224         | 61354         | Vaccinator, poultry                                |
| 61229         | New           | Other poultry producers                            |
| 61231         | New           | Farmer, ornamental fish                            |
| 61232         | New           | Farmer, fish                                       |
| 61232         | New           | Farmer, prawn                                      |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                  |
|---------------|---------------|--|
| 61232         | New           | Farmer, mussel / abalone                   |
| 61232         | New           | Farmer, shellfish                          |
| 61233         | New           | Farmer, gamat                              |
| 61234         | New           | Farmer, crocodile                          |
| 61235         | New           | Producer, marine product                   |
| 61291         | New           | Farmer, leech                              |
| 61292         | New           | Farmer, worm                               |
| 61293         | New           | Farmer, silkworm                           |
| 61293         | 61362         | Worker, sericulture                        |
| 61294         | New           | Collector, honey                           |
| 61294         | 61361         | Farmer, bee                                |
| 61294         | 61361         | Worker, bee keeping                        |
| 61301         | 61120         | Mixed product farmer (crops and husbandry) |
| 62111         | 61411         | Chaser                                     |
| 62111         | 61414         | High climber, logging                      |
| 62111         | 61411         | Logger                                     |
| 62111         | New           | Logger, underwater                         |
| 62111         | 61416         | Marker, log                                |
| 62111         | 61412         | Feller, logging                            |
| 62111         | 61416         | Grader, log                                |
| 62111         | 61413         | Scaler, logging                            |
| 62112         | 61417         | Ranger, forest                             |
| 62113         | 61418         | Signalman, logging                         |
| 62113         | 61418         | Operator, yarder                           |
| 62113         | 61418         | Operator, log-grapple                      |
| 62113         | 61418         | Worker, forestry (skilled)                 |
| 62113         | 61418         | Driver, log                                |
| 62113         | 61418         | Maker, log-raft                            |
| 62113         | New           | Checker, log                               |
| 62113         | 61417         | Forester                                   |
| 62113         | 61418         | Chokerman, logging                         |
| 62113         | 61418         | Peeler, log                                |
| 62113         | New           | Supervisor, log                            |
| 62114         | JPA           | Ranger, forest G17                         |
| 62115         | JPA           | Forest guard G11                           |
| 62116         | JPA           | Instructor, logging G17                    |
| 62119         | New           | Other forestry and related workers         |
| 62121         | 61420         | Burner, charcoal                           |
| 62129         | New           | Other charcoal burners and related workers |
| 62211         | 62111         | Pearl culturist                            |
| 62212         | 62112         | Farm worker, fish                          |
| 62213         | 62113         | Farm worker, prawn                         |
| 62214         | 62114         | Farm worker, crocodile                     |
| 62215         | 62115         | Farm worker, oyster                        |
| 62216         | 62116         | Farm worker, snake                         |
| 62219         | New           | Other aquaculture workers                  |
| 62221         | 62121         | Fishery worker, kelong                     |
| 62221         | 62121         | Fishery worker, inland                     |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 62222         | 62122         | Fishery worker, coastal  |
| 62223         | 62123         | Diver, pearl   |
| 62223         | 62123         | Diver, oyster  |
| 62224         | JPA           | Sub assistant, fishery G17                                       |
| 62225         | New           | Ships crew   |
| 62225         | New           | Anchorman  |
| 62229         | New           | Other inland and coastal water fishery workers                   |
| 62231         | 62130         | Fishery worker, deep-sea   |
| 62239         | New           | Other fishery workers, deep-sea                                  |
| 62241         | 62210         | Hunter   |
| 62242         | 62210         | Trapper  |
| 63101         | New           | Grower, crop farmers   |
| 63201         | New           | Subsistence livestock farmers                                    |
| 63301         | New           | Subsistence mixed crop and livestock farmers                     |
| 63401         | 62220         | Collector, jelutong  |
| 63401         | New           | Collector, petai   |
| 63402         | 62220         | Collector, dammar  |
| 63403         | 62220         | Collector, turtle-egg  |
| 63404         | 62220         | Gatherer, shellfish  |
| 63405         | 62220         | Collector, bird's nest   |
| 63406         | 62220         | Gatherer, seaweed  |
| 63406         | New           | Collector, cane  |
| 63407         | 62220         | Gatherer, wild fruits, herbs & vegetables                        |
| 63408         | New           | Fisherman  |
| 71111         | 71295         | Builder, house/traditional materials                             |
| 71112         | New           | Builder  |
| 71119         | 71299         | Other house builder and related workers not elsewhere classified |
| 71121         | 71211         | Bricklayers, construction  |
| 71122         | 71212         | Stonemason, construction   |
| 71123         | 71213         | Firebrick, layer   |
| 71124         | 71214         | Paviour  |
| 71125         | New           | Worker, brickwork  |
| 71129         | 71219         | Other bricklayers and related workers                            |
| 71131         | 71121         | Splitter, stone  |
| 71132         | 71122         | Setter-operator, lathe/stone                                     |
| 71132         | 71122         | Cutter and finisher, stone                                       |
| 71132         | 71122         | Sawyer, stone  |
| 71133         | 71123         | Grader, stone  |
| 71134         | 71124         | Carver, stone  |
| 71135         | 71125         | Stonework layout man   |
| 71136         | 71126         | Grinder, stone   |
| 71137         | 71127         | Carver-setter, monument  |
| 71138         | 71128         | Polisher, stone  |
| 71139         | New           | Granite cutter   |
| 71139         | 71129         | Dresser, stone   |



| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 71139         | New           | Mason  |
| 71139         | 71129         | Other stonemasons, stone cutters, splitters and carvers                  |
| 71141         | 71221         | Reinforced concrete worker   |
| 71142         | 71222         | Shutterer, concrete moulding   |
| 71142         | 71222         | Shutterer, concrete  |
| 71143         | 71223         | Worker, iron reinforcing   |
| 71143         | 71223         | Steel bender   |
| 71144         | 71224         | Finisher, cement   |
| 71145         | 71226         | Cementer, petroleum and gas wells  |
| 71147         | 71227         | Mixer, concrete  |
| 71149         | 71229         | Other concrete placers, concrete finishers and related workers           |
| 71151         | 71231         | Carpenter  |
| 71152         | 71232         | Carpenter, construction  |
| 71153         | 71233         | Joiner, construction   |
| 71154         | 71234         | Joiner, ship   |
| 71155         | 71235         | Boatbuilder, wood  |
| 71155         | 71235         | Shipwright, wood   |
| 71155         | 71235         | Carpenter, ship  |
| 71156         | 71236         | Joiner, aircraft   |
| 71157         | 71237         | Carpenter, stage and studio  |
| 71158         | 71231         | Carpenter, table   |
| 71159         | 71239         | Other carpenters and joiners   |
| 71191         | 71291         | Worker, building maintenance   |
| 71192         | 71292         | Layer, pipe and drain  |
| 71193         | 71293         | Scaffolder   |
| 71194         | 71294         | Worker, demolition   |
| 71195         | 71296         | Erector, billboard   |
| 71196         | 71297         | Steeplejack  |
| 71199         | 71299         | Other building frame and related trades workers not elsewhere classified |
| 71211         | 71311         | Thatcher / nipah / sagu  |
| 71212         | 71312         | Roofer, composition  |
| 71213         | 71313         | Roofer, asphalt / asbestos   |
| 71214         | 71314         | Roofer, metal / zink   |
| 71215         | 71315         | Roofer, slate and tile   |
| 71216         | 71316         | Roofer, wood-shingle   |
| 71217         | 71317         | Awning installer   |
| 71219         | 71319         | Other roofers  |
| 71219         | New           | Ceiling installer  |
| 71221         | 71225         | Installer, tile  |
| 71221         | 71321         | Setter, tile   |
| 71222         | 71322         | Setter, marble   |
| 71223         | 71323         | Worker, parquetry  |
| 71224         | 71324         | Cutter-setter, mosaic  |
| 71225         | 71325         | Layer, tile/composition  |
| 71229         | 71329         | Other floor layers and tile setters                                      |
| 71231         | 71331         | Plasterer  |
| 71232         | 71332         | Plasterer, stucco  |
| 71233         | 71333         | Plasterer, fibrous   |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 71234         | 71334         | Plasterer, ornamental                                   |
| 71239         | 71339         | Other plasterers  |
| 71241         | 71341         | Insulator, building                                     |
| 71242         | 71342         | Insulator, boiler and pipe                              |
| 71243         | 71343         | Insulator, acoustical                                   |
| 71244         | 71344         | Insulator, refrigeration and air-conditioning equipment |
| 71245         | 71345         | Insulation worker, sound-proofing                       |
| 71249         | 71349         | Other insulation workers                                |
| 71251         | 71351         | Glazier, building                                       |
| 71252         | 71352         | Glazier, vehicle  |
| 71253         | 71353         | Glazier, leaded-glass                                   |
| 71254         | 71354         | Glazier, patent roofing                                 |
| 71255         | 71355         | Glazier, plate-glass                                    |
| 71259         | 71359         | Other glaziers  |
| 71261         | 71361         | Plumber   |
| 71262         | 71362         | Fitter, pipe  |
| 71262         | 71363         | Fitter, pipe and tube/aircraft                          |
| 71262         | 71367         | Fitter, pipe/water supply                               |
| 71262         | 71365         | Fitter, pipe/sewerage                                   |
| 71262         | 71364         | Fitter, pipe/marine                                     |
| 71262         | 71366         | Fitter, pipe/ventilation                                |
| 71263         | JPA           | Tradesman K1 R17  |
| 71264         | JPA           | Tradesman K2 R11  |
| 71265         | JPA           | Tradesman K3 R9   |
| 71266         | 71368         | Digger, well  |
| 71269         | 71369         | Other plumbers and pipe fitters                         |
| 71311         | 71411         | Painter, building                                       |
| 71312         | 71412         | Painter, structural steel                               |
| 71313         | 71413         | Wall/ceiling paperhanger                                |
| 71314         | 71414         | Whitewasher   |
| 71319         | 71419         | Other painters related workers                          |
| 71321         | 71421         | Spray-painter, metal                                    |
| 71322         | 71422         | Spray-painter, automobile                               |
| 71323         | 71423         | Painter, manufactured articles                          |
| 71324         | 71424         | Painter, metal  |
| 71325         | 71425         | Varnisher, manufactured articles                        |
| 71326         | 71426         | Varnisher, metal  |
| 71327         | 71427         | Signpainter   |
| 71328         | 71412         | Painter, ship's hull                                    |
| 71329         | 71429         | Other spray painters and varnishers                     |
| 71329         | New           | Spray painter   |
| 71331         | 71431         | Cleaner, building exteriors                             |
| 71332         | 71432         | Sandblaster, building exteriors                         |
| 71339         | 71439         | Other building structure cleaners                       |
| 72111         | 72111         | Mould repairer, foundry                                 |
| 72111         | New           | Moulder, floor, foundry                                 |
| 72111         | New           | Mould maker   |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                     |
|---------------|---------------|---|
| 72111         | 72111         | Moulder, metal                                |
| 72111         | 72111         | Moulder, pit, foundry                         |
| 72112         | 72112         | Coremaker, metal                              |
| 72112         | 72112         | Core checker, foundry                         |
| 72119         | New           | Others metal moulders and coremakers          |
| 72121         | 72121         | Welder  |
| 72122         | New           | Foreman, welder                               |
| 72123         | 72122         | Flame cutter                                  |
| 72124         | 72123         | Solderer, metal                               |
| 72125         | 72124         | Burner, lead                                  |
| 72126         | 72125         | Solderer                                      |
| 72127         | New           | Welder, tig                                   |
| 72129         | New           | Other welders and flame cutters               |
| 72131         | 72131         | Sheet metal worker                            |
| 72132         | 72132         | Coppersmith                                   |
| 72133         | 72133         | Boilermaker                                   |
| 72133         | 72133         | Boilerman                                     |
| 72133         | New           | Borer   |
| 72134         | 72134         | Brazier                                       |
| 72135         | 72135         | Sheet metal worker, vehicle                   |
| 72135         | 72135         | Sheet metal worker, ornamental                |
| 72135         | 72135         | Sheet metal worker, aircraft                  |
| 72135         | 72135         | Panel beater, aircraft                        |
| 72135         | 72135         | Panel beater, vehicle                         |
| 72136         | 72136         | Marker, sheet metal                           |
| 72139         | 72139         | Other sheet metal workers                     |
| 72141         | 72141         | Structural steel worker, workshop             |
| 72142         | 72142         | Erector, constructional steel                 |
| 72143         | 72143         | Plater, ship                                  |
| 72144         | 72144         | Riveter                                       |
| 72145         | 72145         | Marker, structural metal                      |
| 72146         | 72146         | Shipwright, metal                             |
| 72147         | 72147         | Erector, structural metal                     |
| 72148         | 72148         | Preparer, structural metal                    |
| 72149         | 72149         | Other structural metal preparers and erectors |
| 72151         | 72151         | Rigger, hoisting equipment/construction       |
| 72152         | 72152         | Rigger, hoisting equipment                    |
| 72153         | 72153         | Rigger, logging                               |
| 72154         | 72154         | Rigger, ship                                  |
| 72155         | 72155         | Rigger, petroleum and gas well drilling       |
| 72156         | 72156         | Splicer, rope and cable                       |
| 72157         | 72157         | Rigger, aircraft                              |
| 72158         | 72158         | Rigger, railway cable                         |
| 72159         | 72159         | Other riggers and cable splicer               |
| 72211         | 72211         | Blacksmith                                    |
| 72212         | 72212         | Hammersmith                                   |
| 72213         | 72213         | Operator, drop-hammer                         |
| 72214         | 72214         | Operator, forging-press                       |
| 72215         | 72215         | Toolsmith                                     |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 72219         | 72219         | Other blacksmith, hammersmith and forging-press workers            |
| 72221         | 72221         | Maker, tool and die  |
| 72222         | 72222         | Pattern-maker, metal foundry                                       |
| 72223         | 72223         | Maker, jig and fixture   |
| 72224         | 72224         | Marker, metal  |
| 72225         | 72225         | Keysmith   |
| 72225         | 72225         | Locksmith  |
| 72226         | 72226         | Gunsmith   |
| 72229         | 72229         | Other toolmakers and related workers                               |
| 72231         | 72231         | Grinder, metal   |
| 72232         | 72232         | Sharpener, cutting instruments                                     |
| 72233         | 72233         | Sharpener, machine tools   |
| 72234         | 72234         | Repairer, saw  |
| 72234         | 72234         | Sharpener, saw   |
| 72234         | 72234         | Saw doctor   |
| 72235         | 72235         | Grinder, textile card  |
| 72236         | 72236         | Grinder, crankshaft  |
| 72237         | 72237         | Polisher, metal  |
| 72238         | 72238         | Finisher, metal  |
| 72239         | 72239         | Grinder, thread  |
| 72239         | 72239         | Other metal working machine tool setters and operators             |
| 72311         | 72304         | Mechanic, earth-moving equipment                                   |
| 72312         | 72307         | Mechanic, garage   |
| 72313         | 72307         | Mechanic, motor-cycle  |
| 72314         | 72307         | Mechanic, motor vehicle  |
| 72315         | New           | Chief, mechanic  |
| 72315         | New           | Mechanic, workshop   |
| 72315         | New           | Assistant motor vehicle mechanics and repairers                    |
| 72316         | New           | Workshop, assistant  |
| 72317         | New           | Workshop, maintenance worker                                       |
| 72318         | New           | Foreman, vehicle   |
| 72319         | New           | Other motor vehicle mechanics and repairs                          |
| 72321         | 72308         | Mechanic, aircraft engine  |
| 72329         | New           | Other aircraft engine mechanics and repairers                      |
| 72331         | 72301         | Mechanic, machinery  |
| 72332         | 72302         | Filter, machinery  |
| 72333         | 72303         | Mechanic, office machinery   |
| 72334         | 72305         | Mechanic, mining machinery   |
| 72335         | 72306         | Mechanic, marine engine  |
| 72336         | 72306         | Mechanic, ship   |
| 72336         | New           | Shipyard   |
| 72337         | New           | Mechanic maintenance, estate/plantation                            |
| 72339         | 72309         | Other agriculture and industrial machinery mechanics and repairers |
| 72339         | New           | Mechanic, machine-tool   |
| 72339         | 72309         | Mechanic, industrial machinery                                     |
| 72339         | 72309         | Mechanic, refrigeration and air-conditioning equipment             |
| 72339         | 72309         | Mechanic, plant maintenance  |
| 72339         | 72309         | Oiler and greaser  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                       |
|---------------|---------------|---|
| 72341         | 82816         | Repairer, bicycle                               |
| 72342         | New           | Repairer, beca                                  |
| 73111         | 73111         | Maker and repairer, instrument/precision        |
| 73111         | 73111         | Maker, instrument/scientific                    |
| 73111         | 73111         | Maker, instrument/surgical                      |
| 73111         | 73111         | Maker, photographic equipment                   |
| 73112         | 73112         | Maker and repairer, dental prosthesis           |
| 73113         | 73113         | Maker and repairer, orthopedic appliance        |
| 73114         | 73114         | Maker and repairer, watches and clock           |
| 73115         | 73115         | Maker and repairer, instrument/optical          |
| 73116         | 73116         | Maker and repairer, balance                     |
| 73117         | 73117         | Maker, barometer                                |
| 73117         | 73117         | Maker, instrument/meteorological                |
| 73118         | 73118         | Maker, instrument/nautical                      |
| 73119         | 73119         | Other precision instrument makers and repairers |
| 73121         | 73121         | Turner, musical instrument                      |
| 73122         | 73122         | Maker, stringed-musical instrument              |
| 73122         | 73122         | Maker, piano                                    |
| 73123         | 73123         | Maker, drum                                     |
| 73124         | 73124         | Maker, wood-wind musical instrument             |
| 73125         | 73125         | Maker, metal-wind musical instrument            |
| 73129         | 73129         | Other musical instrument makers and turners     |
| 73131         | 73131         | Jeweller  |
| 73131         | 73131         | Goldsmith                                       |
| 73131         | 73131         | Silversmith                                     |
| 73131         | 73131         | Pewtersmith                                     |
| 73132         | 73132         | Repairer, jewellery                             |
| 73132         | New           | Grader, gold                                    |
| 73133         | 73133         | Slicer, gem                                     |
| 73134         | 73134         | Setter, gem                                     |
| 73135         | 73135         | Roller, precious metal                          |
| 73136         | 73136         | Engraver, jewellery                             |
| 73137         | 73137         | Polisher, gem                                   |
| 73138         | 73138         | Enameller, jewellery                            |
| 73139         | 73139         | Other jewellery and precious-metal workers      |
| 73141         | 73211         | Potter  |
| 73142         | 73312         | Moulder/presser, brick and tile                 |
| 73143         | 73213         | Modeller, pottery and porcelain                 |
| 73144         | 73214         | Caster, pottery and porcelain                   |
| 73145         | 73215         | Turner, pottery and porcelain                   |
| 73145         | 73215         | Thrower, pottery and porcelain                  |
| 73145         | 73215         | Maker, pottery and porcelain mould              |
| 73145         | 73215         | Presser, pottery and porcelain                  |
| 73145         | 73215         | Jiggerer, pottery and porcelain                 |
| 73149         | 73219         | Other potters and related workers               |
| 73151         | 73222         | Bender, glass                                   |
| 73151         | 73221         | Blower, glass                                   |
| 73152         | JPA           | Blower, glass N17                               |
| 73153         | 73223         | Cutter, glass                                   |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 73154         | 73224         | Cutter, optical glass   |
| 73155         | 73225         | Polisher, glass   |
| 73156         | 73226         | Grinder, glass  |
| 73157         | 73227         | Moulder, glass lens   |
| 73158         | 73228         | Finisher, glass   |
| 73159         | New           | Glass frame fabricator  |
| 73159         | 73229         | Other glass makers, cutters, grinders and finishers                               |
| 73161         | 73232         | Etcher, glass   |
| 73161         | 73231         | Engraver, glass   |
| 73162         | 73239         | Sandblaster, glass  |
| 73162         | New           | Dipper, ceramics  |
| 73162         | 73239         | Enameller, glass  |
| 73162         | 73239         | Silverer, mirror  |
| 73162         | 73239         | Painter, glass  |
| 73162         | 73239         | Painter, ceramics   |
| 73163         | 73322         | Electrotyper  |
| 73163         | 73321         | Stereotyper   |
| 73163         | 73329         | Router, printing plate  |
| 73171         | JPA           | Instructor, craft E11   |
| 73172         | New           | Handicraft worker, reed weaving   |
| 73172         | New           | Handicraft worker, stone articles   |
| 73173         | New           | Handicraft worker, wooden articles  |
| 73134         | 74231         | Maker, basket   |
| 73175         | 74232         | Maker, brush  |
| 73176         | 74233         | Weaver, mat   |
| 73177         | 74234         | Maker, broom  |
| 73178         | 74235         | Maker, furniture/rattan   |
| 73178         | 74235         | Maker, furniture/wicker   |
| 73179         | 74239         | Other basketry weavers, brush makers and related workers not elsewhere classified |
| 73181         | New           | Weaver, 'songket'   |
| 73182         | New           | 'Pencanting, batik'   |
| 73183         | New           | Maker, rattan bag   |
| 73189         | New           | Handicraft workers in textile, leather and related materials                      |
| 73191         | New           | Back knife fabricator   |
| 73192         | New           | Batch maker   |
| 73211         | 73311         | Compositor  |
| 73212         | 73312         | Printer   |
| 73213         | 73313         | Typesetter  |
| 73214         | 73314         | Operator, desktop publishing equipment  |
| 73215         | 73315         | Maker, braille plate  |
| 73219         | New           | Other pre-press technicians   |
| 73221         | 73351         | Cutter, stencil/silk-screen   |
| 73222         | 73352         | Printer, silk-screen  |
| 73223         | 73353         | Printer, textile  |
| 73224         | 73354         | Printer, block  |
| 73225         | 73355         | Press-operator, embossing   |
| 73226         | 73356         | Tracer, textile design  |
| 73229         | 73359         | Other printers  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 73231         | 73331         | Bookbinder   |
| 73232         | 73331         | Cutter, paper  |
| 73233         | 73331         | Mounter, map and chart   |
| 73234         | 73332         | Embosser, book   |
| 73235         | 73332         | Finisher, book   |
| 73239         | New           | Other print finishing and binding workers                        |
| 73241         | 73341         | Engraver, printing/metal plate                                   |
| 73242         | 73342         | Etcher, printing/metal plate                                     |
| 73243         | 73343         | Engraver, printing/lithographic stone                            |
| 73244         | 73344         | Photo-engraver   |
| 73245         | 73345         | Worker, darkroom   |
| 73245         | 73345         | Developer, film/color and black and white                        |
| 73246         | 73346         | Developer, film/x-ray  |
| 73249         | 73349         | Other printing and photo engravers and etchers                   |
| 74111         | 74123         | Electrician, building  |
| 74112         | New           | Electrician, construction  |
| 74121         | New           | Chargeman, high voltage/restriction                              |
| 74121         | 72411         | Fitter, electrical   |
| 74121         | 72412         | Fitter, electrical/elevator and related equipment                |
| 74122         | JPA           | Electrical chargeman R17   |
| 74123         | New           | Electrician, maintenance   |
| 74123         | New           | Wireman  |
| 74124         | 72414         | Electrician, ship  |
| 74125         | 72415         | Electrician, vehicle   |
| 74126         | 72416         | Electrician, aircraft  |
| 74127         | 72417         | Electrician, stage and studio                                    |
| 74128         | 72418         | Electrical repairman, household appliance                        |
| 74129         | New           | Foreman, electrical  |
| 74129         | New           | Foreman, maintenance   |
| 74129         | New           | Generator  |
| 74129         | 72419         | Fitter, electrical/office-machinery                              |
| 74129         | 72419         | Fitter, electrical/motors and dynamos                            |
| 74129         | New           | Fitter, maintenance  |
| 74131         | 72441         | Line worker, electrical power                                    |
| 74132         | 72442         | Cable line worker, telephone/telegraph/television                |
| 74133         | 72443         | Jointer, cable/electric  |
| 74134         | 72444         | Layer, underground cable   |
| 74139         | 72449         | Other electrical line installers, repairers and cable jointers   |
| 74211         | 72421         | Fitter, electronics  |
| 74211         | 72421         | Repairer, electronics  |
| 74212         | 72422         | Fitter, electronics/radio, television, video and radar equipment |
| 74213         | 72423         | Fitter, electronics/signaling system                             |
| 74214         | 72424         | Fitter, electronics/medical equipment                            |
| 74215         | 72425         | Fitter, electronics/computer and related electronic equipment    |
| 74216         | 72426         | Fitter, electronics/industrial equipment                         |
| 74217         | 72427         | Fitter, electronics/meteorological equipment                     |
| 74217         | New           | Operator, network  |
| 74217         | New           | Operator, wireless   |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 74217         | New           | Driver, network   |
| 74218         | JPA           | Operator, wireless N17  |
| 74219         | 72429         | Other electronics fitters, mechanics and services                       |
| 74221         | 72431         | Telephone wireman   |
| 74221         | 72431         | Installer, telephone and telegraph                                      |
| 74222         | 72432         | Mechanic, telephone and telegraph                                       |
| 74222         | 72432         | Servicer telephone and telegraph  |
| 74223         | New           | Worker, IT support  |
| 74229         | 72439         | Other information and communications technology installers and services |
| 75111         | 74111         | Slaughterer   |
| 75112         | 74112         | Flayer  |
| 75112         | New           | Butcher   |
| 75113         | 74113         | Fishmonger  |
| 75114         | 74114         | Curer, meat/fish  |
| 75115         | 74115         | Salter, meat/fish   |
| 75115         | 74115         | Pickler, meat/fish  |
| 75116         | 74116         | Maker, sausage  |
| 75117         | New           | Grader, fish  |
| 75119         | New           | Other butchers, fishmongers and related food preparers                  |
| 75121         | 74121         | Baker   |
| 75122         | 74122         | Baker, bread  |
| 75123         | 74123         | Baker, pastry   |
| 75124         | 74124         | Maker, confectionary  |
| 75125         | 74125         | Maker, chocolate  |
| 75126         | 74126         | Maker, yeast  |
| 75127         | 74127         | Maker, noodle   |
| 75128         | 74128         | Maker, chewing-gum  |
| 75129         | 74129         | Other bakers, pastry – cooks and confectionery makers                   |
| 75129         | 74129         | Weigher, ingredients  |
| 75131         | New           | Entrepreneur, cheese  |
| 75132         | New           | Maker, yogurt   |
| 75141         | 74131         | Preserver, fruit  |
| 75142         | 74132         | Preserver, vegetable  |
| 75143         | 74133         | Maker, fruit juice  |
| 75143         | 74133         | Maker, syrup  |
| 75144         | 74133         | Maker, vegetable juice  |
| 75145         | 74134         | Expeller, oil   |
| 75151         | 74141         | Grader/taster, tea  |
| 75152         | 74142         | Grader/taster, coffee   |
| 75153         | 74143         | Grader/taster, food   |
| 75154         | 74144         | Grader/taster, liquor   |
| 75154         | 74144         | Grader/taster, wine   |
| 75155         | 74145         | Grader, meat  |
| 75156         | 74146         | Grader, fruit/vegetable   |
| 75157         | 74147         | Taster, juice   |
| 75158         | 74148         | Grader, oil   |
| 75159         | 74149         | Grader/examiner/sorter, paddy   |
| 75159         | 74149         | Other food and beverage tasters and graders                             |



| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 75161         | 74151         | Grader, tobacco                                     |
| 75162         | 74152         | Maker, cigar  |
| 75163         | 74153         | Maker, cigarette                                    |
| 75164         | 74154         | Quality checker, cigarette                          |
| 75169         | 74159         | Stripper, tobacco                                   |
| 75169         | 74159         | Curer, tobacco                                      |
| 75169         | 74159         | Dryer, tobacco / slicer, tobacco                    |
| 75169         | 74159         | Other tobacco preparers and tobacco products makers |
| 75211         | 74211         | Impregnator, wood                                   |
| 75211         | 74211         | Treater, wood                                       |
| 75212         | 74212         | Seasoner, wood                                      |
| 75213         | 74213         | Grader, wood  |
| 75214         | 74214         | Grader, veneer                                      |
| 75219         | 74219         | Other wood treaters                                 |
| 75221         | 74221         | Maker, cabinet/wooden                               |
| 75222         | 74222         | Builder, bullock cart                               |
| 75223         | 74223         | Maker, furniture/wooden                             |
| 75224         | 74224         | Maker, coffin                                       |
| 75225         | 74225         | Maker, clog   |
| 75226         | 74226         | Maker, model/wooden                                 |
| 75227         | 74227         | Veneer applier                                      |
| 75228         | 74228         | Maker, picture frame                                |
| 75229         | 74229         | Turner, wood (hand)                                 |
| 75229         | 74229         | Inlayer, marquetry                                  |
| 75229         | 74229         | Other cabinet-makers and related workers            |
| 75229         | 74229         | Pattern-maker, wood patterns                        |
| 75229         | 74229         | Maker, toy/wood                                     |
| 75229         | 74229         | Maker, sports equipment/wood                        |
| 75229         | 74229         | Polisher, wood                                      |
| 75229         | 74229         | Lacquerer, wood                                     |
| 75229         | 74229         | Carver, wood  |
| 75229         | 74229         | Marker, woodworking                                 |
| 75231         | New           | Adjuster, wood machine                              |
| 75232         | New           | Operator, wood machine                              |
| 75233         | New           | Setter, wood machine                                |
| 75311         | 74321         | Dressmaker  |
| 75311         | 74321         | Tailor  |
| 75312         | 74322         | Milliner  |
| 75312         | 74322         | Maker, cap  |
| 75312         | 74322         | Maker, hat  |
| 75313         | 74323         | Maker, wig  |
| 75314         | New           | Operator, sewing                                    |
| 75314         | 74391         | Sewer   |
| 75315         | New           | Worker, sewing                                      |
| 75315         | 74392         | Carpet mender                                       |
| 75316         | 74393         | Embroiderer, hand                                   |
| 75317         | 74394         | Maker, artificial flower                            |
| 75318         | 74395         | Maker, doll and stuffed-toy                         |
| 75319         | 74399         | Repairer, fabrics/knitted                           |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 75319         | 74399         | Lacer, hand  |
| 75319         | 74397         | Maker, sack  |
| 75319         | 74398         | Maker, sail, tent and awning                         |
| 75319         | 74396         | Maker, umbrella                                      |
| 75319         | 74399         | Maker, hand/braid                                    |
| 75319         | 74399         | Maker, hand/net                                      |
| 75319         | 74399         | Loom threader, hand                                  |
| 75319         | 74399         | Weaver, hand/cloth                                   |
| 75319         | 74399         | Crocheter, hand                                      |
| 75319         | 74399         | Knitter, hand  |
| 75319         | 74329         | Other tailors, dressmakers, furriers and hatters     |
| 75321         | 74331         | Pattern-maker, garment                               |
| 75322         | 74332         | Pattern-maker, hat and cap                           |
| 75323         | 74333         | Maker, garment                                       |
| 75324         | 74334         | Cutter, garment                                      |
| 75325         | 74335         | Cutter, tent   |
| 75325         | 74335         | Cutter, sail   |
| 75325         | 74335         | Cutter, umbrella                                     |
| 75325         | 74335         | Cutter, gloves                                       |
| 75325         | 74335         | Cutter, mattres                                      |
| 75326         | New           | Pattern-maker, paper                                 |
| 75326         | 74336         | Pattern-maker, tents                                 |
| 75326         | 74336         | Pattern-maker, sails                                 |
| 75326         | 74336         | Pattern-maker, umbrella                              |
| 75326         | 74336         | Pattern-maker, gloves                                |
| 75326         | 74336         | Pattern-maker, mattres                               |
| 75329         | 74339         | Other garment and related pattern-makers and cutters |
| 75331         | 74421         | Shoemaker  |
| 75332         | 74422         | Maker, footwear/orthopedic                           |
| 75332         | 74422         | Maker, footwear/surgical                             |
| 75333         | 74423         | Repairer, footwear                                   |
| 75333         | 74423         | Cobbler  |
| 75334         | 74424         | Pattern-maker, shoe                                  |
| 75335         | 74425         | Maker, leather goods                                 |
| 75336         | 74426         | Maker, footwear/sports                               |
| 75336         | 74426         | Maker, sports equipment/footwear                     |
| 75339         | 74429         | Other shoemakers and related workers                 |
| 75341         | 74341         | Upholsterer, furniture                               |
| 75342         | 74342         | Upholsterer, vehicle                                 |
| 75343         | 74343         | Maker, mattres                                       |
| 75344         | 74344         | Maker, cushion                                       |
| 75344         | 74344         | Maker, soft furnishing                               |
| 75345         | 74345         | Maker, bedding                                       |
| 75346         | 74346         | Maker, quilt   |
| 75347         | 74347         | Upholsterer, aircraft                                |
| 75348         | 74348         | Upholsterer, railway carriage                        |
| 75349         | 74349         | Other upholsterers and related workers               |
| 75351         | 74410         | Pelt dressers, tanners and fellmonger                |
| 75411         | 72160         | Diver construction                                   |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 75411         | 72160         | Worker, underwater                                    |
| 75412         | New           | Dive master   |
| 75413         | New           | Dive boatman  |
| 75421         | 71113         | Blaster   |
| 75421         | 71113         | Shot firer  |
| 75431         | New           | Grader, fibre   |
| 75441         | 51394         | Controller, pest                                      |
| 75442         | New           | Forging worker, bee                                   |
| 75442         | New           | Forging worker, mosquito                              |
| 75442         | New           | Forging worker, ant                                   |
| 75443         | New           | Fumigation operator, service                          |
| 75443         | New           | Fumigation operator, weed                             |
| 75443         | New           | Fumigation operator, soil                             |
| 81111         | 81111         | Machine operator, cutting/mine                        |
| 81111         | 81112         | Machine operator, drilling/mine                       |
| 81111         | 81114         | Machine operator, mining/continuous                   |
| 81111         | 71111         | Miner   |
| 81111         | 71114         | Sampler, mine   |
| 81112         | 81113         | Machine operator, drilling/quarry                     |
| 81112         | 71112         | Quarier   |
| 81112         | 71115         | Sampler, quarry                                       |
| 81119         | New           | Other miners and quarries                             |
| 81119         | 71119         | Timberman, underground                                |
| 81121         | 81124         | Machine operator, stone processing                    |
| 81121         | 81124         | Machine operator, splitting/stone                     |
| 81121         | 81125         | Machine operator, crushing/coal                       |
| 81122         | 81124         | Machine operator, milling/stone                       |
| 81122         | 81122         | Machine operator, milling/mineral                     |
| 81123         | 81123         | Attendant, trommel                                    |
| 81123         | 81123         | Operator magnetic-separator                           |
| 81123         | 81123         | Worker, minerals floatation                           |
| 81123         | 81123         | Dresser, tin ore                                      |
| 81124         | 81126         | Keeper, jig   |
| 81129         | New           | Worker, stone   |
| 81129         | 81129         | Other mineral and stone processing plant operators    |
| 81131         | 81118         | Operator, drilling equipment/cable (oil & gas wells)  |
| 81131         | 81118         | Operator, drilling equipment/rotary (oil & gas wells) |
| 81131         | 81117         | Operator, drilling equipment/wells                    |
| 81132         | 81116         | Operator, derrick/oil and gas wells                   |
| 81132         | 81118         | Operator, pulling equipment/oil and gas wells         |
| 81133         | 81115         | Machine operator boring equipment/well                |
| 81141         | 82127         | Machine operator, concrete mixing                     |
| 81141         | 82122         | Machine operator, cast concrete products              |
| 81141         | 82128         | Machine operator, cement product                      |
| 81142         | 82123         | Machine operator, asbestos                            |
| 81142         | 82124         | Machine operator, asbestos-cement product             |
| 81143         | 82125         | Machine operator, cast stone                          |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 81143         | 82121         | Machine operator, terrazzo tile                                      |
| 81143         | 82126         | Machine operator, abrasive coating                                   |
| 81149         | 82129         | Other cement, stone and other mineral products machine operators     |
| 81211         | 81211         | Converter blowing operator, steel converting                         |
| 81211         | 81212         | Furnace-operator, refining/steel (open-hearth furnace)               |
| 81211         | 81211         | Furnace-operator, converting/steel                                   |
| 81212         | 81228         | Hot-roller, steel  |
| 81212         | 81228         | Continuous-mill roller, steel/cold-roller, steel                     |
| 81213         | 81221         | Furnace-operator, melting/metal                                      |
| 81213         | 81213         | Furnace-operator, smelting/metal (blast-furnace)                     |
| 81213         | 81225         | Furnace-operator, reheating/metal                                    |
| 81213         | 81235         | Furnace-operator, case-hardening/metal                               |
| 81213         | 81232         | Furnace-operator, hardening/metal                                    |
| 81213         | 81214         | Furnace-operator, refining/non-ferrous metal                         |
| 81213         | 81234         | Furnace-operator, heat-treating/metal                                |
| 81214         | 81241         | Machine operator, drawing/metal                                      |
| 81214         | 81223         | Machine operator, die-casting  |
| 81214         | 81222         | Machine operator, casting metal                                      |
| 81214         | 81226         | Machine operator, casting/centrifugal (cylindrical metal product)    |
| 81214         | 81227         | Machine operator, casting/continuous rod (non-ferrous metal)         |
| 81214         | 81224         | Operator, rolling mill/non-ferrous metal                             |
| 81215         | 81228         | Operator, mill table   |
| 81215         | 81233         | Temperer, metal  |
| 81215         | 81241         | Drawer, metal  |
| 81215         | 81242         | Extruder metal   |
| 81215         | 81231         | Annealer, metal  |
| 81216         | 81244         | Machine operator, barbed-wire  |
| 81216         | 81243         | Machine operator, seamless pipe and tube                             |
| 81216         | 81249         | Machine operator, stripping and cutting/wire                         |
| 81216         | 81241         | Machine operator, drawing/wire                                       |
| 81216         | 81249         | Machine operator, insulating   |
| 81216         | 81242         | Machine operator, extruding/wire                                     |
| 81216         | 81241         | Drawer, wire   |
| 81216         | 81243         | Drawer, seamless pipe and tube                                       |
| 81219         | 81249         | Other metal processing and finishing plant operators                 |
| 81221         | 82221         | Machine operator, electroplating/metal                               |
| 81221         | 82221         | Electroplater  |
| 81222         | 82222         | Hot-dip plater   |
| 81222         | 82222         | Machine operator, dipping/metal                                      |
| 81223         | 82223         | Machine operator, galvanishing/metal                                 |
| 81223         | 82223         | Galvaniser   |
| 81224         | 82226         | Machine operator, sandblaster equipment                              |
| 81224         | 82226         | Sandblaster, metal   |
| 81225         | 82227         | Machine operator, finishing/cast metal articles                      |
| 81225         | 82227         | Casting finisher   |
| 81225         | 82228         | Cleaner, metal   |
| 81226         | 82224         | Machine operator, sprying/metal                                      |
| 81227         | 82225         | Oxidizer   |
| 81228         | New           | Operator, moulding   |
| 81311         | 81515         | Machine operators, paint-mixing                                      |
| 81311         | 81511         | Machine operator, mixing and blending/chemical and related processes |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 81311         | 81516         | Machine operators, glue-mixing   |
| 81311         | 81514         | Machine operator, pulverising/chemical and related processes                           |
| 81311         | 81513         | Roll-mill operator, chemical and related processes                                     |
| 81311         | 81512         | Operator, crusher/chemical and related processes                                       |
| 81311         | 81517         | Compounder, match/chemical and related processes                                       |
| 81312         | 81528         | Operator, heat-treating plant/chemical and related process                             |
| 81312         | 81523         | Operator, drier/chemical and related processes   |
| 81312         | 81521         | Operator, cooking equipment/chemical and related processes                             |
| 81312         | 81522         | Operator, roasting equipment/chemical and related processes                            |
| 81312         | 81526         | Operator, retort/chemical and related processes  |
| 81312         | 81527         | Operator, spray-dried/chemical and related processes                                   |
| 81312         | 81525         | Kiln-operator, chemical and related processes  |
| 81312         | 81524         | Cement furnaceman  |
| 81312         | 81522         | Roaster, chemical processes  |
| 81312         | 81521         | Cooker, chemical processes   |
| 81313         | 81531         | Press-operator, filter/chemical and related processes                                  |
| 81313         | 81531         | Machine operator, sieving/chemical and related processes                               |
| 81313         | 81534         | Operator, separator/chemical and related processes                                     |
| 81313         | 81535         | Operator, treating equipment/crude oil   |
| 81313         | 81533         | Rotary drum filterer   |
| 81314         | 81597         | Operator, acid plant   |
| 81314         | 81598         | Operator, fertilizer plant   |
| 81314         | 81592         | Operator, bleacher/chemical  |
| 81314         | 81543         | Operator, vacuum pan/chemical and related processes (except petroleum and natural gas) |
| 81314         | 81542         | Operator, converter/chemical processes (except petroleum and natural gas)              |
| 81314         | 81543         | Operator, evaporator   |
| 81314         | 81541         | Operator, still/batch (chemical processes except petroleum and natural gas)            |
| 81314         | 81541         | Operator, still/chemical processes   |
| 81314         | 81541         | Operator, still/continuous (chemical processes except petroleum and natural gas)       |
| 81314         | 81541         | Operator, still/turpentine   |
| 81314         | 81594         | Kiln-operator, charcoal  |
| 81314         | 81599         | Sulphur burner   |
| 81314         | 81595         | Foam maker, chemical   |
| 81314         | 81596         | Yarn maker, synthetic  |
| 81314         | 81542         | Reactor-converter (chemical processes)   |
| 81314         | 82229         | Enameller, chemical  |
| 81315         | 81599         | Operator, treater/radioactive waste  |
| 81316         | 82211         | Machine operator, detergent production   |
| 81316         | 81594         | Machine operator, coke production  |
| 81316         | 81593         | Machine operator, mosquito coil production   |
| 81316         | 82212         | Machine operator pharmaceutical products   |
| 81316         | 82213         | Machine operator, toiletry products  |
| 81316         | 82211         | Maker, soap  |
| 81317         | 82299         | Machine operator, washing/chemical and related material                                |
| 81317         | 82293         | Machine operator, explosives production  |
| 81317         | 82299         | Machine operator, fireworks production   |
| 81317         | 82294         | Machine operator, halogen gas production   |
| 81317         | 82299         | Machine operator, hydrogen gas production  |
| 81317         | 82297         | Machine operator, chlorine gas production  |
| 81317         | 82292         | Machine operator, candle production  |
| 81317         | 82295         | Machine operator, linoleum production  |
| 81317         | 82296         | Machine operator, match production   |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 81317         | 82299         | Machine operator, pencil production                                |
| 81317         | 82298         | Machine operator, lead production                                  |
| 81317         | 82291         | Machine operator, ammunition products                              |
| 81321         | 82234         | Machine operator, photography printing                             |
| 81321         | 82231         | Machine operator, photograph developing (colour and black & white) |
| 81321         | New           | Assistant, scanning and filming                                    |
| 81322         | JPA           | Sub assistant, film laboratory C17                                 |
| 81323         | 82234         | Machine operator, film processing machine                          |
| 81323         | 82232         | Machine operator, photograph enlarging                             |
| 81323         | 82237         | Machine operator, photographic film production                     |
| 81323         | 82236         | Machine operator, film paper production                            |
| 81323         | 82235         | Machine operator, photographic plate production                    |
| 81323         | 82238         | Machine operator, photographic products                            |
| 81324         | JPA           | Technician, audio-visual N17                                       |
| 81325         | JPA           | Operator, camera offset/platemaker N17                             |
| 81326         | JPA           | Assistant operator, camera N11                                     |
| 81327         | 31318         | Operator, audio-visual aids  |
| 81327         | 31318         | Operator, recording equipment, sound and image                     |
| 81327         | 31316         | Operator, camera/television  |
| 81327         | 31315         | Operator, camera/motion picture                                    |
| 81327         | 31318         | Operator, film-recorder  |
| 81327         | 31318         | Operator, video tape-recorder                                      |
| 81327         | 31317         | Operator, studio equipment/radio and television                    |
| 81327         | 31318         | Operator, telecine   |
| 81328         | New           | Photo finisher   |
| 81329         | New           | Other photographic products machine operator and related           |
| 81411         | 82311         | Attendant, mill/rubber   |
| 81411         | 82311         | Machine operator, milling/rubber                                   |
| 81411         | 82311         | Operator, banbury-mixer/rubber                                     |
| 81412         | 82312         | Machine operator, extruding/rubber                                 |
| 81413         | 82313         | Press-operator, moulding/rubber                                    |
| 81414         | 82314         | Machine operator, calender/rubber                                  |
| 81415         | 82315         | Machine operator, cutting/rubber                                   |
| 81416         | 82316         | Machine operator, tyre production                                  |
| 81416         | 82317         | Tyre retreader   |
| 81417         | 82318         | Air-bag builder  |
| 81417         | 82318         | Foam maker, rubber   |
| 81417         | 82318         | Machine operator, rubber products                                  |
| 81417         | 82318         | Machine operator, rubber stamp production                          |
| 81417         | 82318         | Maker, hose  |
| 81419         | 82319         | Other rubber production machine operators                          |
| 81421         | 82321         | Machine operator, mixing/plastics                                  |
| 81422         | 82322         | Press-machine operator, laminating/plastics                        |
| 81423         | 82323         | Machine operator, extruding/plastics                               |
| 81424         | 82324         | Machine operator, injection moulding/plastics                      |
| 81425         | 82325         | Machine operator, compression moulding/plastics                    |
| 81426         | 82326         | Machine operator, vacuum plastic-forming                           |
| 81427         | 82328         | Machine operator, embossing/plastics                               |
| 81427         | 82327         | Machine operator, tableting/plastics                               |
| 81428         | 82329         | Machine operator, plastic production                               |
| 81429         | 82329         | Machine operator, plastic product                                  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 81429         | 82329         | Other plastics product machine operators                      |
| 81431         | 82531         | Machine operator, carton and paper box production             |
| 81431         | 82538         | Machine operator, paper products                              |
| 81432         | 82533         | Machine operator, cellophane bag production                   |
| 81432         | 82532         | Machine operator, envelope & paper bag production             |
| 81433         | 82534         | Machine operator, straw production                            |
| 81434         | 82536         | Machine operator, joss paper production                       |
| 81435         | 82537         | Machine operator, cardboard products                          |
| 81435         | 82535         | Press-operator, cardboard                                     |
| 81439         | 82539         | Other paper products machine operators                        |
| 81511         | 82614         | Machine operator, twisting/thread and yarn                    |
| 81511         | 82612         | Winder, thread and yarn                                       |
| 81511         | 82611         | Spinner, thread and yarn                                      |
| 81511         | 82615         | Reeler, silk  |
| 81512         | 82613         | Hagotan operator, abaca hemp                                  |
| 81512         | 82613         | Machine operator, cotton-mixing                               |
| 81512         | 82613         | Machine operator, fibre preparing                             |
| 81513         | 82615         | Machine operator, rope-laying                                 |
| 81514         | 82619         | Instructor, spinner   |
| 81519         | New           | Other fibre preparing, spinning and winding machine operators |
| 81521         | 82621         | Instructor, weaving   |
| 81521         | 82627         | Machine operator, warping/beam (textile weaving)              |
| 81521         | 82621         | Machine operator, weaving                                     |
| 81521         | 82624         | Machine operator, weaving/carpet                              |
| 81522         | 82622         | Machine operator, knitting                                    |
| 81522         | 82623         | Machine operator, net production                              |
| 81523         | 82621         | Wrinkle machine operator, textile                             |
| 81523         | 82621         | Machine operator, size/textile                                |
| 81524         | 82622         | Assembler, weaving machine                                    |
| 81524         | 82625         | Jacquard card cutter  |
| 81525         | 82626         | Machine operator, lace production                             |
| 81525         | 82628         | Fabric repairer   |
| 81529         | New           | Other weaving and knitting machine operators                  |
| 81531         | 82631         | Machine operator, sewing                                      |
| 81531         | 82699         | Leather sewer, machine  |
| 81532         | 82632         | Crocheter, machine  |
| 81533         | 82632         | Embroiderer, machine  |
| 81539         | New           | Other sewing machine operators                                |
| 81541         | 82641         | Machine operator, bleaching/textile                           |
| 81542         | 82642         | Machine operator, dyeing                                      |
| 81543         | 82643         | Machine operator, starch                                      |
| 81544         | 82644         | Machine operator, washing and shrinking/textile               |
| 81545         | 82645         | Machine operator, dyeing/textile                              |
| 81546         | 82646         | Machine operator, dry-cleaning                                |
| 81547         | 82647         | Operator, calendar/textile                                    |
| 81549         | 82649         | Other textile treating machine operators                      |
| 81551         | 82651         | Machine operator, hide processing                             |
| 81552         | 82652         | Machine operator, flesing/hide                                |



| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 81553         | 82653         | Machine operator, dehairing/hide   |
| 81554         | 82654         | Machine operator, tanning  |
| 81555         | 82655         | Machine operator, staining/leather   |
| 81556         | 82656         | Machine operator, cutting/leather  |
| 81559         | New           | Other fur and leather preparing machine operators                            |
| 81561         | 82661         | Machine operator, footwear production  |
| 81561         | 82661         | Machine operator, shoe production  |
| 81562         | 82662         | Machine operator, footwear production/orthopaedic                            |
| 81563         | 82663         | Machine operator, footwear production/sports                                 |
| 81569         | New           | Other shoemaking and related machine operators                               |
| 81571         | New           | Machine operator, dyeing/textile fibres                                      |
| 81572         | New           | Machine operator, laundering   |
| 81573         | New           | Machine operator, pressing/laundry   |
| 81591         | 82691         | Machine operator, braid production   |
| 81592         | 82692         | Machine operator, cutting/garments   |
| 81592         | 82692         | Cutter, leather garment  |
| 81593         | 82693         | Machine operator, cutting/textile  |
| 81594         | 82694         | Machine operator, hat making   |
| 81594         | 82695         | Machine operator, mattress production  |
| 81595         | 82696         | Machine operator, pattern-making/leather                                     |
| 81596         | 82697         | Machine operator, pattern-making/textile                                     |
| 81597         | 82699         | Machine operator, folding/cloth  |
| 81599         | 82699         | Other textile and leather products machine operator not elsewhere classified |
| 81601         | 82715         | Machine operator, meat   |
| 81601         | 82714         | Machine operator, fish processing  |
| 81601         | 82714         | Machine operator, meal processing  |
| 81601         | 82713         | Machine operator, belacan production   |
| 81601         | 82712         | Machine operator, fish meal production                                       |
| 81601         | 82711         | Machine operator, sausage production   |
| 81601         | 82717         | Machine operator, canning/meat/food  |
| 81601         | 82716         | Machine operator, canning/fish   |
| 81602         | 82721         | Attendant, churn/dairy products  |
| 81602         | 82721         | Machine operator, processing/dairy products                                  |
| 81602         | 82722         | Machine operator, ice-cream production                                       |
| 81602         | 82725         | Machine operator, milk powder production                                     |
| 81602         | 82723         | Machine operator, churn/dairy products                                       |
| 81602         | 82724         | Machine operator, butter products  |
| 81602         | 82726         | Operator, vacuum pan/condensed milk  |
| 81602         | 82723         | Operator, sterilizer/dairy products  |
| 81602         | 82724         | Cream separator, dairy   |
| 81603         | 82731         | Attendant, mill/foodgrains   |
| 81603         | 82735         | Machine operator, milling/mustard seeds                                      |
| 81603         | New           | Assistant miller   |
| 81603         | 82737         | Mixer, spice   |
| 81603         | 82731         | Blender, flour   |
| 81603         | 82731         | Miller, grain  |
| 81603         | 82736         | Grinder, feed  |
| 81603         | 82732         | Miller, rice   |
| 81603         | 82733         | Miller, spice  |
| 81603         | 82734         | Miller, tapioca  |



| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 81604         | 82747         | Machine operator, wafer-baking                          |
| 81604         | 82749         | Machine operator, yeast making                          |
| 81604         | 82749         | Machine operator, cereal production                     |
| 81604         | 82744         | Machine operator, chocolate production                  |
| 81604         | 82743         | Machine operator, confectionery production              |
| 81604         | 82745         | Machine operator, noodle production                     |
| 81604         | 82748         | Machine operator, pasta production                      |
| 81604         | 82741         | Machine operator, pastry production                     |
| 81604         | 82742         | Machine operator, bread production                      |
| 81604         | 82746         | Machine operator, sago production                       |
| 81605         | 82759         | Attendant, sterilizing oil palm                         |
| 81605         | 82751         | Press-operator, fruit                                   |
| 81605         | 82752         | Press-operator, edible oils                             |
| 81605         | 82759         | Machine operator, edible nut processing                 |
| 81605         | 82753         | Machine operator, margarine processing                  |
| 81605         | 82754         | Machine operator, vegetable processing                  |
| 81605         | 82755         | Machine operator, refining/oils and fats                |
| 81605         | 82759         | Machine operator, fruit juice production                |
| 81605         | 82759         | Machine operator, vegetable juice production            |
| 81605         | 82758         | Machine operator, sauce production                      |
| 81605         | 82757         | Machine operator, canning (food canning and preserving) |
| 81605         | 82753         | Operator, margarine plant                               |
| 81605         | 82755         | Operator, fractionation plant                           |
| 81605         | 82759         | Nut roaster   |
| 81605         | 82759         | Maker, jam (machine)                                    |
| 81605         | 82759         | Maker, peanut butter                                    |
| 81605         | 82758         | Preserver, sauces and condiments                        |
| 81605         | 82752         | Miller, oil seed/palm oil                               |
| 81605         | 82756         | Dehydrator, foodstuffs                                  |
| 81606         | 82760         | Operator, processing and refining/sugar                 |
| 81607         | 82777         | Attendant, pasteurizer (brewery)                        |
| 81607         | 82775         | Attendant, filtration                                   |
| 81607         | 82771         | Machine operator, brewing/spirits                       |
| 81607         | 82779         | Machine operator, vinegar making                        |
| 81607         | 82779         | Machine operator, liquor production                     |
| 81607         | 82778         | Machine operator, soft-drinks production                |
| 81607         | 82772         | Machine operator, distilling/spirits                    |
| 81607         | 82773         | Kiln-operator, matting/spirit                           |
| 81607         | 82776         | Operator, syrup-mixing plant                            |
| 81607         | 82771         | Operator, germination equipment/malting                 |
| 81607         | 82771         | Maker, germination equipment/malting                    |
| 81607         | 82774         | Operator, fermentation equipment/spirits                |
| 81607         | 82779         | Carbonation man (malt liquor)                           |
| 81607         | 82771         | Brewer  |
| 81608         | 82782         | Machine operator, cigar production                      |
| 81608         | 82781         | Machine operator, cigarette production                  |
| 81608         | 82783         | Machine operator, tobacco production                    |
| 81609         | 82794         | Machine operator, feed mixing                           |
| 81609         | 82793         | Machine operator, cocoa-bean processing                 |
| 81609         | 82792         | Machine operator, coffee-bean processing                |
| 81609         | 82791         | Machine operator, tea-leaf processing                   |
| 81609         | 82796         | Machine operator, soup powder production                |
| 81609         | 82795         | Machine operator, bean curd production                  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                    |
|---------------|---------------|--|
| 81711         | 81421         | Operator, digester                           |
| 81712         | 81422         | Machine operator, chipping                   |
| 81713         | 81423         | Operator, beater                             |
| 81714         | 81424         | Machine operator, grinding/wood              |
| 81715         | 81425         | Operator, bleach machine                     |
| 81716         | 81426         | Cutter, paper pulp                           |
| 81717         | 81427         | Valve operator, paper pulp                   |
| 81718         | 81435         | Machine operator, cardboard production       |
| 81718         | 81431         | Machine operator, papermaking                |
| 81718         | 81434         | Machine operator, cutting/paper              |
| 81718         | 81433         | Machine operator, coating                    |
| 81718         | 81428         | Operator, paper-pulp plant                   |
| 81718         | 81432         | Operator, supercalender/paper                |
| 81719         | 81429         | Other pulp and papermaking plant operators   |
| 81721         | 81411         | Operator, sawmill                            |
| 81721         | New           | Operator, wet timber sawing                  |
| 81721         | 81411         | Sawyer, wood                                 |
| 81721         | 81411         | Sawyer, sawmill                              |
| 81722         | 81412         | Lathe-operator, cutting/veneer               |
| 81722         | 81412         | Lathe feeder, veneer                         |
| 81722         | 81412         | Cutter, veneer                               |
| 81723         | 81413         | Plywood core layer                           |
| 81724         | 81414         | Press-operator, plywood                      |
| 81725         | 81415         | Machine operator, seasoning/wood             |
| 81726         | 81416         | Machine operator, incising (wood preserving) |
| 81726         | 81416         | Machine operator, treating/wood              |
| 81727         | 81417         | Operator, veneer dryer                       |
| 81728         | 81418         | Operator, auto-clipper                       |
| 81729         | 81419         | Other wood processing plant operators        |
| 81729         | 81419         | Setter, veneer                               |
| 81731         | 82401         | Lathe-operator, woodworking                  |
| 81731         | 82401         | Machinist, wood                              |
| 81732         | 82402         | Sawyer, precision wood                       |
| 81733         | 82403         | Turner, wood (machine)                       |
| 81734         | 82404         | Machine operator, wood-wood                  |
| 81735         | 82405         | Operator, sander                             |
| 81736         | 82406         | Machine operator, carving/wood               |
| 81737         | 82407         | Machine operator, furniture production       |
| 81738         | 82408         | Machine operator, wood products              |
| 81739         | 82409         | Other wood products machine operators        |
| 81811         | New           | Machine operator, mixing/clay                |
| 81812         | New           | Machine operator, mixing/glass               |
| 81821         | 81621         | Operator, boiler/ship                        |
| 81821         | 81621         | Fireperson, ship                             |
| 81822         | 81622         | Operator, boiler plant/steam                 |
| 81822         | 81622         | Boilerman                                    |
| 81823         | 81623         | Operator, steam engine                       |
| 81823         | 81623         | Fireperson, railway engine                   |
| 81829         | 81629         | Other steam engine and boiler operators      |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 81831         | New           | Operator, carton  |
| 81832         | New           | Operator, packing   |
| 81832         | New           | Packer  |
| 81841         | 81311         | Furnace-operator, glass production                          |
| 81841         | New           | Operator, retort  |
| 81842         | 81312         | Furnace-operator, annealing/glass                           |
| 81843         | 81313         | Kiln-operator, brick and tile                               |
| 81844         | 81314         | Machine operator, ceramics production                       |
| 81844         | 81314         | Machine operator, pottery and porcelain                     |
| 81844         | 81314         | Machine operator, casting/pottery and porcelain             |
| 81844         | 81314         | Kiln-operator, pottery and porcelain                        |
| 81845         | 81315         | Furnace-operator, tempering/glass                           |
| 81845         | 81315         | Temperer, glass   |
| 81846         | 81316         | Machine operator, blowing/glass                             |
| 81847         | 81317         | Machine operator, etching/glass                             |
| 81847         | 81317         | Machine operator, engraving/glass                           |
| 81848         | 81318         | Operator, sandblasting equipment/glass                      |
| 81849         | 81395         | Press-operator, filtering/clay                              |
| 81849         | 81319         | Other glass and ceramics kiln and related machine operators |
| 81849         | 81396         | Machine operator, mixing/abrasives                          |
| 81849         | 81319         | Machine operator, pressing/glass                            |
| 81849         | 81319         | Machine operator, brick-and-tile production                 |
| 81849         | 81319         | Machine operator, bottle production                         |
| 81849         | 81394         | Machine operator, glass-fibre production                    |
| 81849         | 81397         | Machine operator, glaze production                          |
| 81849         | 81392         | Operator, pug-mill/clay                                     |
| 81849         | 81391         | Mixer, clay   |
| 81849         | 81392         | Clay maker, pottery   |
| 81849         | 81394         | Maker, fibreglass   |
| 81849         | 81393         | Maker, glaze  |
| 81849         | 81319         | Maker, glass tube   |
| 81849         | 81391         | Mixer, glass  |
| 81849         | 81319         | Polisher, plate-glass                                       |
| 81911         | 82511         | Press-operator, printing/cylinder                           |
| 81912         | 82512         | Press-operator, printing/offset                             |
| 81913         | 82513         | Press-operator, printing/rotary                             |
| 81914         | 82514         | Press-operator, printing/rotogravure                        |
| 81915         | 82515         | Press-operator, printing/direct lithographic                |
| 81916         | 82516         | Press-operator, printing/wallpaper                          |
| 81916         | 82516         | Printer, wallpaper  |
| 81919         | New           | Operator, printing  |
| 81919         | 82519         | Other printing paper machine operators                      |
| 81921         | 82521         | Machine operator, bookbinding                               |
| 81922         | 82522         | Machine operator, embossing/book                            |
| 81929         | 82529         | Other bookbinding machine operators                         |
| 82111         | 82819         | Assembler, engine/marine                                    |
| 82111         | 82811         | Assembler, automobile                                       |
| 82111         | 82813         | Assembler, motor-cycle                                      |
| 82111         | 82817         | Assembler, aircraft   |
| 82112         | 82816         | Assembler, bicycle  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 82113         | 82812         | Assembler, refrigeration and air-conditioning equipment |
| 82114         | 82815         | Assembler, sewing machine                               |
| 82115         | 82819         | Assembler, mining machinery                             |
| 82115         | 82814         | Assembler, earth-moving equipment                       |
| 82115         | 82819         | Assembler, machine tool                                 |
| 82116         | 82819         | Assembler, printing machinery                           |
| 82116         | 82819         | Assembler, textile machinery                            |
| 82117         | 82818         | Assembler, industrial machinery                         |
| 82118         | 82819         | Assembler, wood working machinery                       |
| 82118         | 82819         | Assembler, agricultural machinery                       |
| 82119         | New           | Foreman, mechanical                                     |
| 82119         | New           | Mechanical, fitter                                      |
| 82119         | New           | Other mechanical machinery assemblers                   |
| 82121         | 82821         | Assembler, electrical equipment                         |
| 82122         | 82822         | Assembler, electronic equipment                         |
| 82123         | 82823         | Assembler, semi-conductor                               |
| 82124         | 82824         | Assembler, battery                                      |
| 82125         | 82825         | Assembler, electric-sign                                |
| 82126         | 82829         | Assembler, clock  |
| 82126         | 82829         | Assembler, watches                                      |
| 82126         | 82829         | Assembler, chronometer                                  |
| 82126         | 82829         | Assembler, office machinery                             |
| 82127         | 82826         | Assembler, hearing aid                                  |
| 82127         | 82826         | Assembler, microelectronics equipment                   |
| 82128         | 82827         | Assembler, audio-visual equipment                       |
| 82129         | 82828         | Assembler, precision instrument                         |
| 82131         | 82831         | Assembler, leather products                             |
| 82132         | 82832         | Assembler, metal products                               |
| 82133         | 82833         | Assembler, rubber products                              |
| 82134         | 82834         | Assembler, plastics products                            |
| 82191         | 82903         | Machine operator, labelling                             |
| 82191         | 82902         | Machine operator, packing                               |
| 82191         | 82909         | Machine operator, wrapping                              |
| 82191         | 82901         | Quality checker/tester                                  |
| 82192         | 82909         | Machine operator, sealing                               |
| 82192         | 82905         | Machine operator, capping                               |
| 82193         | 82904         | Machine operator, bottling                              |
| 82193         | 82906         | Machine operator, filling/container                     |
| 82194         | 82907         | Machine operator, insulation                            |
| 82194         | 82908         | Machine operator, pelletising                           |
| 82195         | 82909         | Press operator, baling                                  |
| 82195         | 82909         | Operator, merry-go-round                                |
| 82196         | 82909         | Machine operator, silicon chip production               |
| 82196         | 82909         | Machine operator, splicing/cable and rope               |
| 82196         | 82909         | Operator, marking equipment/road                        |
| 82197         | New           | Operator, sub-assembly manual                           |
| 82198         | 82891         | Assembler, wood products                                |
| 82198         | 82892         | Assembler, paperboard products                          |
| 82199         | 82894         | Assembler, composite products                           |
| 82199         | 82893         | Assembler, textile products                             |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                    |
|---------------|---------------|--|
| 82211         | 82111         | Press-operator, metal/except forging         |
| 82211         | 82111         | Press-operator, punching/metal               |
| 82211         | 82111         | Press-operator, stamping/metal               |
| 82211         | 82111         | Machine operator, spinning/metal             |
| 82211         | 82111         | Machine operator, bending/metal              |
| 82211         | 82111         | Machine operator, reaming/metal              |
| 82211         | 82111         | Machine operator, buffing/metal              |
| 82211         | 82111         | Machine operator, forming/metal              |
| 82211         | 82111         | Machine operator, coremaking/metal           |
| 82211         | 82111         | Machine operator, moulding/metal             |
| 82211         | 82111         | Machine operator, flamecutting/metal         |
| 82211         | 82111         | Machine operator, cutting/metal              |
| 82211         | 82111         | Machine operator, sharpening/metal           |
| 82211         | 82111         | Machine operator, wiring/electric            |
| 82211         | 82111         | Machine operator, forging/metal              |
| 82211         | 82111         | Machine operator, toy production/metal       |
| 82211         | 82111         | Machine operator, wire goods production      |
| 82211         | 82111         | Machine operator, boiler production          |
| 82211         | 82111         | Machine operator, clock production           |
| 82211         | 82111         | Machine operator, watches production         |
| 82211         | 82111         | Machine operator, needle production          |
| 82211         | 82111         | Machine operator, cable production           |
| 82211         | 82111         | Machine operator, nut production/metal       |
| 82211         | 82111         | Machine operator, pipe production            |
| 82211         | 82111         | Machine operator, nail production            |
| 82211         | 82111         | Machine operator, jewellery production       |
| 82211         | 82111         | Machine operator, commutator production      |
| 82211         | 82111         | Machine operator, tool production            |
| 82211         | 82111         | Machine operator, rivet production           |
| 82211         | 82111         | Machine operator, zip production             |
| 82211         | 82111         | Machine operator, burnishing/metal           |
| 82211         | 82111         | Machine operator, etching/metal              |
| 82211         | 82111         | Machine operator, welding/metal              |
| 82211         | 82111         | Machine operator, grinding/metal             |
| 82211         | 82111         | Machine operator, engraving/metal            |
| 82211         | 82111         | Machine operator, lapping/metal              |
| 82211         | 82111         | Machine operator, core-blowing               |
| 82211         | 82111         | Machine operator, sports equipment/metal     |
| 82211         | 82111         | Machine operator, shearing/metal             |
| 82211         | 82111         | Machine operator, riveting                   |
| 82211         | 82111         | Machine operator, metal products             |
| 82211         | 82111         | Machine operator, minting/metal              |
| 82211         | 82111         | Setter-operator, metalworking machine        |
| 82211         | 82111         | Coremaker, machine, foundry                  |
| 82211         | 82111         | Metal-printing roller-engraver, machine      |
| 82212         | 82112         | Setter-operator, lathe                       |
| 82213         | 82113         | Setter-operator, shaping machine             |
| 82214         | 82114         | Setter-operator, boring and drilling machine |
| 82215         | 82115         | Setter-operator, honing machine              |
| 82216         | 82116         | Setter-operator, milling machine             |
| 82217         | 82117         | Setter-operator, planning machine            |
| 82219         | 82119         | Other machine-tool setter-operators          |
| 83111         | 83111         | Driver, railway engine                       |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                  |
|---------------|---------------|--|
| 83111         | New           | Driver, locomotive                         |
| 83112         | New           | Operator, commuter                         |
| 83112         | New           | Operator, mono-rail                        |
| 83112         | New           | Operator, train/ERL                        |
| 83112         | 83112         | Operator, train/LRT                        |
| 83113         | 83113         | Driver, mine engine                        |
| 83114         | New           | Driver, engine                             |
| 83114         | New           | Assistant, driver locomotive               |
| 83115         | JPA           | Driver, engine (Bukit Bendera Train) R9    |
| 83116         | JPA           | Driver/ Operator, mobile harbour crane R3  |
| 83117         | JPA           | Driver, Sabah locomotive AA13              |
| 83119         | New           | Other railway engine and LRT train drivers |
| 83121         | 83121         | Braker, railway                            |
| 83122         | 83122         | Signaller, railway                         |
| 83123         | 83123         | Shunter, railway                           |
| 83124         | 83124         | Yardman                                    |
| 83124         | 83124         | Coupler, railway yard                      |
| 83125         | 83129         | Pointsman, railway                         |
| 83126         | 83129         | Gateman, railway                           |
| 83129         | 83129         | Other railway braker and related workers   |
| 83211         | 83211         | Motorcyclist                               |
| 83212         | 83212         | Rider, despatch                            |
| 83213         | New           | Driver, auto rickshaw                      |
| 83214         | New           | Driver, motorized tricycle                 |
| 83221         | 83221         | Driver, taxi                               |
| 83222         | 83222         | Chauffeur                                  |
| 83222         | New           | Driver, officer/manager                    |
| 83223         | 83223         | Driver, van                                |
| 83224         | 83224         | Driver, ambulance                          |
| 83225         | New           | Car jockey                                 |
| 83225         | New           | Driver, bell                               |
| 83226         | New           | Driver, personal                           |
| 83227         | New           | Driver, car                                |
| 83228         | JPA           | Driver R3                                  |
| 83229         | New           | Other car, taxi and van drivers            |
| 83311         | 83231         | Driver, bus                                |
| 83312         | 83232         | Driver, tram                               |
| 83313         | New           | Assistant, driver                          |
| 83314         | New           | Motor coach driver                         |
| 83319         | New           | Other bus, tram and related drivers        |
| 83321         | 83241         | Driver, lorry                              |
| 83322         | 83242         | Driver, fire-engine                        |
| 83323         | 83243         | Driver, dumper                             |
| 83324         | 83244         | Driver, truck                              |
| 83325         | 83244         | Driver, tanker                             |
| 83326         | New           | Driver, towing                             |
| 83327         | New           | Operator, shuffle-car/mine                 |
| 83329         | 83249         | Other heavy truck and lorry drivers        |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 83411         | 83311         | Operator, motorized farm equipment                                 |
| 83411         | 83311         | Driver, farm tractor   |
| 83412         | 83312         | Driver, timber carrier   |
| 83413         | 83313         | Driver, winch-truck (logging)                                      |
| 83414         | 83314         | Operator, harvester (paddy)  |
| 83419         | New           | Other motorized farm and forestry plant operators                  |
| 83421         | 83321         | Operator, backhoe  |
| 83422         | 83322         | Machine operator, trench digging                                   |
| 83423         | 83323         | Operator, piling-driver  |
| 83424         | 83324         | Operator, bulldozer  |
| 83424         | New           | Driver, ditch backhoe  |
| 83425         | 83325         | Machine operator, road making                                      |
| 83425         | 83325         | Operator, road roller  |
| 83425         | 83325         | Operator, grader and scraper/road                                  |
| 83426         | 83326         | Winchman, dredging   |
| 83426         | 83326         | Operator, backhoe dredger  |
| 83427         | 83327         | Operator, tunneling machinery/construction                         |
| 83428         | 83328         | Operator, drilling plant   |
| 83429         | 83329         | Other earth-moving and related machinery operators                 |
| 83429         | 83329         | Operator, tamping machinery/construction                           |
| 83429         | 83329         | Operator, dragline   |
| 83429         | 83329         | Operator, grab-bucket  |
| 83431         | 83331         | Operator, crane  |
| 83432         | 83333         | Operator, hoist  |
| 83433         | 83332         | Operator, winch  |
| 83434         | 83334         | Operator, elevator/material handling                               |
| 83435         | 83335         | Operator, cable car  |
| 83439         | 83339         | Other crane, hoist and related plant operators                     |
| 83441         | 83340         | Operator, truck/fork-lift  |
| 83442         | 83340         | Operator, truck/industrial   |
| 83443         | 83340         | Operator, truck/lifting  |
| 83501         | 83401         | Helmsman   |
| 83501         | 83404         | Quatermaster, ship   |
| 83501         | 83403         | Deckhand (ship, barge and boat)                                    |
| 83502         | JPA           | Assistant mechanic, marine engine / Mechanic, marine engine A1/A11 |
| 83503         | 83407         | Crewman  |
| 83503         | 83407         | Sailor   |
| 83503         | New           | Assistant, shipping  |
| 83504         | New           | Crew, ship   |
| 83504         | New           | Crew, ferry  |
| 83505         | 83406         | Ligherman  |
| 83506         | 83406         | Hand, carriage   |
| 83506         | 83405         | Ram controller   |
| 83506         | 83409         | Life-boatman   |
| 83506         | 83408         | Keeper, light house  |
| 83507         | 83409         | Serang A17   |
| 83509         | 83409         | Other ship's deck crew and related workers                         |
| 83509         | 83409         | Serang, ferry service  |
| 91111         | 91211         | Amah, general  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 91111         | New           | Domestic servant   |
| 91111         | New           | Housemaid  |
| 91111         | 91211         | Helper, domestic   |
| 91111         | New           | Helper, housekeeper  |
| 91111         | New           | Assistant, housekeeper   |
| 91111         | New           | Cleaner, house   |
| 91112         | 91212         | Laundress, household   |
| 91113         | 91213         | Cleaner, domestic  |
| 91114         | New           | Domestic housekeeper   |
| 91115         | New           | Char worker, domestic  |
| 91119         | 91219         | Other domestic cleaners and helpers                                    |
| 91121         | 91221         | Room boy   |
| 91121         | 91221         | Chambermaid  |
| 91122         | 91222         | Bell captain, hotel and lodging  |
| 91122         | New           | Porter, hotel/bellman  |
| 91123         | 91223         | Washer, hand/dish  |
| 91124         | 91226         | Cleaner, hotel/club/cafe   |
| 91124         | 91225         | Cleaner, office  |
| 91125         | New           | Tea lady   |
| 91129         | 91229         | Other cleaners and helpers in offices, hotels and other establishments |
| 91211         | 91230         | Workers, laundry and dry cleaning                                      |
| 91212         | New           | Ironers  |
| 91213         | New           | Dry-cleaner, hand  |
| 91214         | New           | Presser, hand  |
| 91221         | 91228         | Cleaner, bus/interior  |
| 91222         | 91322         | Cleaner, vehicles  |
| 91222         | 91322         | Washer, hand/vehicle   |
| 91223         | 91227         | Cleaner, aircraft  |
| 91224         | New           | Operator, auto polish  |
| 91224         | New           | Worker, auto sanding   |
| 91225         | New           | Cleaner, janitor   |
| 91226         | New           | Car detailer   |
| 91229         | New           | Other cleaner and related workers                                      |
| 91231         | 91321         | Cleaner, window  |
| 91291         | New           | Worker, sundries and toiletries  |
| 91292         | New           | Worker, sundries   |
| 91293         | New           | Operator, washing  |
| 91294         | New           | Carpet cleaner   |
| 91295         | New           | Swimming pool cleaner  |
| 91296         | New           | Graffiti cleaner   |
| 92111         | 93111         | Worker, farm   |
| 92111         | 61319         | Farm worker, abaca   |
| 92111         | 61316         | Farm worker, groundnut   |
| 92111         | 61312         | Farm worker, paddy   |
| 92111         | 61313         | Farm worker, market  |
| 92111         | 61319         | Farm worker, spice   |
| 92111         | 61313         | Farm worker, vegetables  |
| 92111         | 61311         | Farm worker, field crop  |



| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                     |
|---------------|---------------|---|
| 92111         | 61317         | Farm worker, sugarcane                        |
| 92111         | 61314         | Farm worker, tobacco                          |
| 92111         | 61315         | Farm worker, tapioca                          |
| 92112         | New           | Worker, estate/plantation                     |
| 92112         | New           | Tapper, plantation                            |
| 92113         | New           | Worker, manuring                              |
| 92114         | 61313         | Worker, vegetables                            |
| 92114         | 61316         | Vegetable workers, bean sprout                |
| 92119         | New           | Other crop farm labourers                     |
| 92121         | New           | Collector, egg                                |
| 92122         | New           | Cleaner, livestock farm                       |
| 92129         | New           | Worker, livestock farm                        |
| 92131         | 93111         | Hand, farm                                    |
| 92131         | 93111         | Helper, farm                                  |
| 92139         | New           | Other mixed crop and livestock farm labourers |
| 92141         | 93121         | Gardener                                      |
| 92142         | 93122         | Cutter, grass                                 |
| 92143         | 93123         | Cutter, tree                                  |
| 92144         | 93124         | Worker, ground maintenance                    |
| 92145         | 93125         | Worker, golf course                           |
| 92146         | 93126         | Labourer, landscape                           |
| 92149         | 93129         | Other garden and horticultural labourers      |
| 92151         | 93192         | Labourer, forestry                            |
| 92152         | 93193         | Labourer, hunting                             |
| 92153         | 93194         | Labourer, trapping                            |
| 92154         | New           | Operator, tacky timber                        |
| 92159         | 93199         | Other forestry labourers                      |
| 92161         | 93191         | Labourer, fishery                             |
| 92161         | New           | Peeler, anchovy                               |
| 92169         | New           | Other fishery and aquaculture labourers       |
| 93111         | New           | Bucket labourer                               |
| 93111         | New           | Labourer, mining                              |
| 93111         | 93311         | Worker, tin mine                              |
| 93111         | New           | Dulang washer                                 |
| 93112         | 93312         | Labourer, quarrying                           |
| 93119         | 93319         | Other mining and quarrying workers            |
| 93121         | New           | Labourer, construction                        |
| 93122         | New           | Labourer, maintenance/dam                     |
| 93131         | 93328         | Hod carrier                                   |
| 93132         | 93322         | Labourer, maintenance                         |
| 93132         | New           | Worker, maintenance                           |
| 93133         | 93323         | Grave-digger                                  |
| 93133         | 93323         | Labourer, digging                             |
| 93134         | 93324         | Land clearer                                  |
| 93135         | 93325         | Trackman, railway                             |
| 93136         | 93326         | Handyman, building construction               |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 93137         | 93327         | Labourer, demolition                                   |
| 93139         | New           | Other building construction labourers                  |
| 93211         | 93296         | Packer, hand   |
| 93212         | 93295         | Labeller, hand   |
| 93221         | 93211         | Rubber coagulator                                      |
| 93222         | 93212         | Sheet rubber maker                                     |
| 93223         | 93213         | Attendant, smokehouse/rubber                           |
| 93224         | 93214         | Smokehouse stoker                                      |
| 93225         | 93215         | Rubber sheet clipper and sorter                        |
| 93226         | 93216         | Cleaner, latex tank                                    |
| 93227         | 93217         | Worker, heavecrumb process                             |
| 93228         | 93218         | Operator, laminating-machine/rubber                    |
| 93229         | 93219         | Other rubber processing workers                        |
| 93291         | 93291         | Labourer, manufacturing                                |
| 93292         | 93292         | Sorter   |
| 93293         | 93293         | Winder, coil/hand                                      |
| 93294         | 93294         | Labourer, assembling                                   |
| 93295         | 93297         | Washer, hand/manufacturing                             |
| 93299         | 93299         | Other manufacturing labourers not elsewhere classified |
| 93299         | 93299         | Maker, hand/carton and paper box                       |
| 93299         | 93299         | Mixer hand (chemical and related processes)            |
| 93311         | 93420         | Trishaw pedaller                                       |
| 93311         | 93420         | Driver, pedal vehicle                                  |
| 93321         | 93431         | Driver, animal-drawn vehicle or machinery              |
| 93322         | 93432         | Driver, bullock-cart                                   |
| 93323         | New           | Driver, animal train                                   |
| 93331         | 93411         | Docker   |
| 93331         | 93411         | Stevedore  |
| 93332         | 93412         | Handler, cargo/freight/product                         |
| 93333         | 93413         | Loader, railway and road vehicle                       |
| 93334         | 93414         | Loader, aircraft                                       |
| 93335         | 93415         | Loader, boat (liquid and gases)                        |
| 93336         | 93417         | Porter, warehouse                                      |
| 93337         | 93418         | Handler, material                                      |
| 93339         | 93419         | Other material and freight handling worker             |
| 93339         | 93419         | Furniture mover  |
| 93351         | New           | Store attendant  |
| 93352         | New           | Operator, store  |
| 93353         | New           | Worker, store  |
| 93354         | New           | Worker, warehouse                                      |
| 93355         | New           | Operator, warehouse                                    |
| 94121         | New           | Helper, kitchen  |
| 95101         | New           | Pedlar, ice-cream                                      |
| 95201         | 91102         | News vendor (street)                                   |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 95201         | 91102         | Vendor, newspapers   |
| 95201         | 91102         | Vendor, street/non-food products                                   |
| 95202         | 91104         | Pedlar   |
| 96111         | 91411         | Worker, garbage disposal   |
| 96112         | 91412         | Stool carrier  |
| 96113         | New           | Scrap handler  |
| 96119         | 91419         | Other garbage and recycling collectors                             |
| 96131         | 91421         | Sweeper, road  |
| 96132         | 91422         | Sweeper, park  |
| 96133         | 91423         | Labourer, odd-jobbing  |
| 96211         | 92011         | Messenger/courier  |
| 96212         | 92012         | Porter, luggage/baggage (except hotel)                             |
| 96213         | 92013         | Office boy   |
| 96213         | New           | Paper searcher   |
| 96214         | 92014         | Deliverer, newspaper/leaflets                                      |
| 96215         | 92015         | Caddie-golf/master   |
| 96216         | New           | Assistant, delivery  |
| 96217         | JPA           | General worker, office (PAP) N1                                    |
| 96219         | 92019         | Bill poster  |
| 96219         | 92019         | Other messengers and porters                                       |
| 96221         | New           | Odd-job person   |
| 96222         | New           | Handyperson  |
| 96231         | 92041         | Meter reader   |
| 96232         | 92042         | Collector, vending machine/money                                   |
| 96239         | 92049         | Other vending machine operators, meter readers and related workers |
| 96251         | 92021         | Attendant, laboratory  |
| 96252         | 92022         | Attendant, hospital  |
| 96252         | 92022         | Attendant, veterinary  |
| 96253         | 92023         | Attendant, parking   |
| 96254         | 92024         | Attendant, lift  |
| 96255         | 92025         | Attendant, amusement park/recreation                               |
| 96255         | 92025         | Attendant, funfair   |
| 96256         | New           | Attendant, room  |
| 96256         | 92026         | Attendant, restroom  |
| 96256         | New           | Attendant, laundry   |
| 96256         | 92026         | Attendant, lavatory  |
| 96257         | 92027         | Attendant, bowling-alley   |
| 96257         | 92027         | Attendant, snooker   |
| 96257         | 92027         | Attendant, sports  |
| 96258         | New           | Attendant, crane   |
| 96258         | 93416         | Attendant, lorry/van/truck   |
| 96258         | New           | Attendant, ramp  |
| 96259         | New           | Attendant, jetty   |
| 96259         | New           | Attendant, public area   |
| 96259         | New           | Attendant, machine   |
| 96259         | New           | Attendant, maintenance   |
| 96291         | JPA           | General worker R1  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                       |
|---------------|---------------|---------------------------------|
| 96292         | JPA           | Specialized general worker R3   |
| 96293         | New           | Worker, site general            |
| 96293         | New           | General unskill worker/labourer |
| 96294         | New           | Worker, kindergarten            |
| 96295         | New           | Worker, inflatable              |
| 96296         | New           | Worker, sawing                  |
| 96297         | New           | Leader, line                    |
| 96297         | New           | Operator, sanding               |
| 96298         | JPA           | Sub assistant, camera/driver N3 |
| 96299         | New           | Collector, old metal            |
| 96299         | New           | Collector, old newspaper        |
| 96299         | New           | Operator camera/driver          |
| 96299         | New           | Trolley boy                     |
| 01101         | New           | General, Army                   |
| 01101         | New           | Field Marshal                   |
| 01102         | New           | Lieutenant General, Army        |
| 01103         | New           | Major General, Army             |
| 01104         | New           | Brigadier General, Army         |
| 01105         | New           | Colonel, Army                   |
| 01106         | New           | Lieutenant Colonel, Army        |
| 01107         | New           | Major, Army                     |
| 01108         | New           | Captain, Army                   |
| 01109         | New           | Lieutenant, Army                |
| 01109         | New           | Second Lieutenant, Army         |
| 01201         | New           | Warrant officer 1, Army         |
| 01202         | New           | Warrant officer 2, Army         |
| 01203         | New           | Staff sergeant                  |
| 01204         | New           | Sergeant                        |
| 01205         | New           | Corporal                        |
| 01206         | New           | Lance corporal                  |
| 01207         | New           | Prebet                          |
| 02101         | New           | Admiral                         |
| 02101         | New           | Vice Admiral                    |
| 02101         | New           | Fleet commander                 |
| 02102         | New           | Rear Admiral, Navy              |
| 02103         | New           | First Admiral, Navy             |
| 02104         | New           | Captain, Navy                   |
| 02105         | New           | Commander, Navy                 |
| 02106         | New           | Lieutenant Commander, Navy      |
| 01207         | New           | Sub leutenant, Navy             |
| 02107         | New           | Lieutenant, Navy                |
| 02108         | New           | Acting Sub Lieutenant, Navy     |
| 02109         | New           | Midshipmen, Navy                |
| 02201         | New           | Warrant Officer I, Navy         |
| 02202         | New           | Warrant Officer II, Navy        |
| 02203         | New           | Chief Petty Officer             |
| 02204         | New           | Petty Officer                   |
| 02205         | New           | Leading Rate                    |
| 02206         | New           | Able Rate                       |
| 02207         | New           | Sub Able Rate                   |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                     |
|---------------|---------------|---|
| 02208         | New           | Ordinary- COD                                 |
| 03101         | New           | General, Royal Malaysian Air Force            |
| 03102         | New           | Lieutenant General, Royal Malaysian Air Force |
| 03103         | New           | Major General, Royal Malaysian Air Force      |
| 03104         | New           | Brigadier General, Royal Malaysian Air Force  |
| 03105         | New           | Colonel, Royal Malaysian Air Force            |
| 03106         | New           | Lieutenant Colonel, Royal Malaysian Air Force |
| 03107         | New           | Major, Royal Malaysian Air Force              |
| 03108         | New           | Captain, Royal Malaysian Air Force            |
| 03109         | New           | Lieutenant, Royal Malaysian Air Force         |
| 03201         | New           | Warrant Officer Air Force I                   |
| 03202         | New           | Warrant Officer Air Force II                  |
| 03203         | New           | Flight Sergeant                               |
| 03204         | New           | Sergeant Air Force                            |
| 03205         | New           | Corporal Air Force                            |
| 03206         | New           | Senior Aircraftman                            |
| 03207         | New           | Aircraftman I (AC I)                          |
| 03208         | New           | Aircraftman II (AC II)                        |

# Occupation in Alphabetical Order

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                       |
|---------------|---------------|---|
| <b>A</b>      |               |   |
| 02206         | New           | Able Rate                                       |
| 24111         | 24101         | Accountant                                      |
| 24112         | JPA           | Accountant W41                                  |
| 24113         | 24102         | Accountant, auditing                            |
| 24116         | 24101         | Accountant, chartered                           |
| 24116         | 24101         | Accountant, company                             |
| 24113         | 24103         | Accountant, cost                                |
| 24116         | New           | Accountant, group                               |
| 24116         | New           | Accountant, management                          |
| 24116         | 24101         | Accountant, municipal                           |
| 24116         | 24101         | Accountant, public                              |
| 24114         | 24104         | Accountant, tax                                 |
| 43112         | 41302         | Accounting analyst, bank                        |
| 31174         | 31174         | Acidiser, oil and gas well                      |
| 26571         | 39541         | Acrobat   |
| 02108         | New           | Acting Sub Lieutenant, Navy                     |
| 26551         | 29351         | Actor   |
| 32305         | 32415         | Acupuncturist                                   |
| 26522         | New           | Adiguru - ancient Malay dance-theatre           |
| 26522         | New           | Adiguru - shadow puppet theatre                 |
| 33156         | 34173         | Adjuster, insurance                             |
| 75231         | New           | Adjuster, wood machine                          |
| 25221         | New           | Administrator, computer systems                 |
| 25211         | 21394         | Administrator, database                         |
| 25213         | 21394         | Administrator, electronic data processing (PDE) |
| 11121         | 11201         | Administrator, government                       |
| 13422         | 13092         | Administrator, hospital                         |
| 25221         | New           | Administrator, network                          |
| 25221         | New           | Administrator, systems                          |
| 35141         | New           | Administrator, website                          |
| 25232         | New           | Administrator/Netapps                           |
| 02101         | New           | Admiral   |
| 33222         | 34154         | Adviser, after sales service                    |
| 21321         | 32131         | Adviser, agricultural                           |
| 24233         | 24304         | Adviser, career                                 |
| 24122         | New           | Adviser, E-commerce                             |
| 23992         | 23912         | Adviser, education methods                      |
| 21321         | 32131         | Adviser, farming                                |
| 24121         | New           | Adviser, financial and investment               |
| 21322         | 32132         | Adviser, forestry                               |
| 26111         | 25015         | Adviser, legal                                  |
| 26114         | JPA           | Adviser, legal L41                              |
| 21321         | 32131         | Adviser, planting                               |
| 33225         | 34153         | Adviser, technical                              |
| 21493         | 21499         | Adviser, technical service                      |
| 26111         | 25016         | Advocate  |
| 26117         | JPA           | Advocate L41                                    |
| 26575         | 39548         | Aerialist/trapeze performer                     |
| 21112         | 21112         | Aerodynamicist                                  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                     |
|---------------|---------------|---|
| 51425         | 51314         | Aesthetician                                  |
| 33311         | 34203         | Agent, clearing and forwarding                |
| 33331         | 34204         | Agent, employment                             |
| 42267         | New           | Agent, guest service                          |
| 33211         | 34131         | Agent, insurance                              |
| 33391         | 34205         | Agent, literary                               |
| 33392         | 34205         | Agent, musical performance                    |
| 33232         | 34162         | Agent, procurement                            |
| 33342         | 34142         | Agent, property                               |
| 33341         | 34141         | Agent, real estate                            |
| 33225         | 34152         | Agent, sales/engineering                      |
| 33225         | 34152         | Agent, sales/technical                        |
| 33312         | 34203         | Agent, shipping                               |
| 33393         | 34205         | Agent, sports                                 |
| 33394         | 34205         | Agent, theatrical                             |
| 21125         | New           | Agrometeorologist                             |
| 21331         | 22131         | Agronomist                                    |
| 53211         | 51396         | Aide, dental                                  |
| 53212         | JPA           | Aide, dental surgery U17                      |
| 53214         | New           | Aide, hospital                                |
| 53211         | 51395         | Aide, nursing/home                            |
| 53211         | 51395         | Aide, nursing/medical                         |
| 53213         | 51396         | Aide, pharmacy                                |
| 53216         | JPA           | Aide, public health U11                       |
| 51641         | 51397         | Aide, veterinary                              |
| 51115         | 51114         | Air hostess                                   |
| 81417         | 82318         | Air-bag builder                               |
| 03207         | New           | Aircraftman I (AC I)                          |
| 03208         | New           | Aircraftman II (AC II)                        |
| 91111         | 91211         | Amah, general                                 |
| 11123         | 11201         | Ambassador                                    |
| 32581         | New           | Ambulance worker                              |
| 22122         | 22213         | Anaesthetist                                  |
| 22122         | 22213         | Anaesthetist, cardiac anaesthesia             |
| 25112         | New           | Analyst, business (information technology)    |
| 21413         | 21493         | Analyst, communication/except computer        |
| 25111         | 21314         | Analyst, communications/computer              |
| 25211         | 21315         | Analyst, database/computer                    |
| 25111         | 21317         | Analyst, electronic data processing (PDE)     |
| 24232         | 24302         | Analyst, job                                  |
| 25111         | 21312         | Analyst, management information systems (MIS) |
| 24211         | 24901         | Analyst, market research/business             |
| 25231         | New           | Analyst, Network                              |
| 24232         | 24302         | Analyst, occupational                         |
| 24211         | 21212         | Analyst, operation research                   |
| 24211         | New           | Analyst, organization and methods             |
| 24223         | New           | Analyst, policy                               |
| 25122         | New           | Analyst, programmer                           |
| 25191         | New           | Analyst, quality assurance                    |
| 24211         | New           | Analyst, research and information             |
| 25111         | 21311         | Analyst, systems/computer                     |
| 21413         | 21493         | Analyst, systems/except computers             |
| 33227         | New           | Analyst/executive, marketing research         |
| 21341         | 22121         | Anatomist                                     |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                               |
|---------------|---------------|---|
| 62225         | New           | Anchorman                               |
| 26513         | 29323         | Animator                                |
| 81215         | 81231         | Annealer, metal                         |
| 26561         | 39521         | Announcers, radio and television        |
| 26322         | 29242         | Anthropologist                          |
| 26198         | 25099         | Appeals referee, social security claims |
| 33151         | 34172         | Appraiser                               |
| 26198         | 25099         | Arbitrator, insurance claims            |
| 21334         | 22134         | Arboriculturist                         |
| 26323         | 29243         | Archaeologist                           |
| 21611         | JPA           | Architect J41                           |
| 21613         | 21411         | Architect, building                     |
| 25211         | New           | Architect, database                     |
| 21714         | New           | Architect, hovercraft                   |
| 21612         | 21415         | Architect, interior                     |
| 21621         | 21413         | Architect, landscape                    |
| 21622         | JPA           | Architect, landscape J41                |
| 21714         | New           | Architect, marine                       |
| 21714         | 21457         | Architect, naval                        |
| 25132         | New           | Architect, website                      |
| 26211         | 29111         | Archivist                               |
| 33227         | New           | Area support engineer (sales)           |
| 26534         | 29344         | Arranger, dance                         |
| 26522         | 29333         | Arranger, music                         |
| 26515         | 29322         | Artist                                  |
| 26515         | 29328         | Artist, computer/visualizer             |
| 26553         | JPA           | Artist, cultural B27                    |
| 34321         | 39511         | Artist, design                          |
| 34322         | 39512         | Artist, display                         |
| 34321         | 39511         | Artist, graphic                         |
| 26515         | 29327         | Artist, landscape                       |
| 26515         | 29326         | Artist, painting                        |
| 26516         | 39516         | Artist, tattoo                          |
| 21462         | 21472         | Assayer                                 |
| 82118         | 82819         | Assembler, agricultural machinery       |
| 82111         | 82817         | Assembler, aircraft                     |
| 82128         | 82827         | Assembler, audio-visual equipment       |
| 82111         | 82811         | Assembler, automobile                   |
| 82124         | 82824         | Assembler, battery                      |
| 82112         | 82816         | Assembler, bicycle                      |
| 82126         | 82829         | Assembler, chronometer                  |
| 82126         | 82829         | Assembler, clock                        |
| 82199         | 82894         | Assembler, composite products           |
| 82115         | 82814         | Assembler, earth-moving equipment       |
| 82121         | 82821         | Assembler, electrical equipment         |
| 82125         | 82825         | Assembler, electric-sign                |
| 82122         | 82822         | Assembler, electronic equipment         |
| 82111         | 82819         | Assembler, engine/marine                |
| 82127         | 82826         | Assembler, hearing aid                  |
| 82117         | 82818         | Assembler, industrial machinery         |
| 82131         | 82831         | Assembler, leather products             |
| 82115         | 82819         | Assembler, machine tool                 |
| 82132         | 82832         | Assembler, metal products               |
| 82127         | 82826         | Assembler, microelectronics equipment   |



| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 82115         | 82819         | Assembler, mining machinery  |
| 82111         | 82813         | Assembler, motor-cycle   |
| 82126         | 82829         | Assembler, office machinery  |
| 82198         | 82892         | Assembler, paperboard products                                     |
| 82134         | 82834         | Assembler, plastics products                                       |
| 82129         | 82828         | Assembler, precision instrument                                    |
| 82116         | 82819         | Assembler, printing machinery                                      |
| 82113         | 82812         | Assembler, refrigeration and air-conditioning equipment            |
| 82133         | 82833         | Assembler, rubber products   |
| 82123         | 82823         | Assembler, semi-conductor  |
| 82114         | 82815         | Assembler, sewing machine  |
| 82116         | 82819         | Assembler, textile machinery                                       |
| 82199         | 82893         | Assembler, textile products  |
| 82126         | 82829         | Assembler, watches   |
| 81524         | 82622         | Assembler, weaving machine   |
| 82198         | 82891         | Assembler, wood products   |
| 82118         | 82819         | Assembler, wood working machinery                                  |
| 33155         | 34172         | Assessor, claims   |
| 33157         | 34174         | Assessor, insurance  |
| 35122         | New           | Assistant analyst, computer systems                                |
| 31184         | JPA           | Assistant architect, landscape J29                                 |
| 51201         | New           | Assistant chef, dim sum  |
| 31432         | JPA           | Assistant conservation, forestry G27                               |
| 32576         | JPA           | Assistant inspector, factory & machinery J29                       |
| 23108         | JPA           | Assistant lecturer, UiTM DM29                                      |
| 14116         | JPA           | Assistant manager, hostel N27                                      |
| 14316         | JPA           | Assistant manager, park/estate G27                                 |
| 83502         | JPA           | Assistant mechanic, marine engine / Mechanic, marine engine A1/A11 |
| 81603         | New           | Assistant miller   |
| 72315         | New           | Assistant motor vehicle mechanics and repairers                    |
| 33131         | 34110         | Assistant officer, account   |
| 33416         | JPA           | Assistant officer, administrative N27                              |
| 31426         | JPA           | Assistant officer, agricultural G27                                |
| 31512         | JPA           | Assistant officer, air traffic control A29                         |
| 34114         | JPA           | Assistant officer, anti-drug S27                                   |
| 33152         | JPA           | Assistant officer, appraiser W27                                   |
| 31185         | JPA           | Assistant officer, architecture J29                                |
| 34331         | JPA           | Assistant officer, archives S27                                    |
| 33567         | JPA           | Assistant officer, civil defence KP27                              |
| 34127         | JPA           | Assistant officer, economy affairs E27                             |
| 33594         | JPA           | Assistant officer, enforcement N27                                 |
| 32574         | JPA           | Assistant officer, environmental control C27                       |
| 32572         | JPA           | Assistant officer, environmental health U29                        |
| 33154         | JPA           | Assistant officer, evaluation W27                                  |
| 35215         | JPA           | Assistant officer, film laboratory C27                             |
| 31441         | JPA           | Assistant officer, fishery G27                                     |
| 31392         | JPA           | Assistant officer, food preparer C27                               |
| 31391         | JPA           | Assistant officer, food technology C27                             |
| 31165         | JPA           | Assistant officer, geochemist C27                                  |
| 34126         | JPA           | Assistant officer, industrial relation S27                         |
| 34124         | JPA           | Assistant officer, information S27                                 |
| 35121         | New           | Assistant officer, information technology                          |
| 35123         | JPA           | Assistant officer, information technology F29                      |
| 33553         | JPA           | Assistant officer, investigation KR29                              |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 34113         | JPA           | Assistant officer, Islamic affairs S27                 |
| 33564         | JPA           | Assistant officer, Kesatria S27                        |
| 33417         | JPA           | Assistant officer, land administrative N27             |
| 41104         | JPA           | Assistant officer, land NT27                           |
| 31186         | JPA           | Assistant officer, land planning G27                   |
| 26437         | JPA           | Assistant officer, language planner S27                |
| 34333         | JPA           | Assistant officer, librarian S27                       |
| 31524         | JPA           | Assistant officer, marine A29                          |
| 32126         | JPA           | Assistant officer, medical U29                         |
| 31112         | JPA           | Assistant officer, meteorology C27                     |
| 31175         | JPA           | Assistant officer, mining C27                          |
| 34123         | JPA           | Assistant officer, psychologist S27                    |
| 34334         | JPA           | Assistant officer, publication N27                     |
| 33592         | JPA           | Assistant officer, registration KP27                   |
| 33158         | JPA           | Assistant officer, research Q27                        |
| 31601         | JPA           | Assistant officer, science C27                         |
| 33598         | JPA           | Assistant officer, security KP27                       |
| 34122         | JPA           | Assistant officer, social development S27              |
| 34125         | JPA           | Assistant officer, social research N27                 |
| 33141         | JPA           | Assistant officer, statistical E27                     |
| 34112         | JPA           | Assistant officer, Syariah LS27                        |
| 33521         | New           | Assistant officer, tax/estimator                       |
| 33415         | JPA           | Assistant officer, training E27                        |
| 31187         | JPA           | Assistant officer, urban and rural planning J29        |
| 32404         | JPA           | Assistant officer, veterinary G27                      |
| 23802         | JPA           | Assistant officer, vocational training J29             |
| 31417         | JPA           | Assistant officer, wild life G27                       |
| 34128         | JPA           | Assistant officer, youth and sport S27                 |
| 81326         | JPA           | Assistant operator, camera N11                         |
| 21827         | New           | Assistant superintendent, boiler                       |
| 33513         | JPA           | Assistant superintendent, customs W27                  |
| 33597         | JPA           | Assistant superintendent, fireman KB29                 |
| 33542         | JPA           | Assistant superintendent, immigration KP27             |
| 33593         | JPA           | Assistant superintendent, prison KX27                  |
| 21826         | New           | Assistant superintendent, sawmill                      |
| 35111         | New           | Assistant supervisor, Electronic Data Processing (EDP) |
| 42266         | New           | Assistant supervisor, front office                     |
| 51512         | New           | Assistant supervisor, housekeeping                     |
| 43128         | New           | Assistant supervisor, insurance/underwriting           |
| 51512         | New           | Assistant supervisor, laundry                          |
| 51532         | New           | Assistant supervisor, recreation                       |
| 42243         | New           | Assistant supervisor, reservation                      |
| 31191         | New           | Assistant surveyor, building                           |
| 31192         | JPA           | Assistant surveyor, quantity J29                       |
| 83313         | New           | Assistant, driver                                      |
| 33134         | JPA           | Assistant, accountant W27                              |
| 33143         | 39213         | Assistant, actuarial                                   |
| 41201         | New           | Assistant, administrative (secretarial)                |
| 41103         | JPA           | Assistant, administrative clerical/operation N17       |
| 41101         | New           | Assistant, administrator                               |
| 33132         | JPA           | Assistant, auditor W27                                 |
| 43115         | 41303         | Assistant, bank  |
| 44199         | 41204         | Assistant, barrister                                   |
| 51322         | New           | Assistant, bartender                                   |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                       |
|---------------|---------------|---|
| 43115         | 41305         | Assistant, broker                               |
| 51201         | New           | Assistant, chef                                 |
| 51112         | New           | Assistant, chief steward                        |
| 32532         | New           | Assistant, clinic                               |
| 35122         | New           | Assistant, communications                       |
| 35122         | New           | Assistant, computer                             |
| 35122         | New           | Assistant, computer database                    |
| 35122         | New           | Assistant, computer engineering                 |
| 35122         | New           | Assistant, computer programming                 |
| 35131         | 31202         | Assistant, computer/systems analyst             |
| 35122         | 31202         | Assistant, computer/user services               |
| 51201         | New           | Assistant, cook                                 |
| 43117         | New           | Assistant, costing                              |
| 34129         | New           | Assistant, counselor                            |
| 52114         | New           | Assistant, counter sales/promoter               |
| 43115         | New           | Assistant, credit control                       |
| 34332         | JPA           | Assistant, curator S27                          |
| 96216         | New           | Assistant, delivery                             |
| 32512         | 32252         | Assistant, dental                               |
| 83114         | New           | Assistant, driver locomotive                    |
| 31412         | 32112         | Assistant, entomological                        |
| 51201         | New           | Assistant, executive chef                       |
| 33131         | New           | Assistant, financial                            |
| 42266         | New           | Assistant, front office                         |
| 32531         | 32210         | Assistant, hospital                             |
| 91111         | New           | Assistant, housekeeper                          |
| 42223         | JPA           | Assistant, information S17                      |
| 35113         | New           | Assistant, information technology               |
| 43128         | 41203         | Assistant, insurance/adjustment                 |
| 43128         | 41203         | Assistant, insurance/claims                     |
| 43128         | New           | Assistant, insurance/policy                     |
| 43128         | New           | Assistant, insurance/underwriting               |
| 41106         | JPA           | Assistant, land administrative N17              |
| 44112         | 41206         | Assistant, library                              |
| 51523         | New           | Assistant, linen housekeeping                   |
| 44122         | New           | Assistant, mail/dispatch                        |
| 33142         | 39212         | Assistant, mathematical                         |
| 32531         | 32210         | Assistant, medical                              |
| 31115         | 31115         | Assistant, meteorological                       |
| 35211         | 31315         | Assistant, motion picture                       |
| 53217         | JPA           | Assistant, nurse U11                            |
| 32123         | 32112         | Assistant, parasitological                      |
| 44167         | New           | Assistant, personnel                            |
| 31174         | 31174         | Assistant, petroleum and natural gas extraction |
| 32131         | 32280         | Assistant, pharmaceutical                       |
| 35211         | New           | Assistant, production                           |
| 41107         | JPA           | Assistant, publication N17                      |
| 41203         | 41111         | Assistant, reporter/reporter                    |
| 33144         | 39214         | Assistant, research                             |
| 42243         | New           | Assistant, reservation                          |
| 52231         | New           | Assistant, sales                                |
| 81321         | New           | Assistant, scanning and filming                 |
| 83503         | New           | Assistant, shipping                             |
| 52231         | 52102         | Assistant, shop                                 |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                     |
|---------------|---------------|---|
| 44199         | 41204         | Assistant, solicitor                          |
| 43211         | New           | Assistant, store                              |
| 43211         | New           | Assistant, store receiving                    |
| 31191         | 31123         | Assistant, surveyor                           |
| 32401         | 32271         | Assistant, veterinary                         |
| 32402         | 32272         | Assistant, veterinary/artificial insemination |
| 51514         | 51319         | Assistant, wardrobe                           |
| 43211         | New           | Assistant, warehouse                          |
| 41105         | JPA           | Assistant, youth and sport S17                |
| 51611         | 51501         | Astrologer                                    |
| 21735         | New           | Astronaut                                     |
| 21117         | 21117         | Astronomer                                    |
| 21117         | 21117         | Astronomer, radio                             |
| 21117         | 21117         | Astrophysicist                                |
| 34212         | 39561         | Athlete                                       |
| 51117         | 51119         | Attendant, airport                            |
| 96255         | 92025         | Attendant, amusement park/recreation          |
| 53221         | 51317         | Attendant, bath                               |
| 96257         | 92027         | Attendant, bowling-alley                      |
| 81602         | 82721         | Attendant, churn/dairy products               |
| 54147         | 92034         | Attendant, cloakroom                          |
| 96258         | New           | Attendant, crane                              |
| 51633         | 51323         | Attendant, crematorium                        |
| 81607         | 82775         | Attendant, filtration                         |
| 51114         | New           | Attendant, flight                             |
| 96255         | 92025         | Attendant, funfair                            |
| 53218         | JPA           | Attendant, health U3                          |
| 96252         | 92022         | Attendant, hospital                           |
| 96259         | New           | Attendant, jetty                              |
| 96251         | 92021         | Attendant, laboratory                         |
| 96256         | New           | Attendant, laundry                            |
| 96256         | 92026         | Attendant, lavatory                           |
| 96254         | 92024         | Attendant, lift                               |
| 96258         | 93416         | Attendant, lorry/van/truck                    |
| 96259         | New           | Attendant, machine                            |
| 96259         | New           | Attendant, maintenance                        |
| 81603         | 82731         | Attendant, mill/foodgrains                    |
| 81411         | 82311         | Attendant, mill/rubber                        |
| 51631         | 51322         | Attendant, mortuary                           |
| 53113         | 51391         | Attendant, nursery school                     |
| 96253         | 92023         | Attendant, parking                            |
| 81607         | 82777         | Attendant, pasteurizer (brewery)              |
| 52451         | 52203         | Attendant, petrol pump                        |
| 96259         | New           | Attendant, public area                        |
| 96258         | New           | Attendant, ramp                               |
| 96256         | 92026         | Attendant, restroom                           |
| 96256         | New           | Attendant, room                               |
| 52452         | New           | Attendant, service station                    |
| 51111         | 51111         | Attendant, ship's cabin                       |
| 51124         | 51122         | Attendant, sleeping car                       |
| 93223         | 93213         | Attendant, smokehouse/rubber                  |
| 96257         | 92027         | Attendant, snooker                            |
| 96257         | 92027         | Attendant, sports                             |
| 81605         | 82759         | Attendant, sterilizing oil palm               |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                       |
|---------------|---------------|---------------------------------|
| 51691         | 51491         | Attendant, swimming pool        |
| 81123         | 81123         | Attendant, trommel              |
| 96252         | 92022         | Attendant, veterinary           |
| 26111         | 25013         | Attorney general                |
| 33151         | 34171         | Auctioneer                      |
| 22661         | 32292         | Audiologists                    |
| 24113         | 24102         | Auditor                         |
| 25212         | 21392         | Auditor computer                |
| 24117         | JPA           | Auditor W41                     |
| 26411         | 29311         | Author                          |
| 54124         | New           | Auxiliary police                |
| 71217         | 71317         | Awning installer                |
| <b>B</b>      |               |                                 |
| 53115         | 51393         | Baby amah                       |
| 53115         | 51393         | Baby sitter                     |
| 73191         | New           | Back knife fabricator           |
| 21316         | 22116         | Bacteriologist                  |
| 21316         | 22116         | Bacteriologist, agricultural    |
| 21316         | 22116         | Bacteriologist, dairy           |
| 21316         | 22116         | Bacteriologist, fishery         |
| 21316         | 22116         | Bacteriologist, food            |
| 21316         | 22116         | Bacteriologist, industrial      |
| 21316         | 22116         | Bacteriologist, medical         |
| 21316         | 22116         | Bacteriologist, molecular       |
| 21316         | 22116         | Bacteriologist, pharmaceutical  |
| 21316         | 22116         | Bacteriologist, soil            |
| 21316         | 22116         | Bacteriologist, veterinary      |
| 44192         | 41204         | Bailif                          |
| 75121         | 74121         | Baker                           |
| 75122         | 74122         | Baker, bread                    |
| 75123         | 74123         | Baker, pastry                   |
| 21112         | 21112         | Ballistician                    |
| 26522         | 39531         | Band leader                     |
| 42111         | 42122         | Bank teller                     |
| 34343         | New           | Barbeque chef                   |
| 51412         | 51311         | Barber                          |
| 14121         | 13052         | Barkeeper                       |
| 26111         | 25017         | Barrister                       |
| 51321         | New           | Bartender                       |
| 73192         | New           | Batch maker                     |
| 51421         | 51314         | Beautician                      |
| 51426         | JPA           | Beautician B11                  |
| 91122         | 91222         | Bell captain, hotel and lodging |
| 73151         | 73222         | Bender, glass                   |
| 31521         | 31427         | Berthing master                 |
| 26224         | 29124         | Bibliographer                   |
| 34134         | 29405         | Bilal                           |
| 96219         | 92019         | Bill poster                     |
| 21342         | 22122         | Biochemist                      |
| 21342         | 22122         | Biochemist, clinical            |
| 21342         | 22122         | Biochemist, enzymes             |
| 21342         | 22122         | Biochemist, proteins            |
| 21342         | 22122         | Biochemist, steroids            |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 26411         | 29311         | Biographer   |
| 21311         | 22111         | Biologist  |
| 21311         | 22111         | Biologist, aquatic   |
| 21311         | 22111         | Biologist, fresh water   |
| 21311         | 22111         | Biologist, marine  |
| 21205         | 21223         | Biometrician   |
| 21343         | 22123         | Biophysicist   |
| 21311         | 22111         | Biotechnologist  |
| 72211         | 72211         | Blacksmith   |
| 75421         | 71113         | Blaster  |
| 31346         | 81556         | Blender (petroleum refining)   |
| 81603         | 82731         | Blender, flour   |
| 73151         | 73221         | Blower, glass  |
| 73152         | JPA           | Blower, glass N17  |
| 71155         | 71235         | Boatbuilder, wood  |
| 51692         | 51493         | Bodyguard  |
| 72133         | 72133         | Boilermaker  |
| 72133         | 72133         | Boilerman  |
| 81822         | 81622         | Boilerman  |
| 73231         | 73331         | Bookbinder   |
| 43111         | 41301         | Bookkeeper   |
| 43111         | 41301         | Bookkeeper, ledger   |
| 72133         | New           | Borer  |
| 21312         | 22112         | Botanist   |
| 21315         | 22115         | Botanist, ecology  |
| 21312         | 22112         | Botanist, economic   |
| 21312         | 22112         | Botanist, histology  |
| 21312         | 22112         | Botanist, mycology   |
| 21312         | 22112         | Botanist, soil   |
| 21312         | 22112         | Botanist, taxonomy   |
| 83121         | 83121         | Braker, railway  |
| 72134         | 72134         | Brazier  |
| 61211         | 61344         | Breeder, cattle  |
| 61211         | 61345         | Breeder, rabbit  |
| 81607         | 82771         | Brewer   |
| 71121         | 71211         | Bricklayers, construction  |
| 01104         | New           | Brigadier General, Army  |
| 03104         | New           | Brigadier General, Royal Malaysian Air Force                           |
| 33241         | 34202         | Broker, commodity  |
| 33113         | 34123         | Broker, foreign exchange   |
| 33212         | 34132         | Broker, insurance  |
| 33115         | 34125         | Broker, investment   |
| 33111         | 34121         | Broker, securities   |
| 33112         | 34122         | Broker, stock and shares   |
| 93111         | New           | Bucket labourer  |
| 71112         | New           | Builder  |
| 75222         | 74222         | Builder, bullock cart  |
| 71111         | 71295         | Builder, house/traditional materials                                   |
| 62121         | 61420         | Burner, charcoal   |
| 72125         | 72124         | Burner, lead   |
| 12191         | New           | Business services and administration managers not elsewhere classified |
| 75112         | New           | Butcher  |
| 33231         | 34161         | Buyer  |
| 33231         | New           | Buyer, production purchasing   |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 33231         | New           | Buyer, purchasing                                 |
| <b>C</b>      |               |   |
| 74132         | 72442         | Cable line worker, telephone/telegraph/television |
| 96215         | 92015         | Caddie-golf/master                                |
| 33223         | 34155         | Canvasser   |
| 01108         | New           | Captain, Army                                     |
| 51513         | 51233         | Captain, floor                                    |
| 02104         | New           | Captain, Navy                                     |
| 21723         | 31423         | Captain, port                                     |
| 03108         | New           | Captain, Royal Malaysian Air Force                |
| 91226         | New           | Car detailer                                      |
| 83225         | New           | Car jockey  |
| 81607         | 82779         | Carbonation man (malt liquor)                     |
| 22126         | 22216         | Cardiologist                                      |
| 51642         | 39551         | Caretaker, animal                                 |
| 71151         | 71231         | Carpenter   |
| 71152         | 71232         | Carpenter, construction                           |
| 71155         | 71235         | Carpenter, ship                                   |
| 71157         | 71237         | Carpenter, stage and studio                       |
| 71158         | 71231         | Carpenter, table                                  |
| 91294         | New           | Carpet cleaner                                    |
| 75315         | 74392         | Carpet mender                                     |
| 21651         | 21482         | Cartographer                                      |
| 21654         | JPA           | Cartographer J41                                  |
| 21651         | 21485         | Cartographer marine                               |
| 26512         | 29323         | Cartoonist  |
| 71134         | 71124         | Carver, stone                                     |
| 75229         | 74229         | Carver, wood                                      |
| 71137         | 71127         | Carver-setter, monument                           |
| 52301         | New           | Cashier   |
| 52301         | New           | Cashier, assistant                                |
| 52306         | 42116         | Cashier, booking-office                           |
| 52302         | 42112         | Cashier, box office                               |
| 52305         | 42115         | Cashier, cafeteria                                |
| 52309         | 42119         | Cashier, cash desk                                |
| 52309         | 42123         | Cashier, change-booth                             |
| 52309         | 42119         | Cashier, check-out/self service store             |
| 52309         | 42123         | Cashier, currency exchange                        |
| 52305         | New           | Cashier, food and beverage                        |
| 52301         | New           | Cashier, head checker                             |
| 52301         | New           | Cashier, office/supervisor                        |
| 52301         | New           | Cashier, parker                                   |
| 52303         | New           | Cashier, petrol pump/station                      |
| 52306         | 42116         | Cashier, race track                               |
| 52305         | 42115         | Cashier, restaurant                               |
| 52303         | 42113         | Cashier, store                                    |
| 52304         | 42114         | Cashier, theatre                                  |
| 73144         | 73214         | Caster, pottery and porcelain                     |
| 81225         | 82227         | Casting finisher                                  |
| 26225         | 29125         | Cataloguer  |
| 71219         | New           | Ceiling installer                                 |
| 81312         | 81524         | Cement furnaceman                                 |
| 71145         | 71226         | Cementer, petroleum and gas wells                 |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 11201         | 12101         | Chairman, enterprise  |
| 11202         | 12102         | Chairman, organization                                      |
| 11141         | 11410         | Chairman, political party                                   |
| 91121         | 91221         | Chambermaid   |
| 13452         | 12102         | Chancellor, university                                      |
| 91115         | New           | Char worker, domestic                                       |
| 74121         | New           | Chargeman, high voltage/restriction                         |
| 62111         | 61411         | Chaser  |
| 83222         | 83222         | Chauffeur   |
| 61114         | New           | Checker, estate/plantation                                  |
| 62113         | New           | Checker, log  |
| 34343         | 51221         | Chefs   |
| 34343         | 51221         | Chefs de party  |
| 21131         | 21131         | Chemist   |
| 21135         | 21135         | Chemist, analysis   |
| 21342         | 22122         | Chemist, biological   |
| 21133         | 21133         | Chemist, corrosion  |
| 21139         | 21139         | Chemist, crystallography                                    |
| 21137         | 21137         | Chemist, detergent  |
| 21137         | 21137         | Chemist, dye  |
| 21137         | 21137         | Chemist, food   |
| 21133         | 21133         | Chemist, glass  |
| 21137         | 21137         | Chemist, industrial   |
| 21133         | 21133         | Chemist, inorganic  |
| 21137         | 21137         | Chemist, leather  |
| 21133         | 21133         | Chemist, metallurgical                                      |
| 21139         | 21139         | Chemist, nuclear  |
| 21132         | 21132         | Chemist, organic  |
| 21137         | 21137         | Chemist, paint  |
| 21137         | 21137         | Chemist, petroleum  |
| 21139         | 21138         | Chemist, pharmaceutical                                     |
| 21134         | 21134         | Chemist, physical   |
| 21133         | 21133         | Chemist, plastics   |
| 21133         | 21133         | Chemist, polymer  |
| 21137         | 21137         | Chemist, quality control                                    |
| 21135         | 21135         | Chemist, research development (chemical or related product) |
| 21132         | 21132         | Chemist, rubber   |
| 21137         | 21137         | Chemist, textile  |
| 21136         | 21136         | Chemist, water purification                                 |
| 34341         | New           | Chief chef  |
| 51201         | 51221         | Chief cook  |
| 11201         | 12101         | Chief executive officer                                     |
| 11202         | 12102         | Chief executive, organization                               |
| 11201         | New           | Chief finance officer                                       |
| 11112         | 11102         | Chief minister  |
| 11201         | New           | Chief operating officer                                     |
| 02203         | New           | Chief Petty Officer   |
| 11121         | 11201         | Chief secretary, government                                 |
| 33431         | New           | Chief secretary, office                                     |
| 51523         | 51214         | Chief steward, hotel  |
| 51112         | 51112         | Chief steward, ship   |
| 51112         | 51112         | Chief stewardess, ship                                      |
| 41101         | 41201         | Chief, clerk  |
| 51533         | New           | Chief, concierge  |



| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                            |
|---------------|---------------|--------------------------------------|
| 72315         | New           | Chief, mechanic                      |
| 41101         | New           | Chief, office                        |
| 54143         | New           | Chief, security guard                |
| 11132         | 11302         | Chief, village                       |
| 22643         | 32265         | Chiropractor                         |
| 62113         | 61418         | Chokerman, logging                   |
| 26532         | 29341         | Choreographer                        |
| 35211         | 31315         | Cinematographer                      |
| 26575         | 39546         | Circus performer, animal             |
| 81849         | 81392         | Clay maker, pottery                  |
| 91223         | 91227         | Cleaner, aircraft                    |
| 51531         | 91311         | Cleaner, building                    |
| 71331         | 71431         | Cleaner, building exteriors          |
| 91221         | 91228         | Cleaner, bus/interior                |
| 91113         | 91213         | Cleaner, domestic                    |
| 91124         | 91226         | Cleaner, hotel/club/cafe             |
| 91111         | New           | Cleaner, house                       |
| 91225         | New           | Cleaner, janitor                     |
| 93226         | 93216         | Cleaner, latex tank                  |
| 92122         | New           | Cleaner, livestock farm              |
| 81225         | 82228         | Cleaner, metal                       |
| 91124         | 91225         | Cleaner, office                      |
| 91222         | 91322         | Cleaner, vehicles                    |
| 91231         | 91321         | Cleaner, window                      |
| 43112         | 41302         | Clerk, account                       |
| 43112         | New           | Clerk, account and promotion         |
| 43112         | 41301         | Clerk, accounting machine            |
| 43112         | New           | Clerk, accounting payable            |
| 43112         | New           | Clerk, accounting receivable         |
| 43115         | 41305         | Clerk, actuarial                     |
| 44168         | 41207         | Clerk, addressing machine            |
| 43115         | 41305         | Clerk, adjustment                    |
| 41101         | New           | Clerk, administrative                |
| 43112         | New           | Clerk, administrative and accounting |
| 44199         | New           | Clerk, advertising                   |
| 43234         | 44004         | Clerk, air transport operations      |
| 42221         | 42226         | Clerk, appointments                  |
| 43112         | 41302         | Clerk, auction                       |
| 43115         | 41304         | Clerk, audit                         |
| 43115         | 41303         | Clerk, bank                          |
| 42121         | 42127         | Clerk, betting counter               |
| 43117         | 41308         | Clerk, billing                       |
| 43115         | 41305         | Clerk, bond                          |
| 42214         | 42219         | Clerk, booking                       |
| 43111         | 41301         | Clerk, bookkeeping                   |
| 43111         | 41301         | Clerk, bookkeeping machine           |
| 43128         | New           | Clerk, book-loan                     |
| 42121         | 42127         | Clerk, bookmaker                     |
| 43115         | 41305         | Clerk, brokerage                     |
| 42225         | New           | Clerk, call centre                   |
| 43217         | 41517         | Clerk, cargo                         |
| 42112         | 42121         | Clerk, cash counter                  |
| 42123         | 42125         | Clerk, casino                        |
| 43128         | New           | Clerk, claim                         |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 44168         | 41207         | Clerk, classification                                       |
| 44199         | New           | Clerk, classified advertising                               |
| 43115         | 41303         | Clerk, clearing house, banking                              |
| 44132         | 41412         | Clerk, coding (data-processing)                             |
| 44132         | 41412         | Clerk, coding/statistics                                    |
| 43115         | 41305         | Clerk, collateral   |
| 44151         | 41207         | Clerk, compilation/directory (compiler, clerical/directory) |
| 41101         | New           | Clerk, confidential   |
| 43212         | 41512         | Clerk, control/food and beverage                            |
| 41101         | 41201         | Clerk, correspondence                                       |
| 43117         | 41307         | Clerk, cost   |
| 43117         | 41307         | Clerk, cost computing                                       |
| 42252         | New           | Clerk, counter enquiries                                    |
| 44199         | 41204         | Clerk, court  |
| 43115         | 41305         | Clerk, credit   |
| 43115         | New           | Clerk, credit control                                       |
| 42251         | 42290         | Clerk, customer-complaints                                  |
| 41321         | 41131         | Clerk, data entry/computer                                  |
| 41321         | 41133         | Clerk, data entry/electronic mail                           |
| 43211         | New           | Clerk, delivery and receiving                               |
| 43234         | 44004         | Clerk, dispatch/air transport                               |
| 44153         | 41209         | Clerk, document copyist                                     |
| 44167         | 41205         | Clerk, employment   |
| 43221         | New           | Clerk, engineering  |
| 43221         | New           | Clerk, estate/plantation                                    |
| 43115         | New           | Clerk, estate/plantation financial                          |
| 43212         | New           | Clerk, estate/plantation stock                              |
| 43117         | 41307         | Clerk, estimating   |
| 43226         | New           | Clerk, facilities maintenance                               |
| 44151         | 41207         | Clerk, filing   |
| 43115         | 41305         | Clerk, finance  |
| 43234         | 44004         | Clerk, flight operation                                     |
| 43217         | 41517         | Clerk, freight  |
| 43217         | 41517         | Clerk, freight/despaching                                   |
| 43217         | 41517         | Clerk, freight/inward                                       |
| 43217         | 41517         | Clerk, freight/receiving                                    |
| 43217         | 41517         | Clerk, freight/routing                                      |
| 43217         | 41517         | Clerk, freight/traffic                                      |
| 44167         | New           | Clerk, general affairs                                      |
| 44199         | New           | Clerk, golf   |
| 43232         | 44002         | Clerk, goods transportation/railway                         |
| 43122         | New           | Clerk, grading  |
| 42291         | New           | Clerk, hospital admissions                                  |
| 42242         | New           | Clerk, hotel front desk                                     |
| 44167         | 41202         | Clerk, human resource                                       |
| 43218         | 41518         | Clerk, import-export  |
| 41323         | 41207         | Clerk, index  |
| 42221         | 42226         | Clerk, information  |
| 41101         | New           | Clerk, information technology                               |
| 42253         | New           | Clerk, inquiries  |
| 43128         | New           | Clerk, insurance underwriting                               |
| 43216         | 41516         | Clerk, inventory  |
| 43216         | New           | Clerk, inventory purchasing                                 |
| 43115         | 41305         | Clerk, investment   |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                              |
|---------------|---------------|--|
| 43112         | 41302         | Clerk, invoice                         |
| 44199         | 41204         | Clerk, judge                           |
| 43216         | 41516         | Clerk, kitchen/hotel                   |
| 44199         | 41204         | Clerk, law/legal                       |
| 43111         | 41301         | Clerk, ledger                          |
| 44111         | 41206         | Clerk, library                         |
| 43216         | 41516         | Clerk, linen supply/hotel and lodging  |
| 44125         | 41207         | Clerk, list/address                    |
| 44125         | 41207         | Clerk, list/mail                       |
| 43225         | New           | Clerk, local sales                     |
| 43221         | New           | Clerk, logging                         |
| 43231         | New           | Clerk, logistic                        |
| 44125         | 43002         | Clerk, mail                            |
| 44122         | 43004         | Clerk, mail/dispatch                   |
| 44124         | 43004         | Clerk, mail/sorting                    |
| 43221         | New           | Clerk, maintenance                     |
| 41102         | New           | Clerk, management information systems  |
| 43225         | New           | Clerk, marketing                       |
| 43221         | New           | Clerk, mill office                     |
| 43115         | 41305         | Clerk, mortgage                        |
| 43221         | New           | Clerk, motor maintenance               |
| 41101         | New           | Clerk, office                          |
| 43117         | 41306         | Clerk, office cash                     |
| 43221         | New           | Clerk, operation                       |
| 43221         | New           | Clerk, order management                |
| 43221         | 41523         | Clerk, order/material                  |
| 43221         | New           | Clerk, packing                         |
| 43131         | 41306         | Clerk, payroll                         |
| 44167         | 41202         | Clerk, personnel                       |
| 44152         | 41209         | Clerk, photocopying                    |
| 43221         | 41522         | Clerk, planning/material               |
| 43224         | 41521         | Clerk, planning/production             |
| 42113         | 42124         | Clerk, postal                          |
| 43223         | New           | Clerk, power plant                     |
| 44168         | 41204         | Clerk, probate                         |
| 43221         | 41523         | Clerk, procurement                     |
| 43221         | New           | Clerk, production administrative       |
| 43221         | New           | Clerk, production control              |
| 43225         | New           | Clerk, production sales administrative |
| 43117         | New           | Clerk, property                        |
| 41101         | 44197         | Clerk, publication                     |
| 43221         | 41523         | Clerk, purchasing/material             |
| 43221         | New           | Clerk, quality and ecology             |
| 43227         | New           | Clerk, quality assurance               |
| 43227         | New           | Clerk, quality control                 |
| 43115         | 41305         | Clerk, rating                          |
| 43211         | New           | Clerk, raw material                    |
| 43211         | New           | Clerk, raw material store              |
| 43211         | New           | Clerk, receiving                       |
| 44167         | 41202         | Clerk, records/personnel               |
| 44168         | 41207         | Clerk, registry                        |
| 42145         | 41208         | Clerk, rental                          |
| 42145         | 41208         | Clerk, rental/audio visual equipment   |
| 42145         | 41208         | Clerk, rental/car/limousine            |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 42145         | 41208         | Clerk, rental/costume                                  |
| 42145         | 41208         | Clerk, rental/heavy vehicles                           |
| 42145         | 41208         | Clerk, rental/video tapes                              |
| 43221         | 41524         | Clerk, research/food and beverage                      |
| 41101         | 51212         | Clerk, room service                                    |
| 42116         | 41209         | Clerk, safe deposit                                    |
| 43225         | 41524         | Clerk, sales   |
| 43225         | New           | Clerk, sales admin                                     |
| 43225         | New           | Clerk, sales and marketing                             |
| 43225         | New           | Clerk, sales counter                                   |
| 43225         | 41524         | Clerk, sales order                                     |
| 43115         | 41305         | Clerk, securities                                      |
| 43221         | New           | Clerk, service   |
| 44199         | New           | Clerk, service assistant sewing                        |
| 43115         | 41305         | Clerk, share and stock registration                    |
| 43214         | 41514         | Clerk, shipping  |
| 43235         | New           | Clerk, shipping and purchasing                         |
| 43221         | New           | Clerk, site  |
| 43121         | 41411         | Clerk, statistical                                     |
| 43212         | 41512         | Clerk, stock   |
| 43212         | New           | Clerk, stock control                                   |
| 43212         | 41512         | Clerk, stock record                                    |
| 43115         | 41305         | Clerk, stockbroker                                     |
| 43211         | 41511         | Clerk, store   |
| 43211         | 41511         | Clerk, supply  |
| 43215         | 41515         | Clerk, tally   |
| 43115         | 41305         | Clerk, tax   |
| 43226         | New           | Clerk, technical                                       |
| 43226         | New           | Clerk, technician                                      |
| 43225         | New           | Clerk, telesales                                       |
| 52307         | 42117         | Clerk, ticket issuing (except travel)                  |
| 42211         | 42211         | Clerk, ticket issuing/travel                           |
| 43117         | 41306         | Clerk, times   |
| 52309         | 42119         | Clerk, toll collection                                 |
| 43222         | New           | Clerk, tooling   |
| 43234         | 44004         | Clerk, traffic   |
| 43231         | 44001         | Clerk, transport                                       |
| 42213         | 42213         | Clerk, travel  |
| 42213         | 42213         | Clerk, travel agency                                   |
| 42212         | 42212         | Clerk, travel/air lines                                |
| 43131         | 41306         | Clerk, wages   |
| 43211         | 41511         | Clerk, warehouse                                       |
| 43213         | 41513         | Clerk, weighbridge                                     |
| 43213         | 41513         | Clerk, weighing  |
| 41312         | 41122         | Clerk, word processing                                 |
| 31121         | 31122         | Clerk-of-work  |
| 21122         | 21122         | Climatologist  |
| 44199         | New           | Clipper, press   |
| 26574         | 39544         | Clown  |
| 34223         | New           | Coach, aerobics  |
| 34228         | New           | Coach, instructor and other sports officials (indoor)  |
| 34229         | New           | Coach, instructor and other sports officials (outdoor) |
| 34224         | New           | Coach, judo  |
| 34224         | New           | Coach, karate  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 34224         | 39563         | Coach, silat                                     |
| 34227         | New           | Coach, swimming                                  |
| 34224         | New           | Coach, taekwando                                 |
| 34226         | New           | Coach, tai chi                                   |
| 34225         | 39563         | Coach, tennis                                    |
| 34226         | New           | Coach, yoga                                      |
| 51695         | 51491         | Coastguard                                       |
| 75333         | 74423         | Cobbler  |
| 43225         | New           | Co-coordinator, sales                            |
| 51411         | New           | Coiffeur   |
| 42141         | 42191         | Collector, bill                                  |
| 63405         | 62220         | Collector, bird's nest                           |
| 63406         | New           | Collector, cane                                  |
| 42142         | 42192         | Collector, charity                               |
| 63402         | 62220         | Collector, dammar                                |
| 42143         | 42193         | Collector, debt                                  |
| 92121         | New           | Collector, egg                                   |
| 61294         | New           | Collector, honey                                 |
| 63401         | 62220         | Collector, jelutong                              |
| 96299         | New           | Collector, old metal                             |
| 96299         | New           | Collector, old newspaper                         |
| 42141         | 42191         | Collector, payment                               |
| 63401         | New           | Collector, petai                                 |
| 42144         | 42194         | Collector, rent                                  |
| 54147         | 92033         | Collector, ticket usher                          |
| 63403         | 62220         | Collector, turtle-egg                            |
| 96232         | 92042         | Collector, vending machine/money                 |
| 01105         | New           | Colonel, Army                                    |
| 03105         | New           | Colonel, Royal Malaysian Air Force               |
| 26421         | 29319         | Columnist  |
| 02105         | New           | Commander, Navy                                  |
| 51201         | New           | Commis   |
| 26191         | 25091         | Commissioner for oaths                           |
| 11121         | 11201         | Commissioner, civil service                      |
| 34121         | New           | Community development supervisor                 |
| 51621         | New           | Companion  |
| 51621         | 51398         | Companion, social                                |
| 11201         | 12101         | Company director                                 |
| 26561         | 39522         | Compere  |
| 44151         | New           | Compiler, directory                              |
| 26522         | 29332         | Composer, music                                  |
| 73211         | 73311         | Compositor                                       |
| 81311         | 81517         | Compounder, match/chemical and related processes |
| 54147         | 92035         | Concierge  |
| 51531         | 91311         | Concierge, building                              |
| 24233         | 24304         | Conciliator, labour management relations         |
| 26523         | 29334         | Conductor, band                                  |
| 51121         | 51121         | Conductor, bus                                   |
| 51121         | 51125         | Conductor, cable car                             |
| 51121         | 51127         | Conductor, ferry boat                            |
| 31425         | 35012         | Conductor, field and factory/oil palm plantation |
| 31425         | 35011         | Conductor, field and factory/rubber plantation   |
| 51121         | 51128         | Conductor, hovercraft                            |
| 31117         | 31117         | Conductor, laboratory research estate/plantation |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 26523         | 29334         | Conductor, orchestra                             |
| 51121         | 51122         | Conductor, train                                 |
| 51121         | 51127         | Conductor, tram                                  |
| 26523         | 29335         | Conductor, vocal group                           |
| 21324         | JPA           | Conservationist, forestry G41                    |
| 21322         | New           | Conservator, forestry                            |
| 54121         | 51421         | Constable, police Y14                            |
| 33433         | 39223         | Consul   |
| 11123         | 11201         | Consul-general                                   |
| 24211         | New           | Consultant, business                             |
| 25111         | New           | Consultant, computer                             |
| 22653         | 32235         | Consultant, dietetic/food processing             |
| 33321         | 34191         | Consultant, exhibition and convention            |
| 25111         | New           | Consultant, information technology               |
| 24211         | New           | Consultant, management                           |
| 25233         | New           | Consultant, network services                     |
| 24234         | 24308         | Consultant, personnel                            |
| 25111         | New           | Consultant, systems                              |
| 33323         | 34192         | Consultant, travel                               |
| 81212         | 81228         | Continuous-mill roller, steel/cold-roller, steel |
| 26572         | 39542         | Contortionist                                    |
| 21741         | 31440         | Controller, air traffic                          |
| 21826         | New           | Controller, bundling                             |
| 43234         | 44004         | Controller, clerical/air transport service       |
| 44124         | 43004         | Controller, clerical/mail                        |
| 44124         | 43004         | Controller, clerical/mail depot                  |
| 44124         | 43004         | Controller, clerical/postal service              |
| 43232         | 44002         | Controller, clerical/railway service             |
| 43233         | 44003         | Controller, clerical/road transport services     |
| 43232         | 44002         | Controller, clerical/train                       |
| 43235         | 44005         | Controller, clerk/sea transport services         |
| 44155         | New           | Controller, document                             |
| 75441         | 51394         | Controller, pest                                 |
| 21826         | New           | Controller, sawmill                              |
| 43211         | New           | Controller, store                                |
| 43213         | New           | Controller, weighbridge-security                 |
| 31343         | 81553         | Controlman (petroleum refining)                  |
| 81211         | 81211         | Converter blowing operator, steel converting     |
| 51205         | JPA           | Cook N1  |
| 51204         | 51224         | Cook, food canning & preserving                  |
| 51202         | 51222         | Cook, hotels and catering services               |
| 51203         | 51223         | Cook, private service                            |
| 51202         | 51229         | Cook, ship                                       |
| 81312         | 81521         | Cooker, chemical processes                       |
| 44156         | New           | Coordinator, document                            |
| 43237         | New           | Coordinator, shipping                            |
| 43221         | New           | Coordinator, site                                |
| 43211         | New           | Coordinator, store                               |
| 72132         | 72132         | Coppersmith                                      |
| 26413         | 29313         | Copywriter, advertising                          |
| 31163         | 31163         | Core analyst (petroleum and natural gas)         |
| 72112         | 72112         | Core checker, foundry                            |
| 82211         | 82111         | Coremaker, machine, foundry                      |
| 72112         | 72112         | Coremaker, metal                                 |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 26197         | 25097         | Coroner  |
| 01205         | New           | Corporal   |
| 03205         | New           | Corporal Air Force                                       |
| 24121         | New           | Corporate financial                                      |
| 33431         | New           | Correspondence assistant                                 |
| 21118         | 21118         | Cosmologist  |
| 33122         | New           | Cost controller  |
| 24233         | New           | Counselor  |
| 24233         | New           | Counselor, education                                     |
| 24233         | 24304         | Counselor, employment                                    |
| 24233         | New           | Counselor, marriage                                      |
| 24233         | 24304         | Counselor, vocational guidance                           |
| 83124         | 83124         | Coupler, railway yard                                    |
| 33433         | 39223         | Courier, diplomatic                                      |
| 26197         | 25097         | Court receiver and liquidator                            |
| 81602         | 82724         | Cream separator, dairy                                   |
| 26591         | New           | Creative and performing artists not elsewhere classified |
| 83504         | New           | Crew, ferry  |
| 83504         | New           | Crew, ship   |
| 83503         | 83407         | Crewman  |
| 26325         | 29245         | Criminologist  |
| 26412         | 29312         | Critic   |
| 75319         | 74399         | Crocheter, hand  |
| 81532         | 82632         | Crocheter, machine                                       |
| 42122         | 42126         | Croupier   |
| 26211         | 29111         | Curator  |
| 26215         | JPA           | Curator S41  |
| 26213         | 29113         | Curator, art gallery                                     |
| 26212         | 29112         | Curator, museum  |
| 75114         | 74114         | Curer, meat/fish   |
| 75169         | 74159         | Curer, tobacco   |
| 42115         | 42123         | Currency sorter  |
| 23993         | 23914         | Curricula developer                                      |
| 71132         | 71122         | Cutter and finisher, stone                               |
| 75324         | 74334         | Cutter, garment  |
| 73153         | 73223         | Cutter, glass  |
| 75325         | 74335         | Cutter, gloves   |
| 92142         | 93122         | Cutter, grass  |
| 81592         | 82692         | Cutter, leather garment                                  |
| 75325         | 74335         | Cutter, mattresses                                       |
| 73154         | 73224         | Cutter, optical glass                                    |
| 73232         | 73331         | Cutter, paper  |
| 81716         | 81426         | Cutter, paper pulp                                       |
| 75325         | 74335         | Cutter, sail   |
| 73221         | 73351         | Cutter, stencil/silk-screen                              |
| 75325         | 74335         | Cutter, tent   |
| 92143         | 93123         | Cutter, tree   |
| 75325         | 74335         | Cutter, umbrella   |
| 81722         | 81412         | Cutter, veneer   |
| 71224         | 71324         | Cutter-setter, mosaic                                    |
| 31349         | 81591         | Cylinder filler & tester (compressed & liquefied gases)  |
| 21313         | 22113         | Cystologist, animal                                      |
| 21312         | 22112         | Cystologist, plant                                       |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                       |
|---------------|---------------|---------------------------------|
| <b>D</b>      |               |                                 |
| 26531         | 29342         | Dancer                          |
| 26531         | 39532         | Dancer, night club              |
| 51312         | New           | Dang pawara                     |
| 33221         | New           | Dealer                          |
| 13452         | 12293         | Dean                            |
| 13452         | 12293         | Dean of faculty, university     |
| 83501         | 83403         | Deckhand (ship, barge and boat) |
| 34322         | 39512         | Decorator, display              |
| 34322         | 39512         | Decorator, display/windows      |
| 34326         | 39517         | Decorator, flower               |
| 34323         | 39513         | Decorator, interior             |
| 34325         | 39515         | Decorator, motion picture set   |
| 26561         | 39525         | Deejay                          |
| 81605         | 82756         | Dehydrator, foodstuffs          |
| 96214         | 92014         | Deliverer, newspaper/leaflets   |
| 11131         | New           | Demang                          |
| 51201         | New           | Demi chef                       |
| 21209         | 21222         | Demographer                     |
| 52421         | 52103         | Demonstrator                    |
| 22611         | 22221         | Dentist                         |
| 22616         | 22226         | Dentist, oral surgery           |
| 22613         | 22223         | Dentist, orthodontistry         |
| 22612         | 22222         | Dentist, pedodontistry          |
| 22615         | 22225         | Dentist, periodontistry         |
| 22614         | 22224         | Dentist, prosthodontistry       |
| 11112         | 11102         | Deputy minister                 |
| 11121         | 11201         | Deputy secretary, government    |
| 22129         | 22219         | Dermatologist                   |
| 21661         | JPA           | Designer B41                    |
| 21737         | 21456         | Designer, aircraft              |
| 34322         | 39512         | Designer, armorial              |
| 21632         | 39514         | Designer, cloth                 |
| 21631         | 39514         | Designer, commercial products   |
| 25211         | 21315         | Designer, database              |
| 34322         | 39512         | Designer, display               |
| 34322         | 39512         | Designer, display, windows      |
| 21632         | 39514         | Designer, dress                 |
| 31191         | 31198         | Designer, engineering           |
| 34322         | 39512         | Designer, exhibition            |
| 21632         | 39514         | Designer, fashion               |
| 34324         | 39514         | Designer, furniture             |
| 21665         | 39511         | Designer, graphic               |
| 21631         | 39514         | Designer, industrial products   |
| 34323         | 39513         | Designer, interior decoration   |
| 34324         | 39514         | Designer, jewellery             |
| 34324         | 39514         | Designer, metalwork/ornamental  |
| 21445         | 21455         | Designer, motor-car             |
| 34324         | 39514         | Designer, package               |
| 34321         | 39511         | Designer, poster                |
| 34322         | 39512         | Designer, scenery               |
| 34324         | 39514         | Designer, shoe                  |
| 25123         | New           | Designer, software              |
| 21664         | 21311         | Designer, systems/computer      |



| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 21413         | 21493         | Designer, systems/except computers                         |
| 21632         | 39514         | Designer, textile  |
| 34325         | 39515         | Designer, theatrical set                                   |
| 21665         | 39511         | Designer, typographical                                    |
| 21662         | 21313         | Designer, web  |
| 31344         | 81554         | Desulphuriser operator, petroleum refining                 |
| 54194         | 51441         | Detective, hotel   |
| 33552         | 39122         | Detective, police  |
| 54196         | 51450         | Detective, private   |
| 54194         | 51441         | Detective, store   |
| 73245         | 73345         | Developer, film/color and black and white                  |
| 73246         | 73346         | Developer, film/x-ray                                      |
| 25131         | 21313         | Developer, web site/Internet/Intranet                      |
| 22651         | 32231         | Dietician  |
| 22651         | 32233         | Dietician, hospital  |
| 22651         | 32233         | Dietician, public health                                   |
| 22651         | 32233         | Dietician, therapeutic                                     |
| 71266         | 71368         | Digger, well   |
| 34343         | New           | Dim sum chef   |
| 11123         | 11201         | Diplomatic representative, embassy                         |
| 73162         | New           | Dipper, ceramics   |
| 13421         | 12291         | Director of medical services                               |
| 13421         | 12291         | Director of nursing  |
| 26533         | 29343         | Director, dance  |
| 11201         | 12101         | Director, enterprise                                       |
| 26541         | 29355         | Director, motion picture                                   |
| 26522         | 29337         | Director, music  |
| 11202         | 12102         | Director, organization                                     |
| 26541         | 29354         | Director, photography (motion picture)                     |
| 26541         | 29353         | Director, radio and television                             |
| 26541         | 29353         | Director, radio and television broadcasting                |
| 13452         | 12102         | Director, school   |
| 26541         | 29356         | Director, stage  |
| 26541         | 29352         | Director, theatrical                                       |
| 11142         | 11421         | Director-general, employers' organization                  |
| 11201         | 12101         | Director-general, enterprise                               |
| 11124         | 11201         | Director-general, fire and rescue                          |
| 11121         | 11201         | Director-general, government administration/regional       |
| 11121         | 11201         | Director-general, government department                    |
| 11124         | 11201         | Director-general, inland revenue                           |
| 11202         | 12102         | Director-general, organization                             |
| 11124         | 11201         | Director-general, prison                                   |
| 43234         | 44004         | Dispatcher, clerical/aircraft                              |
| 43235         | 44005         | Dispatcher, clerical/boat                                  |
| 43233         | 44003         | Dispatcher, clerical/bus                                   |
| 43235         | 44006         | Dispatcher, clerical/gas pipeline                          |
| 43235         | 44006         | Dispatcher, clerical/oil pipeline                          |
| 43232         | 44002         | Dispatcher, clerical/railway                               |
| 43233         | 44003         | Dispatcher, clerical/road transport (except bus and truck) |
| 43232         | 44002         | Dispatcher, clerical/train                                 |
| 43233         | 44003         | Dispatcher, clerical/truck                                 |
| 32302         | 32416         | Dispenser, Chinese traditional medicine                    |
| 75413         | New           | Dive boatman   |
| 75412         | New           | Dive master  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 51693         | 51494         | Diver   |
| 75411         | 72160         | Diver construction  |
| 62223         | 62123         | Diver, oyster   |
| 62223         | 62123         | Diver, pearl  |
| 93331         | 93411         | Docker  |
| 31154         | 31156         | Dockmaster, dry dock  |
| 31154         | 31156         | Dockmaster, graving dock                                    |
| 22129         | 22219         | Doctor medical insurance consultancy                        |
| 22129         | 22213         | Doctor medical/anaesthetic                                  |
| 22129         | 22216         | Doctor medical/cardiology                                   |
| 22129         | 22217         | Doctor medical/gynaecology                                  |
| 22129         | 22218         | Doctor medical/neurology                                    |
| 22129         | 22217         | Doctor medical/obstetrics                                   |
| 22129         | 22215         | Doctor medical/ophthalmology                                |
| 22129         | 22214         | Doctor medical/psychiatry                                   |
| 22129         | 22219         | Doctor medical/radiology                                    |
| 22111         | 22211         | Doctor, medical   |
| 22129         | 22219         | Doctor, skin  |
| 26225         | 29125         | Documentalist   |
| 91114         | New           | Domestic housekeeper  |
| 91111         | New           | Domestic servant  |
| 54147         | 92032         | Doorman   |
| 26198         | 25099         | Drafter, parliamentary                                      |
| 31181         | 31181         | Draughtsperson  |
| 31182         | JPA           | Draughtsperson J17  |
| 31181         | 31183         | Draughtsperson, architectural                               |
| 31181         | 31187         | Draughtsperson, cartographical                              |
| 31181         | 31189         | Draughtsperson, die   |
| 31181         | 31189         | Draughtsperson, engineering/aeronautical                    |
| 31181         | 31182         | Draughtsperson, engineering/civil                           |
| 31181         | 31185         | Draughtsperson, engineering/electrical                      |
| 31181         | 31185         | Draughtsperson, engineering/electronics                     |
| 31181         | 31189         | Draughtsperson, engineering/heating and ventilation systems |
| 31181         | 31184         | Draughtsperson, engineering/marine                          |
| 31181         | 31186         | Draughtsperson, engineering/mechanical                      |
| 31181         | 31188         | Draughtsperson, geological                                  |
| 31181         | 31189         | Draughtsperson, illustration technique                      |
| 31181         | 31189         | Draughtsperson, jig & tool                                  |
| 31181         | 31189         | Draughtsperson, lithographic                                |
| 31181         | 31188         | Draughtsperson, mining                                      |
| 31181         | 31183         | Draughtsperson, structural                                  |
| 31181         | 31181         | Draughtsperson, technical                                   |
| 31181         | 31187         | Draughtsperson, topographical                               |
| 81215         | 81241         | Drawer, metal   |
| 81216         | 81243         | Drawer, seamless pipe and tube                              |
| 81216         | 81241         | Drawer, wire  |
| 71139         | 71129         | Dresser, stone  |
| 81123         | 81123         | Dresser, tin ore  |
| 75311         | 74321         | Dressmaker  |
| 83228         | JPA           | Driver R3   |
| 83224         | 83224         | Driver, ambulance   |
| 93323         | New           | Driver, animal train  |
| 93321         | 93431         | Driver, animal-drawn vehicle or machinery                   |
| 83213         | New           | Driver, auto rickshaw                                       |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                      |
|---------------|---------------|--|
| 83225         | New           | Driver, bell                                   |
| 93322         | 93432         | Driver, bullock-cart                           |
| 83311         | 83231         | Driver, bus                                    |
| 83227         | New           | Driver, car                                    |
| 83424         | New           | Driver, ditch backhoe                          |
| 83323         | 83243         | Driver, dumper                                 |
| 83114         | New           | Driver, engine                                 |
| 83115         | JPA           | Driver, engine (Bukit Bendera Train) R9        |
| 83411         | 83311         | Driver, farm tractor                           |
| 83322         | 83242         | Driver, fire-engine                            |
| 83111         | New           | Driver, locomotive                             |
| 62113         | 61418         | Driver, log                                    |
| 83321         | 83241         | Driver, lorry                                  |
| 83113         | 83113         | Driver, mine engine                            |
| 83214         | New           | Driver, motorized tricycle                     |
| 74217         | New           | Driver, network                                |
| 83222         | New           | Driver, officer/manager                        |
| 93311         | 93420         | Driver, pedal vehicle                          |
| 83226         | New           | Driver, personal                               |
| 83111         | 83111         | Driver, railway engine                         |
| 83117         | JPA           | Driver, Sabah locomotive AA13                  |
| 83325         | 83244         | Driver, tanker                                 |
| 83221         | 83221         | Driver, taxi                                   |
| 83412         | 83312         | Driver, timber carrier                         |
| 83326         | New           | Driver, towing                                 |
| 83312         | 83232         | Driver, tram                                   |
| 83324         | 83244         | Driver, truck                                  |
| 83223         | 83223         | Driver, van                                    |
| 83413         | 83313         | Driver, winch-truck (logging)                  |
| 83116         | JPA           | Driver/ Operator, mobile harbour crane R3      |
| 91213         | New           | Dry-cleaner, hand                              |
| 75169         | 74159         | Dryer, tobacco / slicer, tobacco               |
| 35212         | 31318         | Dubbing mixer                                  |
| 93111         | New           | Dulang washer                                  |
| <b>E</b>      |               |  |
| 21315         | 22115         | Ecologist                                      |
| 21315         | 22115         | Ecologist, animal                              |
| 21315         | 22115         | Ecologist, plant                               |
| 26311         | 29212         | Econometrician                                 |
| 26311         | 29212         | Economist                                      |
| 26311         | 29212         | Economist, econometrician                      |
| 26415         | 29316         | Editor   |
| 26415         | 29316         | Editor, book                                   |
| 26542         | 29357         | Editor, film and video                         |
| 26542         | 29316         | Editor, press                                  |
| 26422         | 29316         | Editor, radio and television news broadcasting |
| 35212         | 31318         | Editor, sound                                  |
| 22655         | New           | Educator, health                               |
| 74122         | JPA           | Electrical charginman R17                      |
| 74128         | 72418         | Electrical repairman, household appliance      |
| 74126         | 72416         | Electrician, aircraft                          |
| 74111         | 74123         | Electrician, building                          |
| 74112         | New           | Electrician, construction                      |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                       |
|---------------|---------------|---|
| 74123         | New           | Electrician, maintenance                        |
| 74124         | 72414         | Electrician, ship                               |
| 74127         | 72417         | Electrician, stage and studio                   |
| 74125         | 72415         | Electrician, vehicle                            |
| 81221         | 82221         | Electroplater                                   |
| 32551         | New           | Electrotherapist                                |
| 73163         | 73322         | Electrotypist                                   |
| 51632         | 51321         | Embalmer  |
| 73234         | 73332         | Embosser, book                                  |
| 75316         | 74393         | Embroiderer, hand                               |
| 81533         | 82632         | Embroiderer, machine                            |
| 81314         | 82229         | Enameller, chemical                             |
| 73162         | 73239         | Enameller, glass                                |
| 73138         | 73138         | Enameller, jewellery                            |
| 21344         | 22124         | Endocrinologists                                |
| 21737         | 21456         | Engineer, aeronautical                          |
| 21531         | 21442         | Engineer, aerospace (telecommunications)        |
| 21449         | 21459         | Engineer, agricultural                          |
| 21737         | New           | Engineer, aircraft                              |
| 33227         | New           | Engineer, application (sales)                   |
| 21524         | 21444         | Engineer, audio and video equipment             |
| 21411         | 21491         | Engineer, automation                            |
| 21451         | 21461         | Engineer, chemical                              |
| 21451         | 21461         | Engineer, chemical process                      |
| 21454         | 21464         | Engineer, chemical/fertilizer                   |
| 21456         | 21466         | Engineer, chemical/food                         |
| 21453         | 21463         | Engineer, chemical/paints and varnish           |
| 21452         | 21462         | Engineer, chemical/petroleum and gas            |
| 21455         | 21465         | Engineer, chemical/pharmaceutical products      |
| 21711         | 31411         | Engineer, chief/ship                            |
| 21421         | 21421         | Engineer, civil                                 |
| 21424         | JPA           | Engineer, civil J41                             |
| 21422         | 21422         | Engineer, civil/aerodome construction           |
| 21425         | 21425         | Engineer, civil/bridge construction             |
| 21422         | 21422         | Engineer, civil/building construction           |
| 21422         | 21422         | Engineer, civil/building structure              |
| 21422         | 21422         | Engineer, civil/chimney construction            |
| 21422         | 21422         | Engineer, civil/construction                    |
| 21422         | 21422         | Engineer, civil/dock and harbour construction   |
| 21426         | 21426         | Engineer, civil/dredging                        |
| 21425         | 21424         | Engineer, civil/geotechnic                      |
| 21423         | 21423         | Engineer, civil/highway and street construction |
| 21423         | 21423         | Engineer, civil/highways and road               |
| 21427         | 21427         | Engineer, civil/hydraulics                      |
| 21427         | 21427         | Engineer, civil/hydrology                       |
| 21426         | 21426         | Engineer, civil/irrigation                      |
| 21428         | 21428         | Engineer, civil/public health                   |
| 21423         | 21423         | Engineer, civil/railway construction            |
| 21423         | 21423         | Engineer, civil/road construction               |
| 21428         | 21428         | Engineer, civil/sanitary                        |
| 21426         | 21426         | Engineer, civil/soil mechanics                  |
| 21422         | 21422         | Engineer, civil/structural                      |
| 21422         | 21422         | Engineer, civil/tower construction              |
| 21425         | 21425         | Engineer, civil/tunnel construction             |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 21523         | 21443         | Engineer, computer   |
| 21523         | 21443         | Engineer, computer applications                                    |
| 21523         | 21443         | Engineer, computer hardware  |
| 21523         | 21443         | Engineer, computer software  |
| 21523         | 21443         | Engineer, computer systems   |
| 21414         | 21494         | Engineer, cost evaluation  |
| 21443         | 21453         | Engineer, cryogenic  |
| 21445         | 21455         | Engineer, diesel   |
| 21511         | 21431         | Engineer, electrical   |
| 21514         | 21434         | Engineer, electrical illumination                                  |
| 21516         | JPA           | Engineer, electrical J41   |
| 21511         | 21431         | Engineer, electrical systems                                       |
| 21511         | New           | Engineer, electrical testing                                       |
| 21513         | 21433         | Engineer, electrical/electric power distribution                   |
| 21512         | 21432         | Engineer, electrical/electric power generation                     |
| 21513         | 21433         | Engineer, electrical/electric power transmission                   |
| 21513         | 21433         | Engineer, electrical/electric traction                             |
| 21515         | 21435         | Engineer, electrical/electromechanical equipment                   |
| 21512         | 21432         | Engineer, electrical/high voltage                                  |
| 21521         | 21441         | Engineer, electronics  |
| 21527         | JPA           | Engineer, electronics J41  |
| 21523         | 21443         | Engineer, electronics/computer hardware design                     |
| 21523         | 21443         | Engineer, electronics/information engineering                      |
| 21526         | 21446         | Engineer, electronics/instrumentation                              |
| 21525         | 21445         | Engineer, electronics/semiconductors                               |
| 21445         | 21455         | Engineer, engines  |
| 21431         | New           | Engineer, environment  |
| 21429         | New           | Engineer, facilities   |
| 21737         | 31432         | Engineer, flight   |
| 21445         | 21455         | Engineer, gas turbine  |
| 21316         | 22116         | Engineer, genetics   |
| 21444         | 21454         | Engineer, heating, ventilation, air-conditioning and refrigeration |
| 21412         | 21492         | Engineer, industrial   |
| 21414         | 21494         | Engineer, industrial efficiency                                    |
| 21415         | 21495         | Engineer, industrial health  |
| 21415         | 21495         | Engineer, industrial health and safety                             |
| 21412         | 21492         | Engineer, industrial layout  |
| 21442         | 21452         | Engineer, industrial machinery and tools                           |
| 21415         | 21495         | Engineer, industrial safety  |
| 21523         | 21443         | Engineer, information technology (IT)                              |
| 21445         | 21455         | Engineer, internal combustion engine                               |
| 21445         | 21455         | Engineer, jet engine   |
| 21442         | New           | Engineer, lift   |
| 21445         | 21455         | Engineer, locomotive engine  |
| 21445         | 21459         | Engineer, lubrication  |
| 21429         | 21429         | Engineer, maintenance  |
| 21523         | 21443         | Engineer, management information systems (MIS)                     |
| 21712         | New           | Engineer, marine   |
| 21441         | 21451         | Engineer, mechanical   |
| 21446         | JPA           | Engineer, mechanical J41   |
| 21737         | 21456         | Engineer, mechanical/aeronautics                                   |
| 21737         | 21456         | Engineer, mechanical/aerospace                                     |
| 21449         | 21459         | Engineer, mechanical/agriculture                                   |
| 21445         | 21455         | Engineer, mechanical/automotive                                    |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 21445         | 21455         | Engineer, mechanical/diesel                                    |
| 21445         | 21455         | Engineer, mechanical/gas turbine                               |
| 21442         | 21452         | Engineer, mechanical/instruments                               |
| 21445         | 21455         | Engineer, mechanical/motors and engine (except marine)         |
| 21445         | 21455         | Engineer, mechanical/motors and engines (marine)               |
| 21712         | 21457         | Engineer, mechanical/naval                                     |
| 21443         | 21453         | Engineer, mechanical/nuclear power                             |
| 21526         | 21446         | Engineer, mechantronics  |
| 21465         | 21474         | Engineer, metal testing  |
| 21461         | 21471         | Engineer, mining   |
| 21463         | 21473         | Engineer, mining/coal  |
| 21463         | 21473         | Engineer, mining/diamonds                                      |
| 21462         | 21472         | Engineer, mining/metal   |
| 21463         | 21473         | Engineer, mining/non metal                                     |
| 21464         | 21473         | Engineer, mining/petroleum and natural gas                     |
| 21445         | 21455         | Engineer, motor  |
| 21452         | 21462         | Engineer, natural gas production and distribution              |
| 21523         | 21443         | Engineer, network  |
| 21443         | 21453         | Engineer, nuclear power  |
| 21413         | 21493         | Engineer, organization and methods                             |
| 21413         | 21493         | Engineer, planning   |
| 21513         | 21433         | Engineer, power distribution and transmission                  |
| 21512         | 21432         | Engineer, power generation                                     |
| 21491         | New           | Engineer, process  |
| 21416         | 21496         | Engineer, production   |
| 21491         | 21499         | Engineer, project  |
| 21492         | New           | Engineer, quality assurance                                    |
| 21492         | 21499         | Engineer, quality control                                      |
| 21494         | 21499         | Engineer, research   |
| 21422         | 21422         | Engineer, resident/civil engineering                           |
| 21411         | 21491         | Engineer, robotics   |
| 21525         | 21445         | Engineer, semiconductor  |
| 21428         | 21428         | Engineer, sewerage and sanitation                              |
| 21712         | 31412         | Engineer, ship   |
| 21712         | 21457         | Engineer, ship construction                                    |
| 21522         | 21442         | Engineer, signal/railway                                       |
| 21421         | New           | Engineer, site   |
| 21524         | 21444         | Engineer, sound systems  |
| 21445         | New           | Engineer, steam  |
| 21523         | 21443         | Engineer, systems  |
| 21413         | 21493         | Engineer, systems/except computers                             |
| 21531         | 21442         | Engineer, telecommunications/aerospace                         |
| 21533         | 21442         | Engineer, telecommunications/microwave                         |
| 21531         | 21442         | Engineer, telecommunications/radar                             |
| 21533         | 21442         | Engineer, telecommunications/radio                             |
| 21531         | 21442         | Engineer, telecommunications/signal systems                    |
| 21533         | 21442         | Engineer, telecommunications/telegraph                         |
| 21533         | 21442         | Engineer, telecommunications/telephone                         |
| 21533         | 21442         | Engineer, telecommunications/television                        |
| 21414         | 21494         | Engineer, time and motion                                      |
| 21642         | 21414         | Engineer, traffic  |
| 21513         | 21433         | Engineer, transmission/electric power                          |
| 21414         | 21494         | Engineer, work study   |
| 31151         | 31154         | Engineering assistant, aeronautical (mechanical) and equipment |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 31151         | 31153         | Engineering assistant, automobile  |
| 31161         | 31161         | Engineering assistant, chemical  |
| 31162         | 31162         | Engineering assistant, chemical (petroleum)  |
| 31121         | 31121         | Engineering assistant, civil   |
| 35111         | New           | Engineering assistant, computer  |
| 31131         | 31131         | Engineering assistant, electrical  |
| 31132         | 31132         | Engineering assistant, electrical (high voltage system)                                |
| 31141         | 31141         | Engineering assistant, electronics   |
| 31155         | New           | Engineering assistant, marine  |
| 31151         | 31151         | Engineering assistant, mechanical  |
| 31151         | 31152         | Engineering assistant, mechanical, motors and engines (except marine and aeronautical) |
| 31191         | 31195         | Engineering assistant, production  |
| 35221         | 31142         | Engineering assistant, telecommunications  |
| 31191         | 31195         | Engineering assistant, time and motion study   |
| 21495         | New           | Engineering executive, store   |
| 73161         | 73231         | Engraver, glass  |
| 73136         | 73136         | Engraver, jewellery  |
| 73243         | 73343         | Engraver, printing/lithographic stone  |
| 73241         | 73341         | Engraver, printing/metal plate   |
| 26514         | 29324         | Engraver-etcher, artistic  |
| 21314         | 22114         | Entomologist   |
| 75131         | New           | Entrepreneur, cheese   |
| 43123         | New           | Enumerator, field  |
| 43123         | 41413         | Enumerator, market research  |
| 43123         | 41413         | Enumerator, opinion polling  |
| 43123         | 41413         | Enumerator, social and economics data  |
| 21348         | 22127         | Epidemiologist   |
| 71195         | 71296         | Erector, billboard   |
| 72142         | 72142         | Erector, constructional steel  |
| 72147         | 72147         | Erector, structural metal  |
| 26412         | 29312         | Essayist   |
| 31164         | 31164         | Estimator, engineering/chemical  |
| 31121         | 31124         | Estimator, engineering/civil   |
| 31134         | 31134         | Estimator, engineering/electrical  |
| 31142         | 31146         | Estimator, engineering/electronics   |
| 31151         | 31157         | Estimator, engineering/mechanical  |
| 73161         | 73232         | Etcher, glass  |
| 73242         | 73342         | Etcher, printing/metal plate   |
| 26326         | 29246         | Ethnologist  |
| 23991         | 23911         | Evaluator and researcher, education systems  |
| 32577         | JPA           | Examiner, motor/vehicles A17   |
| 21738         | JPA           | Examiner, pilot A41  |
| 24311         | 24903         | Executive account, advertising   |
| 34342         | New           | Executive chef   |
| 33434         | 39111         | Executive officer, government  |
| 33435         | 39112         | Executive officer, statutory board   |
| 33431         | New           | Executive secretary  |
| 33431         | 39221         | Executive secretary, committee   |
| 33432         | 39222         | Executive secretary, government administration   |
| 33431         | 39221         | Executive secretary, non-government administration                                     |
| 24251         | 39224         | Executive, administrative  |
| 24113         | New           | Executive, audit   |
| 24113         | New           | Executive, audit and risk assessment   |
| 33227         | New           | Executive, business development  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                   |
|---------------|---------------|---|
| 33122         | New           | Executive, claims                           |
| 21831         | New           | Executive, contract                         |
| 24321         | New           | Executive, corporate affairs                |
| 24323         | New           | Executive, corporate communication          |
| 33227         | New           | Executive, export                           |
| 24132         | New           | Executive, finance                          |
| 27115         | New           | Executive, hotel operations                 |
| 51513         | 51212         | Executive, housekeeper                      |
| 26221         | New           | Executive, library                          |
| 21825         | New           | Executive, maintenance                      |
| 21821         | New           | Executive, manufacturing                    |
| 33227         | New           | Executive, marketing                        |
| 25221         | New           | Executive, network communications           |
| 33231         | New           | Executive, planning and distribution        |
| 33227         | New           | Executive, product/brand                    |
| 21823         | New           | Executive, production                       |
| 21832         | New           | Executive, project                          |
| 21833         | New           | Executive, property                         |
| 21822         | New           | Executive, quality assurance                |
| 33227         | New           | Executive, sales                            |
| 33227         | New           | Executive, sales administrative             |
| 21792         | New           | Executive, shipping                         |
| 21824         | New           | Executive, store                            |
| 21824         | New           | Executive, warehouse                        |
| 75145         | 74134         | Expeller, oil                               |
| 81215         | 81242         | Extruder metal                              |
| <b>F</b>      |               |   |
| 81525         | 82628         | Fabric repairer                             |
| 33414         | New           | Factory administrator                       |
| 32213         | New           | Factory medic                               |
| 32308         | 32420         | Faith healers                               |
| 92111         | 61319         | Farm worker, abaca                          |
| 62214         | 62114         | Farm worker, crocodile                      |
| 61211         | 61343         | Farm worker, diary                          |
| 92111         | 61311         | Farm worker, field crop                     |
| 62212         | 62112         | Farm worker, fish                           |
| 92111         | 61316         | Farm worker, groundnut                      |
| 61211         | 61341         | Farm worker, livestock                      |
| 92111         | 61313         | Farm worker, market                         |
| 62215         | 62115         | Farm worker, oyster                         |
| 92111         | 61312         | Farm worker, paddy                          |
| 61211         | 61342         | Farm worker, pig                            |
| 61221         | 61351         | Farm worker, poultry                        |
| 62213         | 62113         | Farm worker, prawn                          |
| 61212         | 61370         | Farm worker, skilled/mixed animal husbandry |
| 62216         | 62116         | Farm worker, snake                          |
| 92111         | 61319         | Farm worker, spice                          |
| 92111         | 61317         | Farm worker, sugarcane                      |
| 92111         | 61315         | Farm worker, tapioca                        |
| 92111         | 61314         | Farm worker, tobacco                        |
| 92111         | 61313         | Farm worker, vegetables                     |
| 21321         | 32133         | Farm, demonstrator                          |
| 61294         | 61361         | Farmer, bee                                 |



| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 61221         | 61351         | Farmer, bird   |
| 61221         | 61351         | Farmer, chicken  |
| 61234         | New           | Farmer, crocodile  |
| 61221         | 61351         | Farmer, duck   |
| 61232         | New           | Farmer, fish   |
| 61233         | New           | Farmer, gamat  |
| 61221         | 61351         | Farmer, goose  |
| 61291         | New           | Farmer, leech  |
| 61232         | New           | Farmer, mussel / abalone   |
| 61231         | New           | Farmer, ornamental fish  |
| 61221         | 61351         | Farmer, ostrich  |
| 61232         | New           | Farmer, prawn  |
| 61232         | New           | Farmer, shellfish  |
| 61293         | New           | Farmer, silkworm   |
| 61221         | 61351         | Farmer, turkey   |
| 61292         | New           | Farmer, worm   |
| 26111         | 25015         | Federal counsel (government service)                             |
| 32531         | New           | Feldchers  |
| 62111         | 61412         | Feller, logging  |
| 21725         | 31425         | Ferry captain  |
| 33227         | New           | Field consultant   |
| 01101         | New           | Field Marshal  |
| 44113         | New           | Filer, library   |
| 43212         | New           | Filler, stock  |
| 72332         | 72302         | Filter, machinery  |
| 24131         | 24201         | Financial analyst  |
| 24132         | New           | Financial controller   |
| 73235         | 73332         | Finisher, book   |
| 71144         | 71224         | Finisher, cement   |
| 73158         | 73228         | Finisher, glass  |
| 72238         | 72238         | Finisher, metal  |
| 54114         | New           | Fire watch   |
| 71123         | 71213         | Firebrick, layer   |
| 54112         | 51412         | Fire-fighter (air port)  |
| 54111         | 51411         | Fireman (fire brigade)   |
| 81823         | 81623         | Fireperson, railway engine                                       |
| 81821         | 81621         | Fireperson, ship   |
| 02103         | New           | First Admiral, Navy  |
| 63408         | New           | Fisherman  |
| 62222         | 62122         | Fishery worker, coastal  |
| 62231         | 62130         | Fishery worker, deep-sea   |
| 62221         | 62121         | Fishery worker, inland   |
| 62221         | 62121         | Fishery worker, kelong   |
| 75113         | 74113         | Fishmonger   |
| 74121         | 72411         | Fitter, electrical   |
| 74121         | 72412         | Fitter, electrical/elevator and related equipment                |
| 74129         | 72419         | Fitter, electrical/motors and dynamos                            |
| 74129         | 72419         | Fitter, electrical/office-machinery                              |
| 74211         | 72421         | Fitter, electronics  |
| 74215         | 72425         | Fitter, electronics/computer and related electronic equipment    |
| 74216         | 72426         | Fitter, electronics/industrial equipment                         |
| 74214         | 72424         | Fitter, electronics/medical equipment                            |
| 74217         | 72427         | Fitter, electronics/meteorological equipment                     |
| 74212         | 72422         | Fitter, electronics/radio, television, video and radar equipment |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 74213         | 72423         | Fitter, electronics/signaling system                   |
| 74129         | New           | Fitter, maintenance                                    |
| 71262         | 71362         | Fitter, pipe   |
| 71262         | 71363         | Fitter, pipe and tube/aircraft                         |
| 71262         | 71364         | Fitter, pipe/marine                                    |
| 71262         | 71365         | Fitter, pipe/sewerage                                  |
| 71262         | 71366         | Fitter, pipe/ventilation                               |
| 71262         | 71367         | Fitter, pipe/water supply                              |
| 72123         | 72122         | Flame cutter   |
| 75112         | 74112         | Flayer   |
| 02101         | New           | Fleet commander  |
| 03203         | New           | Flight Sergeant  |
| 43235         | 44005         | Float master   |
| 21333         | 22133         | Floriculturist   |
| 52115         | 39517         | Florist  |
| 81314         | 81595         | Foam maker, chemical                                   |
| 81417         | 82318         | Foam maker, rubber                                     |
| 27111         | New           | Food and beverage administrative captain               |
| 27111         | New           | Food and beverage administrator                        |
| 51323         | New           | Food and beverage barmen                               |
| 27112         | New           | Food and beverage captain                              |
| 27112         | New           | Food and beverage coordinator                          |
| 27112         | New           | Food and beverage guest services executive             |
| 27111         | New           | Food and beverage officer/executive                    |
| 27113         | New           | Food and beverage personnel                            |
| 51316         | New           | Food and beverage room worker, service                 |
| 51317         | New           | Food and beverage worker                               |
| 51315         | New           | Food and beverage worker, banquet                      |
| 21123         | 21123         | Forecaster-weather                                     |
| 74129         | New           | Foreman, electrical                                    |
| 74129         | New           | Foreman, maintenance                                   |
| 82119         | New           | Foreman, mechanical                                    |
| 72318         | New           | Foreman, vehicle                                       |
| 72122         | New           | Foreman, welder  |
| 62115         | JPA           | Forest guard G11                                       |
| 62113         | 61417         | Forester   |
| 75442         | New           | Forging worker, ant                                    |
| 75442         | New           | Forging worker, bee                                    |
| 75442         | New           | Forging worker, mosquito                               |
| 51613         | 51503         | Fortune-teller   |
| 75443         | New           | Fumigation operator, service                           |
| 75443         | New           | Fumigation operator, soil                              |
| 75443         | New           | Fumigation operator, weed                              |
| 81842         | 81312         | Furnace-operator, annealing/glass                      |
| 81213         | 81235         | Furnace-operator, case-hardening/metal                 |
| 81211         | 81211         | Furnace-operator, converting/steel                     |
| 81841         | 81311         | Furnace-operator, glass production                     |
| 81213         | 81232         | Furnace-operator, hardening/metal                      |
| 81213         | 81234         | Furnace-operator, heat-treating/metal                  |
| 81213         | 81221         | Furnace-operator, melting/metal                        |
| 81213         | 81214         | Furnace-operator, refining/non-ferrous metal           |
| 81211         | 81212         | Furnace-operator, refining/steel (open-hearth furnace) |
| 81213         | 81225         | Furnace-operator, reheating/metal                      |
| 81213         | 81213         | Furnace-operator, smelting/metal (blast-furnace)       |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                 |
|---------------|---------------|---|
| 81845         | 81315         | Furnace-operator, tempering/glass         |
| 93339         | 93419         | Furniture mover                           |
| <b>G</b>      |               |   |
| 81223         | 82223         | Galvaniser                                |
| 54191         | 51492         | Game ranger                               |
| 92141         | 93121         | Gardener                                  |
| 54147         | New           | Gate keeper                               |
| 83126         | 83129         | Gateman, railway                          |
| 63406         | 62220         | Gatherer, seaweed                         |
| 63404         | 62220         | Gatherer, shellfish                       |
| 63407         | 62220         | Gatherer, wild fruits, herbs & vegetables |
| 12222         | New           | General affairs section chief             |
| 41101         | New           | General office clerk                      |
| 96293         | New           | General unskill worker/labourer           |
| 96291         | JPA           | General worker R1                         |
| 96217         | JPA           | General worker, office (PAP) N1           |
| 01101         | New           | General, Army                             |
| 03101         | New           | General, Royal Malaysian Air Force        |
| 74129         | New           | Generator                                 |
| 21316         | 22116         | Geneticist                                |
| 21313         | 22113         | Geneticist, animal                        |
| 21312         | 22112         | Geneticist, plant                         |
| 21146         | 21147         | Geodesist                                 |
| 26324         | 29244         | Geographer                                |
| 21141         | 21141         | Geologist                                 |
| 21142         | 21142         | Geologist, engineering                    |
| 21145         | 21146         | Geologist, marine                         |
| 21149         | 21149         | Geologist, micropalaeontology             |
| 21143         | 21143         | Geologist, mining                         |
| 21145         | 21146         | Geologist, oceanography                   |
| 21144         | 21144         | Geologist, oil                            |
| 21149         | 21149         | Geologist, palaeontology                  |
| 21144         | 21144         | Geologist, petroleum                      |
| 21144         | 21144         | Geologist, petrology                      |
| 21149         | 21149         | Geologist, stratigraphy                   |
| 21146         | 21147         | Geomagnetician                            |
| 21146         | 21147         | Geomorphologies                           |
| 21141         | New           | Geophysicist                              |
| 21146         | 21147         | Geophysicist, geomagnetic                 |
| 21146         | 21147         | Geophysicist, geomorphology               |
| 21147         | 21148         | Geophysicist, hydrology                   |
| 21145         | 21146         | Geophysicist, oceanography                |
| 21146         | 21147         | Geophysicist, seismology                  |
| 73159         | New           | Glass frame fabricator                    |
| 71251         | 71351         | Glazier, building                         |
| 71253         | 71353         | Glazier, leaded-glass                     |
| 71254         | 71354         | Glazier, patent roofing                   |
| 71255         | 71355         | Glazier, plate-glass                      |
| 71252         | 71352         | Glazier, vehicle                          |
| 73131         | 73131         | Goldsmith                                 |
| 75431         | New           | Grader, fibre                             |
| 75117         | New           | Grader, fish                              |
| 75156         | 74146         | Grader, fruit/vegetable                   |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                            |
|---------------|---------------|--------------------------------------|
| 73132         | New           | Grader, gold                         |
| 62111         | 61416         | Grader, log                          |
| 75155         | 74145         | Grader, meat                         |
| 75158         | 74148         | Grader, oil                          |
| 61114         | New           | Grader, oil palm                     |
| 71133         | 71123         | Grader, stone                        |
| 75161         | 74151         | Grader, tobacco                      |
| 75214         | 74214         | Grader, veneer                       |
| 75213         | 74213         | Grader, wood                         |
| 75159         | 74149         | Grader/examiner/sorter, paddy        |
| 75152         | 74142         | Grader/taster, coffee                |
| 75153         | 74143         | Grader/taster, food                  |
| 75154         | 74144         | Grader/taster, liquor                |
| 75151         | 74141         | Grader/taster, tea                   |
| 75154         | 74144         | Grader/taster, wine                  |
| 91296         | New           | Graffiti cleaner                     |
| 71139         | New           | Granite cutter                       |
| 93133         | 93323         | Grave-digger                         |
| 72236         | 72236         | Grinder, crankshaft                  |
| 81603         | 82736         | Grinder, feed                        |
| 73156         | 73226         | Grinder, glass                       |
| 72231         | 72231         | Grinder, metal                       |
| 71136         | 71126         | Grinder, stone                       |
| 72235         | 72235         | Grinder, textile card                |
| 72239         | 72239         | Grinder, thread                      |
| 61111         | New           | Grower, abaca                        |
| 61152         | New           | Grower, bean-sprout                  |
| 61125         | New           | Grower, cluster fruit                |
| 61122         | New           | Grower, coco                         |
| 61117         | New           | Grower, coconut                      |
| 61124         | New           | Grower, coffee                       |
| 63101         | New           | Grower, crop farmers                 |
| 61111         | New           | Grower, dragon fruit                 |
| 61131         | New           | Grower, flower                       |
| 61125         | New           | Grower, grape                        |
| 61112         | New           | Grower, groundnut                    |
| 61131         | 61332         | Grower, horticultural                |
| 61112         | New           | Grower, intercrop                    |
| 61132         | New           | Grower, mushroom                     |
| 61117         | New           | Grower, palm-tree                    |
| 61111         | New           | Grower, pineapple                    |
| 61123         | New           | Grower, pomegranate                  |
| 61116         | New           | Grower, rubber                       |
| 61121         | New           | Grower, shrub trees                  |
| 61122         | New           | Grower, tea                          |
| 61151         | New           | Grower, vegetable                    |
| 54145         | New           | Guard                                |
| 54141         | 51442         | Guard, departmental/store/industrial |
| 54141         | 51441         | Guard, gambling activities           |
| 54146         | New           | Guard, office                        |
| 51123         | 51113         | Guard, passenger train               |
| 54131         | 51430         | Guard, prison                        |
| 51123         | 51129         | Guard, railway                       |
| 54141         | 51442         | Guard, security/private              |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 31351         | 81228         | Guide setter   |
| 51132         | 51133         | Guide, art gallery   |
| 51133         | 51134         | Guide, factory tour  |
| 51132         | 51133         | Guide, museum  |
| 51133         | 51134         | Guide, plant   |
| 51131         | 51131         | Guide, tourist   |
| 51131         | 51132         | Guide, travel  |
| 51134         | 51135         | Guide, travel/game park                                      |
| 51134         | 51136         | Guide, travel/sightseeing                                    |
| 72226         | 72226         | Gunsmith   |
| 22127         | 22217         | Gynaecologist  |
| <b>H</b>      |               |  |
| 81512         | 82613         | Hagotan operator, abaca hemp                                 |
| 51411         | 51312         | Hairdresser  |
| 51413         | 51312         | Hairstylist  |
| 72212         | 72212         | Hammersmith  |
| 83506         | 83406         | Hand, carriage   |
| 92131         | 93111         | Hand, farm   |
| 73172         | New           | Handicraft worker, reed weaving                              |
| 73172         | New           | Handicraft worker, stone articles                            |
| 73173         | New           | Handicraft worker, wooden articles                           |
| 73189         | New           | Handicraft workers in textile, leather and related materials |
| 93332         | 93412         | Handler, cargo/freight/product                               |
| 93337         | 93418         | Handler, material  |
| 43212         | New           | Handler, stock   |
| 26198         | 25099         | Handwriting expert   |
| 93136         | 93326         | Handyman, building construction                              |
| 96222         | New           | Handyperson  |
| 21723         | 31423         | Harbour master   |
| 61222         | 61352         | Hatchery work, poultry                                       |
| 52121         | 91101         | Hawker (prepared food and drinks)                            |
| 52121         | 91103         | Hawker (prepared food and non-food)                          |
| 11121         | 11201         | Head, chancery   |
| 13452         | 12293         | Head, college faculty  |
| 11121         | 11201         | Head, government department                                  |
| 13452         | 12293         | Head, university faculty                                     |
| 13452         | 12293         | Headmaster   |
| 32591         | New           | Health associate professionals not elsewhere classified      |
| 83501         | 83401         | Helmsman   |
| 51201         | New           | Helper, barbeque   |
| 91111         | 91211         | Helper, domestic   |
| 92131         | 93111         | Helper, farm   |
| 91111         | New           | Helper, housekeeper  |
| 94121         | New           | Helper, kitchen  |
| 21313         | 22113         | Herpetologist  |
| 62111         | 61414         | High climber, logging  |
| 11123         | 11201         | High commissioner, government                                |
| 21316         | 22116         | Histologist  |
| 21312         | 22112         | Histologist, plant   |
| 21347         | 22127         | Histopathologist   |
| 26332         | 29222         | Historian  |
| 93131         | 93328         | Hod carrier  |
| 24217         | 24907         | Home economist   |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 32306         | 32294         | Homeopath   |
| 21333         | 22133         | Horticulturist  |
| 81222         | 82222         | Hot-dip plater  |
| 81212         | 81228         | Hot-roller, steel   |
| 51523         | 51216         | Housekeeper (private service)   |
| 51515         | New           | Housekeeper, hotel  |
| 14322         | New           | Housekeeping administrator  |
| 91111         | New           | Housemaid   |
| 26412         | 29312         | Humorist  |
| 62241         | 62210         | Hunter  |
| 21311         | 22111         | Hydrobiologist  |
| 21112         | 21112         | Hydrodynamics   |
| 21147         | 21148         | Hydrogeologist  |
| 21147         | 21148         | Hydrologist   |
| <b>I</b>      |               |   |
| 21313         | 22113         | Ichthyologist   |
| 34321         | 39511         | Illustrator, advertising  |
| 34321         | 39511         | Illustrator, book   |
| 31189         | 31189         | Illustrator, engineering  |
| 31189         | 31189         | Illustrator, technical  |
| 26363         | 29403         | Imam  |
| 21316         | 22116         | Immunologist  |
| 26551         | 29359         | Impersonator  |
| 75211         | 74211         | Impregnator, wood   |
| 31329         | 81699         | Incinerator, water treatment and related plant operators not elsewhere classified |
| 26226         | 29126         | Information scientist, business services  |
| 26226         | 29126         | Information scientist, technical information                                      |
| 75229         | 74229         | Inlayer, marquetry  |
| 61223         | 61353         | Inseminator, poultry  |
| 43232         | 44002         | Inspector clerical/railway transport service                                      |
| 61114         | New           | Inspector quality, estate/plantation  |
| 21736         | JPA           | Inspector, aircraft A41   |
| 33511         | 39114         | Inspector, border   |
| 33591         | 31511         | Inspector, building   |
| 43233         | 44003         | Inspector, bus services   |
| 33561         | 39119         | Inspector, civil service  |
| 33155         | 34172         | Inspector, claims   |
| 43233         | 44003         | Inspector, clerical/road transport services                                       |
| 33511         | 39114         | Inspector, custom   |
| 33511         | 39114         | Inspector, custom and border  |
| 22633         | JPA           | Inspector, factory and machinery J41  |
| 44166         | JPA           | Inspector, fingerprint N17  |
| 33591         | 31512         | Inspector, fire and safety  |
| 33562         | 39119         | Inspector, government administration  |
| 33541         | New           | Inspector, licensing  |
| 32571         | 31521         | Inspector, occupational health and safety   |
| 24495         | JPA           | Inspector, patent Q41   |
| 33551         | 39121         | Inspector, police   |
| 33591         | 39117         | Inspector, price  |
| 32573         | 31525         | Inspector, public health  |
| 32571         | 31524         | Inspector, quality product  |
| 31533         | New           | Inspector, railway  |
| 32573         | 31526         | Inspector, safety and health/consumer protection                                  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 32573         | 32222         | Inspector, safety and health/pollution                  |
| 32575         | 31523         | Inspector, safety/vehicles                              |
| 32573         | New           | Inspector, sanitary                                     |
| 23911         | 23920         | Inspector, school                                       |
| 51122         | 51124         | Inspector, ticket                                       |
| 33595         | 39119         | Inspector, wage   |
| 33591         | 39118         | Inspector, weight and measures                          |
| 11124         | 11201         | Inspector-general, police                               |
| 74221         | 72431         | Installer, telephone and telegraph                      |
| 71221         | 71225         | Installer, tile   |
| 34232         | 39565         | Instructor, billiard                                    |
| 34233         | 39565         | Instructor, bridge                                      |
| 34234         | 39565         | Instructor, chess                                       |
| 32532         | New           | Instructor, clinical                                    |
| 73171         | JPA           | Instructor, craft E11                                   |
| 51651         | New           | Instructor, driving                                     |
| 21734         | 31436         | Instructor, flight                                      |
| 34237         | New           | Instructor, horse riding                                |
| 62116         | JPA           | Instructor, logging G17                                 |
| 34222         | JPA           | Instructor, march S17                                   |
| 34231         | 39564         | Instructor, physical fitness                            |
| 34236         | 33909         | Instructor, sailing                                     |
| 81514         | 82619         | Instructor, spinner                                     |
| 81521         | 82621         | Instructor, weaving                                     |
| 26521         | 29331         | Instrumentalist   |
| 71245         | 71345         | Insulation worker, sound-proofing                       |
| 71243         | 71343         | Insulator, acoustical                                   |
| 71242         | 71342         | Insulator, boiler and pipe                              |
| 71241         | 71341         | Insulator, building                                     |
| 71244         | 71344         | Insulator, refrigeration and air-conditioning equipment |
| 26432         | 39402         | Interpreter   |
| 26435         | JPA           | Interpreter L17   |
| 42292         | New           | Interviewer, eligibility                                |
| 26562         | 39524         | Interviewer, media                                      |
| 54196         | 51441         | Investigator, industrial                                |
| 54196         | 51450         | Investigator, private                                   |
| 91212         | New           | Ironers   |
| 61113         | 61319         | Irrigator   |
| <b>J</b>      |               |   |
| 81524         | 82625         | Jacquard card cutter                                    |
| 51531         | 91311         | Janitor   |
| 73131         | 73131         | Jeweller  |
| 73145         | 73215         | Jiggerer, pottery and porcelain                         |
| 24232         | 24302         | Job evaluator   |
| 33114         | 34124         | Jobber/stock broker                                     |
| 34235         | 39566         | Jockey  |
| 71156         | 71236         | Joiner, aircraft  |
| 71153         | 71233         | Joiner, construction                                    |
| 71154         | 71234         | Joiner, ship  |
| 74133         | 72443         | Joiner, cable/electric                                  |
| 26421         | 29315         | Journalist  |
| 26423         | JPA           | Journalist S41  |
| 26121         | 25021         | Judge, federal court                                    |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 26121         | 25021         | Judge, high court                                      |
| 26121         | New           | Judge, native court                                    |
| 26121         | 25022         | Judge, sessions court                                  |
| 26575         | 39545         | Juggler  |
| 54199         | JPA           | Junior assistant, wildlife G11                         |
| 54127         | JPA           | Junior police officer and aborigines constable YP1- 10 |
| 54125         | JPA           | Junior police officer and constable YY1- YY10          |
| 54126         | JPA           | Junior police officer and support constable YT1- 10    |
| 41311         | 41121         | Justowriter  |
| <b>K</b>      |               |  |
| 26364         | 29404         | Kadhi  |
| 11134         | New           | Kapitan  |
| 51643         | 39551         | Keeper in zoo, bird and aquatic parks                  |
| 81124         | 81126         | Keeper, jig  |
| 83506         | 83408         | Keeper, light house                                    |
| 72225         | 72225         | Keysmith   |
| 81843         | 81313         | Kiln-operator, brick and tile                          |
| 81314         | 81594         | Kiln-operator, charcoal                                |
| 81312         | 81525         | Kiln-operator, chemical and related processes          |
| 81607         | 82773         | Kiln-operator, matlting/spirit                         |
| 81844         | 81314         | Kiln-operator, pottery and porcelain                   |
| 27121         | New           | Kitchen administrator                                  |
| 51201         | New           | Kitchen coordinator                                    |
| 75319         | 74399         | Knitter, hand  |
| <b>L</b>      |               |  |
| 93212         | 93295         | Labeller, hand   |
| 31111         | 31113         | Laboratory assistant, chemistry                        |
| 31116         | 31116         | Laboratory assistant, geological                       |
| 32531         | 32210         | Laboratory assistant, medical                          |
| 31171         | 31171         | Laboratory assistant, metallurgy                       |
| 31162         | 31162         | Laboratory assistant, petroleum refining               |
| 32132         | 32280         | Laboratory assistant, pharmaceutical                   |
| 31111         | 31113         | Laboratory assistant, physics                          |
| 31414         | 32114         | Laboratory assistant, research, artificial breeding    |
| 31413         | 32113         | Laboratory assistant, research/botanical               |
| 31415         | 32115         | Laboratory assistant, research/zoological              |
| 31111         | 31111         | Laboratory assistant, science physics                  |
| 31114         | 31114         | Laboratory assistant, soil                             |
| 93294         | 93294         | Labourer, assembling                                   |
| 93121         | New           | Labourer, construction                                 |
| 93137         | 93327         | Labourer, demolition                                   |
| 93133         | 93323         | Labourer, digging                                      |
| 92161         | 93191         | Labourer, fishery                                      |
| 92151         | 93192         | Labourer, forestry                                     |
| 92152         | 93193         | Labourer, hunting                                      |
| 92146         | 93126         | Labourer, landscape                                    |
| 93132         | 93322         | Labourer, maintenance                                  |
| 93122         | New           | Labourer, maintenance/dam                              |
| 93291         | 93291         | Labourer, manufacturing                                |
| 93111         | New           | Labourer, mining                                       |
| 96133         | 91423         | Labourer, odd-jobbing                                  |
| 93112         | 93312         | Labourer, quarrying                                    |



| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                     |
|---------------|---------------|---|
| 92153         | 93194         | Labourer, trapping                            |
| 75319         | 74399         | Lacer, hand                                   |
| 75229         | 74229         | Lacquerer, wood                               |
| 01206         | New           | Lance corporal                                |
| 93134         | 93324         | Land clearer                                  |
| 81722         | 81412         | Lathe feeder, veneer                          |
| 81722         | 81412         | Lathe-operator, cutting/veneer                |
| 81731         | 82401         | Lathe-operator, woodworking                   |
| 91112         | 91212         | Laundress, household                          |
| 26111         | 25011         | Lawyer  |
| 26111         | 25011         | Lawyer, civil                                 |
| 26111         | 25011         | Lawyer, conveyancing                          |
| 26111         | 25011         | Lawyer, criminal                              |
| 26111         | 25011         | Lawyer, litigation                            |
| 71192         | 71292         | Layer, pipe and drain                         |
| 71225         | 71325         | Layer, tile/composition                       |
| 74134         | 72444         | Layer, underground cable                      |
| 96297         | New           | Leader, line                                  |
| 11141         | 11410         | Leader, political party                       |
| 11143         | 11422         | Leader, trade union                           |
| 23102         | 23102         | Leader, university                            |
| 02205         | New           | Leading Rate                                  |
| 81531         | 82699         | Leather sewer, machine                        |
| 23101         | 23101         | Lecturer, college                             |
| 23109         | JPA           | Lecturer, dental DUG45                        |
| 23106         | JPA           | Lecturer, medical DU45                        |
| 23101         | 23101         | Lecturer, polytechnic                         |
| 23107         | JPA           | Lecturer, UiTM DM41                           |
| 23102         | 23102         | Lecturer, university                          |
| 23105         | JPA           | Lecturer, university DS45                     |
| 26115         | JPA           | Legal drafter L41                             |
| 26116         | JPA           | Legal officer, legal aid bureau L41           |
| 26433         | 39403         | Lexicographer                                 |
| 26221         | 29121         | Librarian                                     |
| 26227         | JPA           | Librarian S41                                 |
| 26223         | 29123         | Librarian, audio-visual                       |
| 26222         | 29122         | Librarian, children's                         |
| 26223         | 29123         | Librarian, film                               |
| 01106         | New           | Lieutenant Colonel, Army                      |
| 03106         | New           | Lieutenant Colonel, Royal Malaysian Air Force |
| 02106         | New           | Lieutenant Commander, Navy                    |
| 01102         | New           | Lieutenant General, Army                      |
| 03102         | New           | Lieutenant General, Royal Malaysian Air Force |
| 01109         | New           | Lieutenant, Army                              |
| 02107         | New           | Lieutenant, Navy                              |
| 03109         | New           | Lieutenant, Royal Malaysian Air Force         |
| 83506         | 83409         | Life-boatman                                  |
| 51691         | 51491         | Lifeguard                                     |
| 51696         | JPA           | Lifeguard N1                                  |
| 83505         | 83406         | Lighterman                                    |
| 74131         | 72441         | Line worker, electrical power                 |
| 24115         | 24105         | Liquidator                                    |
| 31311         | 81610         | Load dispatcher, electric power               |
| 93334         | 93414         | Loader, aircraft                              |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 93335         | 93415         | Loader, boat (liquid and gases)                                   |
| 93333         | 93413         | Loader, railway and road vehicle                                  |
| 72225         | 72225         | Locksmith   |
| 21826         | New           | Log yard exchange, sawmill  |
| 62111         | 61411         | Logger  |
| 62111         | New           | Logger, underwater  |
| 75319         | 74399         | Loom threader, hand   |
| 26414         | 29319         | Lyricist  |
| <b>M</b>      |               |   |
| 81133         | 81115         | Machine operator boring equipment/well                            |
| 81316         | 82212         | Machine operator pharmaceutical products                          |
| 81143         | 82126         | Machine operator, abrasive coating                                |
| 81317         | 82291         | Machine operator, ammunition products                             |
| 81142         | 82123         | Machine operator, asbestos  |
| 81142         | 82124         | Machine operator, asbestos-cement product                         |
| 81216         | 81244         | Machine operator, barbed-wire                                     |
| 81609         | 82795         | Machine operator, bean curd production                            |
| 81601         | 82713         | Machine operator, belacan production                              |
| 82211         | 82111         | Machine operator, bending/metal                                   |
| 81541         | 82641         | Machine operator, bleaching/textile                               |
| 81846         | 81316         | Machine operator, blowing/glass                                   |
| 82211         | 82111         | Machine operator, boiler production                               |
| 81921         | 82521         | Machine operator, bookbinding                                     |
| 81849         | 81319         | Machine operator, bottle production                               |
| 82193         | 82904         | Machine operator, bottling  |
| 81591         | 82691         | Machine operator, braid production                                |
| 81604         | 82742         | Machine operator, bread production                                |
| 81607         | 82771         | Machine operator, brewing/spirits                                 |
| 81849         | 81319         | Machine operator, brick-and-tile production                       |
| 82211         | 82111         | Machine operator, buffing/metal                                   |
| 82211         | 82111         | Machine operator, burnishing/metal                                |
| 81602         | 82724         | Machine operator, butter products                                 |
| 82211         | 82111         | Machine operator, cable production                                |
| 81414         | 82314         | Machine operator, calender/rubber                                 |
| 81317         | 82292         | Machine operator, candle production                               |
| 81605         | 82757         | Machine operator, canning (food canning and preserving)           |
| 81601         | 82716         | Machine operator, canning/fish                                    |
| 81601         | 82717         | Machine operator, canning/meat/food                               |
| 82192         | 82905         | Machine operator, capping   |
| 81718         | 81435         | Machine operator, cardboard production                            |
| 81435         | 82537         | Machine operator, cardboard products                              |
| 81431         | 82531         | Machine operator, carton and paper box production                 |
| 81736         | 82406         | Machine operator, carving/wood                                    |
| 81141         | 82122         | Machine operator, cast concrete products                          |
| 81143         | 82125         | Machine operator, cast stone                                      |
| 81214         | 81222         | Machine operator, casting metal                                   |
| 81214         | 81226         | Machine operator, casting/centrifugal (cylindrical metal product) |
| 81214         | 81227         | Machine operator, casting/continuous rod (non-ferrous metal)      |
| 81844         | 81314         | Machine operator, casting/pottery and porcelain                   |
| 81432         | 82533         | Machine operator, cellophane bag production                       |
| 81141         | 82128         | Machine operator, cement product                                  |
| 81844         | 81314         | Machine operator, ceramics production                             |
| 81604         | 82749         | Machine operator, cereal production                               |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 81712         | 81422         | Machine operator, chipping                        |
| 81317         | 82297         | Machine operator, chlorine gas production         |
| 81604         | 82744         | Machine operator, chocolate production            |
| 81602         | 82723         | Machine operator, churn/dairy products            |
| 81608         | 82782         | Machine operator, cigar production                |
| 81608         | 82781         | Machine operator, cigarette production            |
| 82211         | 82111         | Machine operator, clock production                |
| 81718         | 81433         | Machine operator, coating                         |
| 81609         | 82793         | Machine operator, cocoa-bean processing           |
| 81609         | 82792         | Machine operator, coffee-bean processing          |
| 81316         | 81594         | Machine operator, coke production                 |
| 82211         | 82111         | Machine operator, commutator production           |
| 81425         | 82325         | Machine operator, compression moulding/plastics   |
| 81141         | 82127         | Machine operator, concrete mixing                 |
| 81604         | 82743         | Machine operator, confectionery production        |
| 82211         | 82111         | Machine operator, core-blowing                    |
| 82211         | 82111         | Machine operator, coremaking/metal                |
| 81512         | 82613         | Machine operator, cotton-mixing                   |
| 81121         | 81125         | Machine operator, crushing/coal                   |
| 81592         | 82692         | Machine operator, cutting/garments                |
| 81556         | 82656         | Machine operator, cutting/leather                 |
| 82211         | 82111         | Machine operator, cutting/metal                   |
| 81111         | 81111         | Machine operator, cutting/mine                    |
| 81718         | 81434         | Machine operator, cutting/paper                   |
| 81415         | 82315         | Machine operator, cutting/rubber                  |
| 81593         | 82693         | Machine operator, cutting/textile                 |
| 41322         | JPA           | Machine operator, data processing F11             |
| 81553         | 82653         | Machine operator, dehairing/hide                  |
| 81316         | 82211         | Machine operator, detergent production            |
| 81214         | 81223         | Machine operator, die-casting                     |
| 81222         | 82222         | Machine operator, dipping/metal                   |
| 81607         | 82772         | Machine operator, distilling/spirits              |
| 81214         | 81241         | Machine operator, drawing/metal                   |
| 81216         | 81241         | Machine operator, drawing/wire                    |
| 81111         | 81112         | Machine operator, drilling/mine                   |
| 81112         | 81113         | Machine operator, drilling/quarry                 |
| 81546         | 82646         | Machine operator, dry-cleaning                    |
| 81542         | 82642         | Machine operator, dyeing                          |
| 81545         | 82645         | Machine operator, dyeing/textile                  |
| 81571         | New           | Machine operator, dyeing/textile fibres           |
| 81605         | 82759         | Machine operator, edible nut processing           |
| 81221         | 82221         | Machine operator, electroplating/metal            |
| 81922         | 82522         | Machine operator, embossing/book                  |
| 81427         | 82328         | Machine operator, embossing/plastics              |
| 81847         | 81317         | Machine operator, engraving/glass                 |
| 82211         | 82111         | Machine operator, engraving/metal                 |
| 81432         | 82532         | Machine operator, envelope & paper bag production |
| 81847         | 81317         | Machine operator, etching/glass                   |
| 82211         | 82111         | Machine operator, etching/metal                   |
| 81317         | 82293         | Machine operator, explosives production           |
| 81423         | 82323         | Machine operator, extruding/plastics              |
| 81412         | 82312         | Machine operator, extruding/rubber                |
| 81216         | 81242         | Machine operator, extruding/wire                  |
| 81609         | 82794         | Machine operator, feed mixing                     |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 81512         | 82613         | Machine operator, fibre preparing                 |
| 82193         | 82906         | Machine operator, filling/container               |
| 81323         | 82236         | Machine operator, film paper production           |
| 81323         | 82234         | Machine operator, film processing machine         |
| 81225         | 82227         | Machine operator, finishing/cast metal articles   |
| 81317         | 82299         | Machine operator, fireworks production            |
| 81601         | 82712         | Machine operator, fish meal production            |
| 81601         | 82714         | Machine operator, fish processing                 |
| 82211         | 82111         | Machine operator, flamecutting/metal              |
| 81552         | 82652         | Machine operator, flesing/hide                    |
| 81597         | 82699         | Machine operator, folding/cloth                   |
| 81561         | 82661         | Machine operator, footwear production             |
| 81562         | 82662         | Machine operator, footwear production/orthopaedic |
| 81563         | 82663         | Machine operator, footwear production/sports      |
| 82211         | 82111         | Machine operator, forging/metal                   |
| 82211         | 82111         | Machine operator, forming/metal                   |
| 81605         | 82759         | Machine operator, fruit juice production          |
| 81737         | 82407         | Machine operator, furniture production            |
| 81223         | 82223         | Machine operator, galvanishing/metal              |
| 81849         | 81394         | Machine operator, glass-fibre production          |
| 81849         | 81397         | Machine operator, glaze production                |
| 82211         | 82111         | Machine operator, grinding/metal                  |
| 81714         | 81424         | Machine operator, grinding/wood                   |
| 81317         | 82294         | Machine operator, halogen gas production          |
| 81594         | 82694         | Machine operator, hat making                      |
| 81551         | 82651         | Machine operator, hide processing                 |
| 81317         | 82299         | Machine operator, hydrogen gas production         |
| 31329         | 81699         | Machine operator, ice production                  |
| 81602         | 82722         | Machine operator, ice-cream production            |
| 81726         | 81416         | Machine operator, incising (wood preserving)      |
| 81424         | 82324         | Machine operator, injection moulding/plastics     |
| 81216         | 81249         | Machine operator, insulating                      |
| 82194         | 82907         | Machine operator, insulation                      |
| 82211         | 82111         | Machine operator, jewellery production            |
| 81434         | 82536         | Machine operator, joss paper production           |
| 81522         | 82622         | Machine operator, knitting                        |
| 82191         | 82903         | Machine operator, labelling                       |
| 81525         | 82626         | Machine operator, lace production                 |
| 82211         | 82111         | Machine operator, lapping/metal                   |
| 81572         | New           | Machine operator, laundering                      |
| 81317         | 82298         | Machine operator, lead production                 |
| 81317         | 82295         | Machine operator, linoleum production             |
| 81607         | 82779         | Machine operator, liquor production               |
| 81605         | 82753         | Machine operator, margarine processing            |
| 81317         | 82296         | Machine operator, match production                |
| 81594         | 82695         | Machine operator, mattress production             |
| 81601         | 82714         | Machine operator, meal processing                 |
| 81601         | 82715         | Machine operator, meat                            |
| 82211         | 82111         | Machine operator, metal products                  |
| 81602         | 82725         | Machine operator, milk powder production          |
| 81122         | 81122         | Machine operator, milling/mineral                 |
| 81603         | 82735         | Machine operator, milling/mustard seeds           |
| 81411         | 82311         | Machine operator, milling/rubber                  |
| 81122         | 81124         | Machine operator, milling/stone                   |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 81111         | 81114         | Machine operator, mining/continuous                                  |
| 82211         | 82111         | Machine operator, minting/metal                                      |
| 81311         | 81511         | Machine operator, mixing and blending/chemical and related processes |
| 81849         | 81396         | Machine operator, mixing/abrasives                                   |
| 81811         | New           | Machine operator, mixing/clay  |
| 81812         | New           | Machine operator, mixing/glass                                       |
| 81421         | 82321         | Machine operator, mixing/plastics                                    |
| 81316         | 81593         | Machine operator, mosquito coil production                           |
| 82211         | 82111         | Machine operator, moulding/metal                                     |
| 82211         | 82111         | Machine operator, nail production                                    |
| 82211         | 82111         | Machine operator, needle production                                  |
| 81522         | 82623         | Machine operator, net production                                     |
| 81604         | 82745         | Machine operator, noodle production                                  |
| 82211         | 82111         | Machine operator, nut production/metal                               |
| 82191         | 82902         | Machine operator, packing  |
| 81431         | 82538         | Machine operator, paper products                                     |
| 81718         | 81431         | Machine operator, papermaking  |
| 81604         | 82748         | Machine operator, pasta production                                   |
| 81604         | 82741         | Machine operator, pastry production                                  |
| 81595         | 82696         | Machine operator, pattern-making/leather                             |
| 81596         | 82697         | Machine operator, pattern-making/textile                             |
| 82194         | 82908         | Machine operator, pelletising  |
| 81317         | 82299         | Machine operator, pencil production                                  |
| 81321         | 82231         | Machine operator, photograph developing (colour and black & white)   |
| 81323         | 82232         | Machine operator, photograph enlarging                               |
| 81323         | 82237         | Machine operator, photographic film production                       |
| 81323         | 82235         | Machine operator, photographic plate production                      |
| 81323         | 82238         | Machine operator, photographic products                              |
| 81321         | 82234         | Machine operator, photography printing                               |
| 82211         | 82111         | Machine operator, pipe production                                    |
| 81429         | 82329         | Machine operator, plastic product                                    |
| 81428         | 82329         | Machine operator, plastic production                                 |
| 81844         | 81314         | Machine operator, pottery and porcelain                              |
| 81849         | 81319         | Machine operator, pressing/glass                                     |
| 81573         | New           | Machine operator, pressing/laundry                                   |
| 81602         | 82721         | Machine operator, processing/dairy products                          |
| 81311         | 81514         | Machine operator, pulverising/chemical and related processes         |
| 82211         | 82111         | Machine operator, reaming/metal                                      |
| 81605         | 82755         | Machine operator, refining/oils and fats                             |
| 82211         | 82111         | Machine operator, rivet production                                   |
| 82211         | 82111         | Machine operator, riveting   |
| 83425         | 83325         | Machine operator, road making  |
| 81513         | 82615         | Machine operator, rope-laying  |
| 81417         | 82318         | Machine operator, rubber products                                    |
| 81417         | 82318         | Machine operator, rubber stamp production                            |
| 81604         | 82746         | Machine operator, sago production                                    |
| 81224         | 82226         | Machine operator, sandblaster equipment                              |
| 81605         | 82758         | Machine operator, sauce production                                   |
| 81601         | 82711         | Machine operator, sausage production                                 |
| 82192         | 82909         | Machine operator, sealing  |
| 81216         | 81243         | Machine operator, seamless pipe and tube                             |
| 81725         | 81415         | Machine operator, seasoning/wood                                     |
| 81531         | 82631         | Machine operator, sewing   |
| 82211         | 82111         | Machine operator, sharpening/metal                                   |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 82211         | 82111         | Machine operator, shearing/metal                         |
| 81561         | 82661         | Machine operator, shoe production                        |
| 81313         | 81531         | Machine operator, sieving/chemical and related processes |
| 82196         | 82909         | Machine operator, silicon chip production                |
| 81523         | 82621         | Machine operator, size/textile                           |
| 81607         | 82778         | Machine operator, soft-drinks production                 |
| 81609         | 82796         | Machine operator, soup powder production                 |
| 82211         | 82111         | Machine operator, spinning/metal                         |
| 82196         | 82909         | Machine operator, splicing/cable and rope                |
| 81121         | 81124         | Machine operator, splitting/stone                        |
| 82211         | 82111         | Machine operator, sports equipment/metal                 |
| 81226         | 82224         | Machine operator, sprying/metal                          |
| 81555         | 82655         | Machine operator, staining/leather                       |
| 81543         | 82643         | Machine operator, starch                                 |
| 81121         | 81124         | Machine operator, stone processing                       |
| 81433         | 82534         | Machine operator, straw production                       |
| 81216         | 81249         | Machine operator, stripping and cutting/wire             |
| 81427         | 82327         | Machine operator, tableting/plastics                     |
| 81554         | 82654         | Machine operator, tanning                                |
| 81609         | 82791         | Machine operator, tea-leaf processing                    |
| 81143         | 82121         | Machine operator, terrazzo tile                          |
| 81608         | 82783         | Machine operator, tobacco production                     |
| 81316         | 82213         | Machine operator, toiletry products                      |
| 82211         | 82111         | Machine operator, tool production                        |
| 82211         | 82111         | Machine operator, toy production/metal                   |
| 81726         | 81416         | Machine operator, treating/wood                          |
| 83422         | 83322         | Machine operator, trench digging                         |
| 81511         | 82614         | Machine operator, twisting/thread and yarn               |
| 81416         | 82316         | Machine operator, tyre production                        |
| 81426         | 82326         | Machine operator, vacuum plastic-forming                 |
| 81605         | 82759         | Machine operator, vegetable juice production             |
| 81605         | 82754         | Machine operator, vegetable processing                   |
| 81607         | 82779         | Machine operator, vinegar making                         |
| 81604         | 82747         | Machine operator, wafer-baking                           |
| 81521         | 82627         | Machine operator, warping/beam (textile weaving)         |
| 81544         | 82644         | Machine operator, washing and shrinking/textile          |
| 81317         | 82299         | Machine operator, washing/chemical and related material  |
| 82211         | 82111         | Machine operator, watches production                     |
| 81521         | 82621         | Machine operator, weaving                                |
| 81521         | 82624         | Machine operator, weaving/carpet                         |
| 82211         | 82111         | Machine operator, welding/metal                          |
| 82211         | 82111         | Machine operator, wire goods production                  |
| 82211         | 82111         | Machine operator, wiring/electric                        |
| 81738         | 82408         | Machine operator, wood products                          |
| 81734         | 82404         | Machine operator, wood-wool                              |
| 82191         | 82909         | Machine operator, wrapping                               |
| 81604         | 82749         | Machine operator, yeast making                           |
| 82211         | 82111         | Machine operator, zip production                         |
| 81311         | 81516         | Machine operators, glue-mixing                           |
| 81311         | 81515         | Machine operators, paint-mixing                          |
| 81731         | 82401         | Machinist, wood  |
| 26573         | 39543         | Magician   |
| 26123         | 25023         | Magistrate   |
| 26125         | JPA           | Magistrate L41   |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                |
|---------------|---------------|--|
| 51522         | New           | Maid, linen                              |
| 01103         | New           | Major General, Army                      |
| 03103         | New           | Major General, Royal Malaysian Air Force |
| 01107         | New           | Major, Army                              |
| 03107         | New           | Major, Royal Malaysian Air Force         |
| 51422         | New           | Mak andam                                |
| 73116         | 73116         | Maker and repairer, balance              |
| 73112         | 73112         | Maker and repairer, dental prosthesis    |
| 73115         | 73115         | Maker and repairer, instrument/optical   |
| 73111         | 73111         | Maker and repairer, instrument/precision |
| 73113         | 73113         | Maker and repairer, orthopedic appliance |
| 73114         | 73114         | Maker and repairer, watches and clock    |
| 75317         | 74394         | Maker, artificial flower                 |
| 73117         | 73117         | Maker, barometer                         |
| 73134         | 74231         | Maker, basket                            |
| 75345         | 74345         | Maker, bedding                           |
| 73215         | 73315         | Maker, braille plate                     |
| 73177         | 74234         | Maker, broom                             |
| 73175         | 74232         | Maker, brush                             |
| 75221         | 74221         | Maker, cabinet/wooden                    |
| 75312         | 74322         | Maker, cap                               |
| 75128         | 74128         | Maker, chewing-gum                       |
| 75125         | 74125         | Maker, chocolate                         |
| 75162         | 74152         | Maker, cigar                             |
| 75163         | 74153         | Maker, cigarette                         |
| 75225         | 74225         | Maker, clog                              |
| 75224         | 74224         | Maker, coffin                            |
| 75124         | 74124         | Maker, confectionary                     |
| 75344         | 74344         | Maker, cushion                           |
| 75318         | 74395         | Maker, doll and stuffed-toy              |
| 73123         | 73123         | Maker, drum                              |
| 81849         | 81394         | Maker, fibreglass                        |
| 75332         | 74422         | Maker, footwear/orthopedic               |
| 75336         | 74426         | Maker, footwear/sports                   |
| 75332         | 74422         | Maker, footwear/surgical                 |
| 75143         | 74133         | Maker, fruit juice                       |
| 73178         | 74235         | Maker, furniture/rattan                  |
| 73178         | 74235         | Maker, furniture/wicker                  |
| 75223         | 74223         | Maker, furniture/wooden                  |
| 75323         | 74333         | Maker, garment                           |
| 81607         | 82771         | Maker, germination equipment/malting     |
| 81849         | 81319         | Maker, glass tube                        |
| 81849         | 81393         | Maker, glaze                             |
| 75319         | 74399         | Maker, hand/braid                        |
| 93299         | 93299         | Maker, hand/carton and paper box         |
| 75319         | 74399         | Maker, hand/net                          |
| 75312         | 74322         | Maker, hat                               |
| 81417         | 82318         | Maker, hose                              |
| 73117         | 73117         | Maker, instrument/meteorological         |
| 73118         | 73118         | Maker, instrument/nautical               |
| 73111         | 73111         | Maker, instrument/scientific             |
| 73111         | 73111         | Maker, instrument/surgical               |
| 81605         | 82759         | Maker, jam (machine)                     |
| 72223         | 72223         | Maker, jig and fixture                   |



| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                   |
|---------------|---------------|---|
| 75335         | 74425         | Maker, leather goods                        |
| 62113         | 61418         | Maker, log-raft                             |
| 75343         | 74343         | Maker, mattress                             |
| 73125         | 73125         | Maker, metal-wind musical instrument        |
| 75226         | 74226         | Maker, model/wooden                         |
| 75127         | 74127         | Maker, noodle                               |
| 81605         | 82759         | Maker, peanut butter                        |
| 73111         | 73111         | Maker, photographic equipment               |
| 73122         | 73122         | Maker, piano                                |
| 75228         | 74228         | Maker, picture frame                        |
| 73145         | 73215         | Maker, pottery and porcelain mould          |
| 75346         | 74346         | Maker, quilt                                |
| 73183         | New           | Maker, rattan bag                           |
| 75319         | 74397         | Maker, sack                                 |
| 75319         | 74398         | Maker, sail, tent and awning                |
| 75116         | 74116         | Maker, sausage                              |
| 81316         | 82211         | Maker, soap                                 |
| 75344         | 74344         | Maker, soft furnishing                      |
| 75336         | 74426         | Maker, sports equipment/footwear            |
| 75229         | 74229         | Maker, sports equipment/wood                |
| 73122         | 73122         | Maker, stringed-musical instrument          |
| 75143         | 74133         | Maker, syrup                                |
| 72221         | 72221         | Maker, tool and die                         |
| 75229         | 74229         | Maker, toy/wood                             |
| 75319         | 74396         | Maker, umbrella                             |
| 75144         | 74133         | Maker, vegetable juice                      |
| 75313         | 74323         | Maker, wig                                  |
| 73124         | 73124         | Maker, wood-wind musical instrument         |
| 75126         | 74126         | Maker, yeast                                |
| 75132         | New           | Maker, yogurt                               |
| 51422         | 51315         | Make-up artist                              |
| 34343         | New           | Malay cuisine chef                          |
| 21313         | 22113         | Mammalogist                                 |
| 33413         | New           | Management trainee                          |
| 14121         | 13052         | Manager (cafe, bar and snack-bar)           |
| 12111         | 12312         | Manager, account                            |
| 12151         | 12311         | Manager, administrative                     |
| 12221         | 12341         | Manager, advertising                        |
| 13431         | New           | Manager, aged care services                 |
| 13112         | 13011         | Manager, agricultural                       |
| 11201         | 12101         | Manager, airport                            |
| 12117         | New           | Manager, audit                              |
| 12117         | New           | Manager, audit and risk assessment          |
| 14111         | 13051         | Manager, boarding-house                     |
| 11201         | 12101         | Manager, broadcasting, radio and television |
| 12111         | 12312         | Manager, budget                             |
| 12142         | 13070         | Manager, business services/development      |
| 14121         | 13052         | Manager, cafe                               |
| 14313         | 13051         | Manager, camping site                       |
| 14121         | 13052         | Manager, canteen                            |
| 14313         | 13051         | Manager, caravan park                       |
| 14313         | 13099         | Manager, casino                             |
| 14121         | 13052         | Manager, catering                           |
| 13411         | 13093         | Manager, child care centre                  |



| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                     |
|---------------|---------------|---|
| 14321         | 13082         | Manager, cleaning                             |
| 14313         | 13095         | Manager, club                                 |
| 12222         | New           | Manager, communications                       |
| 13303         | 12362         | Manager, computer services                    |
| 13231         | 13030         | Manager, construction                         |
| 12212         | New           | Manager, contact centre                       |
| 13232         | New           | Manager, contract                             |
| 12111         | 12312         | Manager, credit                               |
| 14313         | New           | Manager, cruise                               |
| 14312         | 13094         | Manager, cultural activities                  |
| 12212         | New           | Manager, customer service                     |
| 13304         | 12369         | Manager, data processing                      |
| 13492         | New           | Manager, design                               |
| 14122         | 13053         | Manager, discotheque                          |
| 12223         | 13070         | Manager, display                              |
| 13242         | 12350         | Manager, distribution                         |
| 13451         | 13091         | Manager, education                            |
| 13493         | New           | Manager, electricity, water and sanitary      |
| 14313         | 13095         | Manager, entertainment                        |
| 14313         | 13095         | Manager, environment, parks and land care     |
| 13493         | New           | Manager, environmental systems                |
| 13112         | 12211         | Manager, estate/plantation                    |
| 12116         | New           | Manager, expenditure                          |
| 14202         | New           | Manager, export sales                         |
| 13493         | New           | Manager, facilities maintenance               |
| 13211         | New           | Manager, factory                              |
| 12111         | 12312         | Manager, finance                              |
| 12115         | New           | Manager, financial and institution            |
| 13461         | New           | Manager, financial and insurance branch       |
| 13121         | New           | Manager, fishery farm                         |
| 14114         | New           | Manager, food and beverage services           |
| 13111         | 13013         | Manager, forestry                             |
| 14113         | New           | Manager, front desk                           |
| 14113         | New           | Manager, front office hotel                   |
| 12113         | 24202         | Manager, fund                                 |
| 14313         | 13095         | Manager, gaming                               |
| 13493         | New           | Manager, garbage systems                      |
| 14111         | 13051         | Manager, guest-house                          |
| 11201         | 12101         | Manager, harbour                              |
| 13421         | 13092         | Manager, health                               |
| 14111         | 13051         | Manager, hostel                               |
| 14115         | JPA           | Manager, hostel N41                           |
| 14111         | 13051         | Manager, hotel                                |
| 12121         | 12321         | Manager, human resource/personnel             |
| 12121         | 12321         | Manager, human resource/training              |
| 14313         | 13095         | Manager, ice-skating rink                     |
| 12122         | 12322         | Manager, industrial relations                 |
| 13302         | New           | Manager, information systems                  |
| 13302         | 12361         | Manager, information technology               |
| 12112         | 13070         | Manager, insurance                            |
| 14321         | 13082         | Manager, laundering, dry-cleaning and ironing |
| 14331         | New           | Manager, legal and risk management            |
| 14112         | 13051         | Manager, lodging-house                        |
| 14341         | 13096         | Manager, maintenance                          |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 13211         | 13020         | Manager, manufacturing  |
| 12212         | 12332         | Manager, market research  |
| 12211         | 12332         | Manager, marketing  |
| 13421         | 12291         | Manager, medical (medical administration)                                     |
| 14111         | 13051         | Manager, motel  |
| 12123         | 12323         | Manager, occupational health and safety                                       |
| 14351         | New           | Manager, occupational safety  |
| 13233         | New           | Manager, operation  |
| 14315         | JPA           | Manager, park/estate G41  |
| 14322         | 13081         | Manager, personal care services   |
| 12131         | New           | Manager, policy and planning  |
| 12212         | New           | Manager, product/brand  |
| 13112         | 13014         | Manager, production and operation/agricultural                                |
| 12141         | 12250         | Manager, production and operation/business                                    |
| 14321         | 12261         | Manager, production and operation/cleaning                                    |
| 13301         | 12223         | Manager, production and operation/communications                              |
| 13301         | 12223         | Manager, production and operation/communications (postal services)            |
| 13301         | 12223         | Manager, production and operation/communications (telecommunication services) |
| 13231         | 12214         | Manager, production and operation/construction                                |
| 14312         | 12291         | Manager, production and operation/cultural activities                         |
| 13451         | 12291         | Manager, production and operation/education                                   |
| 13491         | 12291         | Manager, production and operation/extra territorial organization              |
| 13121         | 12212         | Manager, production and operation/fishery                                     |
| 13111         | 12212         | Manager, production and operation/forestry                                    |
| 13421         | 12291         | Manager, production and operation/health                                      |
| 14111         | 12231         | Manager, production and operation/hotel                                       |
| 13211         | 12213         | Manager, production and operation/manufacturing                               |
| 13221         | 12215         | Manager, production and operation/mining and quarry                           |
| 14322         | 12262         | Manager, production and operation/personal care services                      |
| 14311         | 12291         | Manager, production and operation/recreation                                  |
| 14121         | 12232         | Manager, production and operation/restaurant                                  |
| 14201         | 12242         | Manager, production and operation/retail trade                                |
| 14201         | 12242         | Manager, production and operation/retail trade (store)                        |
| 14201         | 12242         | Manager, production and operation/retail trade (supermarket)                  |
| 13441         | 12291         | Manager, production and operation/social work                                 |
| 14311         | 12291         | Manager, production and operation/sporting activities                         |
| 14314         | 12292         | Manager, production and operation/stage                                       |
| 13242         | 12222         | Manager, production and operation/storage                                     |
| 13241         | 12221         | Manager, production and operation/transport                                   |
| 13241         | 12221         | Manager, production and operation/transport (freight traffic)                 |
| 13241         | 12221         | Manager, production and operation/transport (passenger traffic)               |
| 13241         | 12221         | Manager, production and operation/transport (pipeline)                        |
| 14313         | 12291         | Manager, production and operation/travel agency                               |
| 14202         | 12241         | Manager, production and operation/wholesale trade                             |
| 14202         | 12241         | Manager, production and operation/wholesale trade (export)                    |
| 14202         | 12241         | Manager, production and operation/wholesale trade (import)                    |
| 11201         | 12223         | Manager, programme/radio & television   |
| 13233         | New           | Manager, project  |
| 14342         | 13096         | Manager, property   |
| 12222         | 12342         | Manager, public relations   |
| 13243         | 12350         | Manager, purchasing   |
| 13211         | New           | Manager, quality assurance  |
| 13211         | New           | Manager, quality control  |
| 14313         | 13095         | Manager, racecourse   |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                |
|---------------|---------------|--|
| 14313         | 13095         | Manager, recreation                      |
| 14123         | 13059         | Manager, refreshment-room                |
| 12231         | 12370         | Manager, research and development        |
| 14121         | 13052         | Manager, restaurant                      |
| 14201         | 13042         | Manager, retail trade/chain store        |
| 14201         | 13042         | Manager, retail trade/discount store     |
| 14201         | 13042         | Manager, retail trade/mail-order store   |
| 14201         | 13042         | Manager, retail trade/self-service store |
| 14201         | 13042         | Manager, retail trade/shop               |
| 12211         | 12331         | Manager, sales                           |
| 12211         | 12331         | Manager, sales and marketing             |
| 12211         | 12332         | Manager, sales promotion                 |
| 14352         | 12319         | Manager, security                        |
| 14121         | 13052         | Manager, self-service restaurant         |
| 12213         | New           | Manager, shopping centre                 |
| 13233         | New           | Manager, site                            |
| 14121         | 13052         | Manager, snack-bar                       |
| 13441         | 13093         | Manager, social work                     |
| 14313         | 13095         | Manager, sporting activities             |
| 11201         | 12101         | Manager, sports                          |
| 14313         | 13095         | Manager, sports and recreation           |
| 14313         | 13095         | Manager, sports centre                   |
| 14313         | 13095         | Manager, stadium                         |
| 14314         | 12292         | Manager, stage                           |
| 51125         | JPA           | Manager, station N19                     |
| 13242         | 13062         | Manager, storage                         |
| 12213         | New           | Manager, supermarket                     |
| 13242         | 12350         | Manager, supplies                        |
| 13241         | 13061         | Manager, transport                       |
| 14313         | 13095         | Manager, travel agency                   |
| 12114         | 24203         | Manager, treasury                        |
| 13242         | New           | Manager, warehouse                       |
| 14202         | 13041         | Manager, wholesale trade                 |
| 14202         | 13041         | Manager, wholesale trade/export          |
| 14202         | 13041         | Manager, wholesale trade/import          |
| 11201         | 12101         | Managing director                        |
| 11202         | 12102         | Managing-director, organization          |
| 61114         | New           | Mandore, estate/plantation               |
| 51423         | 51313         | Manicurist                               |
| 31351         | 81228         | Manipulator, rolling-mill, metal         |
| 21651         | New           | Map maker                                |
| 21726         | 31426         | Marine superintendent (deck)             |
| 21713         | 31413         | Marine superintendent, technical         |
| 62111         | 61416         | Marker, log                              |
| 72224         | 72224         | Marker, metal                            |
| 72136         | 72136         | Marker, sheet metal                      |
| 72145         | 72145         | Marker, structural metal                 |
| 75229         | 74229         | Marker, woodworking                      |
| 42271         | New           | Market research interviewer              |
| 71139         | New           | Mason                                    |
| 53116         | 51392         | Masseur (non-medical)                    |
| 22642         | 32265         | Masseur, physiotherapy                   |
| 22642         | 32263         | Masseur, therapeutic                     |
| 26561         | 39522         | Master of ceremonies                     |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 13241         | 12221         | Master, railway station                                    |
| 21201         | 21211         | Mathematician  |
| 21201         | 21213         | Mathematician, actuarial science                           |
| 21201         | 21211         | Mathematician, applied mathematics                         |
| 21201         | 21211         | Mathematician, pure mathematics                            |
| 51517         | 51213         | Matron, housekeeping                                       |
| 32211         | 32311         | Matron, medical  |
| 11114         | 11104         | Mayor/Datuk Bandar   |
| 72337         | New           | Mechanic maintenance, estate/plantation                    |
| 72321         | 72308         | Mechanic, aircraft engine                                  |
| 72311         | 72304         | Mechanic, earth-moving equipment                           |
| 72312         | 72307         | Mechanic, garage   |
| 72339         | 72309         | Mechanic, industrial machinery                             |
| 72331         | 72301         | Mechanic, machinery  |
| 72339         | New           | Mechanic, machine-tool                                     |
| 72335         | 72306         | Mechanic, marine engine                                    |
| 72334         | 72305         | Mechanic, mining machinery                                 |
| 72314         | 72307         | Mechanic, motor vehicle                                    |
| 72313         | 72307         | Mechanic, motor-cycle                                      |
| 72333         | 72303         | Mechanic, office machinery                                 |
| 72339         | 72309         | Mechanic, plant maintenance                                |
| 72339         | 72309         | Mechanic, refrigeration and air-conditioning equipment     |
| 72336         | 72306         | Mechanic, ship   |
| 74222         | 72432         | Mechanic, telephone and telegraph                          |
| 72315         | New           | Mechanic, workshop   |
| 82119         | New           | Mechanical, fitter   |
| 24221         | 24903         | Media planner  |
| 22111         | 22211         | Medical practitioner                                       |
| 33436         | JPA           | Meeting herald N27   |
| 11111         | 11101         | Member of parliamentarian                                  |
| 14201         | 13042         | Merchant, retail trade                                     |
| 14202         | 13041         | Merchant, wholesale trade                                  |
| 96211         | 92011         | Messenger/courier  |
| 21462         | 21472         | Metallurgist, assayer                                      |
| 21465         | 21474         | Metallurgist, extractive                                   |
| 21465         | 21474         | Metallurgist, foundry                                      |
| 21466         | 21476         | Metallurgist, physics                                      |
| 21462         | 21472         | Metallurgist, radioactive minerals                         |
| 31171         | 31171         | Metallurgy assistant, extractive                           |
| 31172         | 31172         | Metallurgy assistant, physics                              |
| 82211         | 82111         | Metal-printing roller-engraver, machine                    |
| 21121         | 21121         | Meteorologist  |
| 21127         | New           | Meteorologist, environmental                               |
| 21126         | New           | Meteorologist, marine                                      |
| 21128         | New           | Meteorologist, Numerical Weather Prediction Modeling (NWP) |
| 21122         | 21122         | Meteorologist-climatology                                  |
| 21123         | 21123         | Meteorologist-weather forecasting                          |
| 96231         | 92041         | Meter reader   |
| 21316         | 22116         | Microbiologist   |
| 21149         | 21149         | Micropalaeontology   |
| 34314         | 31314         | Microphotographer  |
| 02109         | New           | Midshipmen, Navy   |
| 32221         | 32320         | Midwife  |
| 22221         | New           | Midwife, professional                                      |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                   |
|---------------|---------------|---|
| 61211         | New           | Milker                                      |
| 81603         | 82731         | Miller, grain                               |
| 81605         | 82752         | Miller, oil seed/palm oil                   |
| 81603         | 82732         | Miller, rice                                |
| 81603         | 82733         | Miller, spice                               |
| 81603         | 82734         | Miller, tapioca                             |
| 75312         | 74322         | Milliner                                    |
| 26574         | 39544         | Mimic                                       |
| 81111         | 71111         | Miner                                       |
| 21143         | 21143         | Mineralogist                                |
| 31173         | 31173         | Mining assistant, general                   |
| 11112         | 11102         | Minister                                    |
| 61141         | 61110         | Mixed crop grower (no husbandry)            |
| 61301         | 61120         | Mixed product farmer (crops and husbandry)  |
| 93299         | 93299         | Mixer hand (chemical and related processes) |
| 81849         | 81391         | Mixer, clay                                 |
| 71147         | 71227         | Mixer, concrete                             |
| 81849         | 81391         | Mixer, glass                                |
| 81603         | 82737         | Mixer, spice                                |
| 52412         | 52302         | Model, advertising                          |
| 52413         | 52303         | Model, artist                               |
| 52411         | 52301         | Model, fashion                              |
| 73143         | 73213         | Modeller, pottery and porcelain             |
| 42114         | 42123         | Money changer                               |
| 42132         | 42132         | Money-lender                                |
| 34131         | 39601         | Monk, associate professional                |
| 83314         | New           | Motor coach driver                          |
| 83211         | 83211         | Motorcyclist                                |
| 72111         | New           | Mould maker                                 |
| 72111         | 72111         | Mould repairer, foundry                     |
| 72111         | New           | Moulder, floor, foundry                     |
| 73157         | 73227         | Moulder, glass lens                         |
| 72111         | 72111         | Moulder, metal                              |
| 72111         | 72111         | Moulder, pit, foundry                       |
| 73142         | 73312         | Moulder/presser, brick and tile             |
| 73233         | 73331         | Mounter, map and chart                      |
| 26362         | 29402         | Mufti                                       |
| 25121         | 21316         | Multi-media software developer              |
| 26522         | 39532         | Musician                                    |
| 26525         | JPA           | Musician B41                                |
| 26521         | 29338         | Musicologist                                |
| 21312         | 22112         | Mycologist                                  |
| <b>N</b>      |               |   |
| 53115         | 51393         | Nanny                                       |
| 32307         | 32295         | Naturopath                                  |
| 21733         | 31433         | Navigator, flight                           |
| 33344         | 34144         | Negotiator (property)                       |
| 22128         | 22218         | Neurologist                                 |
| 21347         | 22127         | Neuropathologist                            |
| 26562         | 39524         | Newscaster/commentator                      |
| 95201         | 91102         | Newsvendor (street)                         |
| 43112         | 41301         | Night auditor                               |
| 54147         | New           | Night watchman                              |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 26191         | 25091         | Notary  |
| 44126         | JPA           | Notice server N3                                      |
| 26411         | 29311         | Novelist  |
| 51614         | 51504         | Numerologist  |
| 34132         | 39602         | Nun, associate professional                           |
| 32211         | 32311         | Nurse   |
| 32211         | 32311         | Nurse instructor                                      |
| 32211         | 32311         | Nurse tutor   |
| 32214         | JPA           | Nurse U29   |
| 32222         | JPA           | Nurse, community U19                                  |
| 32511         | 32251         | Nurse, dental   |
| 32513         | JPA           | Nurse, dental U29                                     |
| 32213         | 32313         | Nurse, industrial                                     |
| 32213         | 32313         | Nurse, occupational health                            |
| 32212         | 32312         | Nurse, operation theatre                              |
| 32212         | 32312         | Nurse, orthopedic                                     |
| 32212         | 32312         | Nurse, paediatric                                     |
| 22211         | New           | Nurse, professional                                   |
| 32212         | 32312         | Nurse, psychiatric                                    |
| 32211         | 32311         | Nurse, public health (medical)                        |
| 32511         | 32251         | Nurse, public health/dental                           |
| 32511         | 32251         | Nurse, school/dental                                  |
| 32212         | 32312         | Nurse, specialized                                    |
| 53211         | New           | Nursing aids  |
| 81605         | 82759         | Nut roaster   |
| 22652         | 32232         | Nutritionist  |
| 22652         | 32232         | Nutritionist, animal                                  |
| 22652         | 32234         | Nutritionist, public health                           |
| 22652         | 32234         | Nutritionist, research                                |
| <b>O</b>      |               |   |
| 22129         | 22217         | Obstetrician and gynaecologist                        |
| 22129         | 22217         | Obstetrician and gynaecologist, fertility             |
| 22129         | 22217         | Obstetrician and gynaecologist, fetomaternal medicine |
| 22129         | 22217         | Obstetrician and gynaecologist, oncology              |
| 21145         | 21146         | Oceanographer   |
| 21145         | 21146         | Oceanographer, geological                             |
| 21145         | 21146         | Oceanographer, geophysical                            |
| 96221         | New           | Odd-job person  |
| 96213         | 92013         | Office boy  |
| 43232         | 44002         | Officer claims, railway                               |
| 33229         | New           | Officer commercial, railway                           |
| 21202         | JPA           | Officer, actuary W41                                  |
| 11125         | JPA           | Officer, administrative and diplomatic M41            |
| 11126         | JPA           | Officer, administrative N41                           |
| 21321         | 22131         | Officer, agricultural                                 |
| 21325         | JPA           | Officer, agricultural G41                             |
| 21743         | 31491         | Officer, air cargo                                    |
| 21742         | JPA           | Officer, air traffic control A41                      |
| 26194         | JPA           | Officer, anti-drug S41                                |
| 24215         | JPA           | Officer, appraiser W41                                |
| 26214         | JPA           | Officer, archivist S41                                |
| 26196         | 25096         | Officer, bankruptcy                                   |
| 24462         | 39119         | Officer, civil defence                                |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 24463         | JPA           | Officer, civil defence KP41                      |
| 33563         | 39119         | Officer, civil service commission                |
| 33568         | JPA           | Officer, civilian relation KP19                  |
| 26352         | JPA           | Officer, cultural B41                            |
| 42227         | JPA           | Officer, customer service N17                    |
| 22617         | JPA           | Officer, dental U41                              |
| 22656         | JPA           | Officer, dietetic U41                            |
| 44157         | New           | Officer, document                                |
| 44154         | New           | Officer, document controller                     |
| 26312         | JPA           | Officer, economy affairs E41                     |
| 23303         | JPA           | Officer, education graduate services DG41        |
| 24494         | JPA           | Officer, enforcement N41                         |
| 21338         | JPA           | Officer, environmental control C41               |
| 22632         | JPA           | Officer, environmental U41                       |
| 24214         | JPA           | Officer, evaluation W41                          |
| 34121         | 39304         | Officer, family planning                         |
| 43235         | 44005         | Officer, ferry                                   |
| 26545         | JPA           | Officer, film laboratory C41                     |
| 24133         | JPA           | Officer, finance W41                             |
| 54113         | JPA           | Officer, fireman KB17                            |
| 21323         | JPA           | Officer, fishery G41                             |
| 27116         | New           | Officer, food preparer C41                       |
| 22654         | JPA           | Officer, food technology C41                     |
| 21322         | New           | Officer, forestry                                |
| 42266         | New           | Officer, front office                            |
| 33122         | New           | Officer, general ledger                          |
| 21138         | JPA           | Officer, geochemist C41                          |
| 21148         | JPA           | Officer, geophysics/geology C41                  |
| 23301         | New           | Officer, graduate teacher                        |
| 27114         | New           | Officer, guest service                           |
| 22655         | New           | Officer, health                                  |
| 23994         | JPA           | Officer, higher learning education services DH41 |
| 54151         | JPA           | Officer, immigration KP17                        |
| 24321         | 24306         | Officer, industrial relations                    |
| 24324         | JPA           | Officer, industrial relations S41                |
| 24213         | JPA           | Officer, information S41                         |
| 25221         | New           | Officer, information system                      |
| 25222         | JPA           | Officer, information technology F41              |
| 25221         | New           | Officer, information technology support          |
| 24223         | New           | Officer, intelligence                            |
| 26126         | JPA           | Officer, Islamic affair S41                      |
| 33332         | 34204         | Officer, job placement                           |
| 24461         | JPA           | Officer, Kesatria S41                            |
| 21643         | JPA           | Officer, land planning G41                       |
| 26434         | JPA           | Officer, language planner S41                    |
| 33541         | New           | Officer, licensing                               |
| 21791         | 31492         | Officer, load sheet                              |
| 33121         | New           | Officer, loan                                    |
| 21826         | New           | Officer, logs                                    |
| 21727         | JPA           | Officer, marine A41                              |
| 22111         | 22211         | Officer, medical                                 |
| 22113         | JPA           | Officer, medical rehabilitation U41              |
| 22112         | JPA           | Officer, medical UD41                            |
| 21121         | 21121         | Officer, meteorological                          |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                       |
|---------------|---------------|---|
| 21124         | JPA           | Officer, meteorology C41                        |
| 21811         | JPA           | Officer, mining C41                             |
| 33121         | New           | Officer, mortgage                               |
| 23412         | JPA           | Officer, non-graduate teacher DGA29             |
| 24233         | 24304         | Officer, occupational guidance                  |
| 22631         | 31521         | Officer, occupational safety and health         |
| 33512         | 39114         | Officer, passport checking                      |
| 33541         | New           | Officer, passport issuing                       |
| 24231         | 24301         | Officer, personnel                              |
| 24231         | 24305         | Officer, personnel safety                       |
| 22625         | JPA           | Officer, pharmacy U41                           |
| 54122         | 51423         | Officer, police                                 |
| 24212         | 24905         | Officer, press                                  |
| 24212         | 24905         | Officer, press liaison                          |
| 54133         | JPA           | Officer, prison KX11                            |
| 26544         | JPA           | Officer, publication N41                        |
| 24497         | JPA           | Officer, registration KP41                      |
| 33565         | New           | Officer, RELA                                   |
| 26361         | New           | Officer, religious                              |
| 24216         | JPA           | Officer, research Q41                           |
| 22128         | JPA           | Officer, science C41                            |
| 24492         | JPA           | Officer, security KP41                          |
| 21724         | 31424         | Officer, ship/deck                              |
| 35214         | 31324         | Officer, ships radio                            |
| 33531         | New           | Officer, social benefits                        |
| 26353         | JPA           | Officer, social development S41                 |
| 26327         | JPA           | Officer, social research N41                    |
| 33532         | New           | Officer, social security claims                 |
| 24241         | 24307         | Officer, staff training                         |
| 24241         | New           | Officer, staff vocational training              |
| 21203         | 39211         | Officer, statistical                            |
| 26122         | JPA           | Officer, Syariah LS41                           |
| 24217         | 24908         | Officer, tourist                                |
| 23804         | JPA           | Officer, training E41                           |
| 26193         | 25094         | Officer, trust                                  |
| 21644         | JPA           | Officer, urban and rural planning J41           |
| 22504         | JPA           | Officer, veterinary G41                         |
| 23801         | JPA           | Officer, vocational training J41                |
| 21337         | JPA           | Officer, wild life G41                          |
| 26354         | JPA           | Officer, youth and sport S41                    |
| 21751         | 31495         | Officer/controller, LRT/ ERL/monorail operation |
| 24116         | New           | Officer/executive, account                      |
| 33122         | New           | Officer/executive, costing                      |
| 33121         | New           | Officer/executive, credit control               |
| 24321         | New           | Officer/executive, customer service             |
| 24231         | 24301         | Officer/executive, human resource               |
| 26111         | 25015         | Officer/executive, legal                        |
| 24321         | 24904         | Officer/executive, public relations             |
| 33231         | New           | Officer/executive, purchasing                   |
| 21822         | New           | Officer/executive, quality control              |
| 26195         | 25095         | Officials assignee (high court)                 |
| 33433         | 39223         | Officials, consular                             |
| 33596         | 39119         | Officials, electoral                            |
| 11115         | 11109         | Officials, legislative                          |



| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 34221         | 39562         | Officials, sports  |
| 72339         | 72309         | Oiler and greaser  |
| 21333         | 22133         | Olericulturist   |
| 22123         | 22219         | Oncologist, medical  |
| 22123         | 22219         | Oncologist, radiotherapy   |
| 96299         | New           | Operator camera/driver   |
| 81123         | 81123         | Operator magnetic-separator  |
| 31344         | 81554         | Operator, acetylene plant  |
| 81314         | 81597         | Operator, acid plant   |
| 35211         | New           | Operator, audio/visual   |
| 81327         | 31318         | Operator, audio-visual aids  |
| 91224         | New           | Operator, auto polish  |
| 81728         | 81418         | Operator, auto-clipper   |
| 83421         | 83321         | Operator, backhoe  |
| 83426         | 83326         | Operator, backhoe dredger  |
| 81411         | 82311         | Operator, banbury-mixer/rubber   |
| 81713         | 81423         | Operator, beater   |
| 81715         | 81425         | Operator, bleach machine   |
| 81314         | 81592         | Operator, bleacher/chemical  |
| 81822         | 81622         | Operator, boiler plant/steam   |
| 81821         | 81621         | Operator, boiler/ship  |
| 35216         | New           | Operator, broadcasting equipment   |
| 35216         | 31327         | Operator, broadcasting equipment/radio and television                    |
| 83424         | 83324         | Operator, bulldozer  |
| 83435         | 83335         | Operator, cable car  |
| 81547         | 82647         | Operator, calendar/textile   |
| 81325         | JPA           | Operator, camera offset/platemaker N17                                   |
| 81327         | 31315         | Operator, camera/motion picture  |
| 81327         | 31316         | Operator, camera/television  |
| 81831         | New           | Operator, carton   |
| 31344         | 81554         | Operator, chlorine plant   |
| 83112         | New           | Operator, commuter   |
| 31322         | 81692         | Operator, compressor   |
| 31322         | 81692         | Operator, compressor/gas   |
| 35111         | 41421         | Operator, computer   |
| 35122         | New           | Operator, computer help desk   |
| 35111         | 41421         | Operator, computer peripheral equipment                                  |
| 35111         | 41421         | Operator, computer peripheral equipment/console                          |
| 35111         | 41421         | Operator, computer peripheral equipment/high-speed printer               |
| 35111         | 41421         | Operator, console  |
| 81312         | 81521         | Operator, cooking equipment/chemical and related processes               |
| 81314         | 81542         | Operator, coverter/chemical processes (except petroleum and natural gas) |
| 83431         | 83331         | Operator, crane  |
| 81311         | 81512         | Operator, crusher/chemical and related processes                         |
| 81132         | 81116         | Operator, derrick/oil and gas wells                                      |
| 73214         | 73314         | Operator, desktop publishing equipment                                   |
| 81711         | 81421         | Operator, digester   |
| 83429         | 83329         | Operator, dragline   |
| 81312         | 81523         | Operator, drier/chemical and related processes                           |
| 81131         | 81118         | Operator, drilling equipment/cable (oil & gas wells)                     |
| 81131         | 81118         | Operator, drilling equipment/rotary (oil & gas wells)                    |
| 81131         | 81117         | Operator, drilling equipment/wells                                       |
| 83428         | 83328         | Operator, drilling plant   |
| 72213         | 72213         | Operator, drop-hammer  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 31312         | 81610         | Operator, electrical switchboard                           |
| 32562         | 31392         | Operator, electrocardiograph equipment                     |
| 32563         | 31393         | Operator, electroencephalograph equipment                  |
| 35111         | 41422         | Operator, Electronic Data Processing (EDP)                 |
| 83434         | 83334         | Operator, elevator/material handling                       |
| 81314         | 81543         | Operator, evaporator                                       |
| 81607         | 82774         | Operator, fermentation equipment/spirits                   |
| 81314         | 81598         | Operator, fertilizer plant                                 |
| 81327         | 31318         | Operator, film-recorder                                    |
| 72214         | 72214         | Operator, forging-press                                    |
| 81605         | 82755         | Operator, fractionation plant                              |
| 31344         | 81554         | Operator, gas plant  |
| 81607         | 82771         | Operator, germination equipment/malting                    |
| 83429         | 83329         | Operator, grab-bucket                                      |
| 83425         | 83325         | Operator, grader and scraper/road                          |
| 83414         | 83314         | Operator, harvester (paddy)                                |
| 31325         | 81695         | Operator, heating and ventilation equipment                |
| 81312         | 81528         | Operator, heat-treating plant/chemical and related process |
| 83432         | 83333         | Operator, hoist  |
| 31329         | 81699         | Operator, hopper   |
| 31313         | 81610         | Operator, hydroelectric station                            |
| 31323         | 81693         | Operator, incinerator plant                                |
| 61222         | 61355         | Operator, incubator  |
| 93228         | 93218         | Operator, laminating-machine/rubber                        |
| 31349         | 81591         | Operator, liquefaction plant/gases                         |
| 62113         | 61418         | Operator, log-grapple                                      |
| 81605         | 82753         | Operator, margarine plant                                  |
| 82196         | 82909         | Operator, marking equipment/road                           |
| 32561         | 31391         | Operator, medical x-ray equipment                          |
| 82195         | 82909         | Operator, merry-go-round                                   |
| 81215         | 81228         | Operator, mill table                                       |
| 83112         | New           | Operator, mono-rail  |
| 83411         | 83311         | Operator, motorized farm equipment                         |
| 81228         | New           | Operator, moulding   |
| 74217         | New           | Operator, network  |
| 31344         | 81554         | Operator, oxygen plant                                     |
| 81832         | New           | Operator, packing  |
| 81718         | 81428         | Operator, paper-pulp plant                                 |
| 31345         | 81555         | Operator, paraffin plant                                   |
| 83423         | 83323         | Operator, piling-driver                                    |
| 31327         | JPA           | Operator, plant R3   |
| 31314         | 81610         | Operator, power generating plant                           |
| 81919         | New           | Operator, printing   |
| 81606         | 82760         | Operator, processing and refining/sugar                    |
| 81849         | 81392         | Operator, pug-mill/clay                                    |
| 81132         | 81118         | Operator, pulling equipment/oil and gas wells              |
| 31324         | 81694         | Operator, pumping station                                  |
| 31348         | 81558         | Operator, pumping-station/petroleum and natural gas        |
| 35216         | 31325         | Operator, radio equipment/flight                           |
| 35216         | 31323         | Operator, radio equipment/land-base                        |
| 32561         | New           | Operator, radiograph equipment                             |
| 32561         | 31392         | Operator, radiograph equipment, medical, general           |
| 81327         | 31318         | Operator, recording equipment, sound and image             |
| 31326         | 81696         | Operator, refrigeration system                             |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 81841         | New           | Operator, retort   |
| 81312         | 81526         | Operator, retort/chemical and related processes  |
| 83425         | 83325         | Operator, road roller  |
| 81312         | 81522         | Operator, roasting equipment/chemical and related processes                            |
| 81214         | 81224         | Operator, rolling mill/non-ferrous metal   |
| 81848         | 81318         | Operator, sandblasting equipment/glass   |
| 81735         | 82405         | Operator, sander   |
| 96297         | New           | Operator, sanding  |
| 81721         | 81411         | Operator, sawmill  |
| 32563         | 31393         | Operator, scanning equipment   |
| 81313         | 81534         | Operator, separator/chemical and related processes                                     |
| 31328         | 81698         | Operator, sewage plant   |
| 75314         | New           | Operator, sewing   |
| 83327         | New           | Operator, shuffle-car/mine   |
| 32564         | 31394         | Operator, sonographic  |
| 81312         | 81527         | Operator, spray-dried/chemical and related processes                                   |
| 31321         | 81691         | Operator, stationary engine  |
| 81823         | 81623         | Operator, steam engine   |
| 81602         | 82723         | Operator, sterilizer/dairy products  |
| 81314         | 81541         | Operator, still/batch (chemical processes except petroleum and natural gas)            |
| 81314         | 81541         | Operator, still/chemical processes   |
| 81314         | 81541         | Operator, still/continuous (chemical processes except petroleum and natural gas)       |
| 81314         | 81541         | Operator, still/turpentine   |
| 93352         | New           | Operator, store  |
| 81327         | 31317         | Operator, studio equipment/radio and television  |
| 82197         | New           | Operator, sub-assembly manual  |
| 81718         | 81432         | Operator, supercalender/paper  |
| 81607         | 82776         | Operator, syrup-mixing plant   |
| 92154         | New           | Operator, tacky timber   |
| 83429         | 83329         | Operator, tamping machinery/construction   |
| 81327         | 31318         | Operator, telecine   |
| 35216         | 31321         | Operator, telecommunications equipment   |
| 42231         | 42231         | Operator, telephone (private branch exchange)  |
| 42231         | 42231         | Operator, telephone (telephone exchange)   |
| 83112         | New           | Operator, train/ERL  |
| 83112         | 83112         | Operator, train/LRT  |
| 35216         | 31326         | Operator, transmitting equipment/radio and television                                  |
| 31347         | 81557         | Operator, treater/petroleum and natural gas refining                                   |
| 81315         | 81599         | Operator, treater/radioactive waste  |
| 81313         | 81535         | Operator, treating equipment/crude oil   |
| 83441         | 83340         | Operator, truck/fork-lift  |
| 83442         | 83340         | Operator, truck/industrial   |
| 83443         | 83340         | Operator, truck/lifting  |
| 83427         | 83327         | Operator, tunneling machinery/construction   |
| 31315         | 81610         | Operator, turbine  |
| 32565         | New           | Operator, ultrasonographic   |
| 81314         | 81543         | Operator, vacuum pan/chemical and related processes (except petroleum and natural gas) |
| 81602         | 82726         | Operator, vacuum pan/condensed milk  |
| 81727         | 81417         | Operator, veneer dryer   |
| 81327         | 31318         | Operator, video tape-recorder  |
| 93355         | New           | Operator, warehouse  |
| 91293         | New           | Operator, washing  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 31328         | 81697         | Operator, water treatment plant   |
| 81721         | New           | Operator, wet timber sawing   |
| 83433         | 83332         | Operator, winch   |
| 74217         | New           | Operator, wireless  |
| 74218         | JPA           | Operator, wireless N17  |
| 75232         | New           | Operator, wood machine  |
| 62113         | 61418         | Operator, yarder  |
| 22125         | 22215         | Ophthalmologist   |
| 22672         | 32241         | Optician  |
| 32541         | 32241         | Optician, contact-lens dispensing   |
| 22672         | 32241         | Optician, ophthalmic  |
| 22671         | 32242         | Optometrists  |
| 22673         | JPA           | Optometrists U41  |
| 26522         | 29333         | Orchestrator  |
| 02208         | New           | Ordinary- COD   |
| 33322         | 34192         | Organizer, exhibition and convention  |
| 33324         | 34192         | Organizer, travel   |
| 21313         | 22113         | Ornithologist   |
| 22613         | 22223         | Orthodontist  |
| 22663         | 32299         | Orthoepist  |
| 22129         | 22219         | Orthopaedist  |
| 22663         | 32299         | Orthophonist  |
| 22672         | 32241         | Orthoptist  |
| 22129         | 22219         | Osteopath   |
| 32151         | 32266         | Osteopath, lay  |
| 24119         | New           | Other accountants   |
| 43119         | New           | Other accounting and bookkeeping clerk  |
| 26559         | New           | Other actor   |
| 24319         | New           | Other advertising and marketing professional                                      |
| 72339         | 72309         | Other agriculture and industrial machinery mechanics and repairers                |
| 72329         | New           | Other aircraft engine mechanics and repairers                                     |
| 26589         | 39559         | Other animal keepers and trainers   |
| 26569         | New           | Other announcers on radio, television and other media                             |
| 33159         | New           | Other appraisers and valuers  |
| 62219         | New           | Other aquaculture workers   |
| 51619         | New           | Other astrologers, fortune-tellers and related workers                            |
| 34219         | New           | Other athletes, sportsperson and related associate professionals                  |
| 26419         | New           | Other author and related writers  |
| 75129         | 74129         | Other bakers, pastry – cooks and confectionery makers                             |
| 42119         | New           | Other bank teller and related clerks  |
| 51329         | New           | Other bartender   |
| 73179         | 74239         | Other basketry weavers, brush makers and related workers not elsewhere classified |
| 51429         | New           | Other beauticians and related workers   |
| 21319         | New           | Other biologist, botanist, zoologist and related professionals                    |
| 72219         | 72219         | Other blacksmith, hammersmith and forging-press workers                           |
| 81929         | 82529         | Other bookbinding machine operators   |
| 42129         | New           | Other bookmakers, croupiers and gaming workers                                    |
| 71129         | 71219         | Other bricklayers and related workers   |
| 35219         | New           | Other broadcasting technicians  |
| 21619         | New           | Other building architects   |
| 51539         | New           | Other building caretakers   |
| 93139         | New           | Other building construction labourers   |
| 71199         | 71299         | Other building frame and related trades workers not elsewhere classified          |
| 71339         | 71439         | Other building structure cleaners   |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 83319         | New           | Other bus, tram and related drivers  |
| 33399         | New           | Other business services agents   |
| 75119         | New           | Other butchers, fishmongers and related food preparers                                 |
| 33239         | New           | Other buyers and purchasing officers   |
| 75229         | 74229         | Other cabinet-makers and related workers   |
| 83229         | New           | Other car, taxi and van drivers  |
| 71159         | 71239         | Other carpenters and joiners   |
| 21659         | New           | Other cartographer and surveyors   |
| 52309         | New           | Other cashiers and ticket clerks   |
| 81149         | 82129         | Other cement, stone and other mineral products machine operators                       |
| 62129         | New           | Other charcoal burners and related workers   |
| 31119         | New           | Other chemical and physical science technicians  |
| 31169         | New           | Other chemical engineering technicians   |
| 21459         | 21468         | Other chemical engineers   |
| 21139         | New           | Other chemist  |
| 53119         | New           | Other child care workers   |
| 21429         | New           | Other civil engineers  |
| 91229         | New           | Other cleaner and related workers  |
| 91129         | 91229         | Other cleaners and helpers in offices, hotels and other establishments                 |
| 51519         | New           | Other cleaning and housekeeping supervisors in offices, hotel and other establishments |
| 44199         | New           | Other clerical support workers not elsewhere classified                                |
| 42299         | New           | Other client information workers not elsewhere classified                              |
| 44139         | New           | Other coding, proof-reading and related clerks   |
| 33229         | New           | Other commercial sales representative  |
| 51629         | New           | Other companions and valets  |
| 71149         | 71229         | Other concrete placers, concrete finishers and related workers                         |
| 42229         | New           | Other contact centre information clerks  |
| 51209         | New           | Other cooks  |
| 83439         | 83339         | Other crane, hoist and related plant operators   |
| 26579         | New           | Other creative or performing artists   |
| 92119         | New           | Other crop farm labourers  |
| 26539         | New           | Other dancers and choreographers   |
| 41329         | New           | Other data entry operators   |
| 25219         | New           | Other database designers and administrators  |
| 42149         | New           | Other debt-collectors and related workers not elsewhere classified                     |
| 22619         | 22229         | Other dentists   |
| 22659         | New           | Other dieticians and nutritionists   |
| 91119         | 91219         | Other domestic cleaners and helpers  |
| 51529         | New           | Other domestic housekeeper   |
| 52439         | New           | Other door to door salespersons  |
| 83429         | 83329         | Other earth-moving and related machinery operators                                     |
| 26319         | New           | Other economists   |
| 21519         | 21439         | Other electrical engineer  |
| 31139         | New           | Other electrical engineering technicians   |
| 74139         | 72449         | Other electrical line installers, repairers and cable jointers                         |
| 31149         | New           | Other electronics engineering technicians  |
| 21529         | New           | Other electronics engineers  |
| 74219         | 72429         | Other electronics fitters, mechanics and services                                      |
| 42259         | New           | Other enquiry clerks   |
| 22639         | New           | Other environmental and occupational health and hygiene professionals                  |
| 21339         | New           | Other environmental protection professionals   |
| 52419         | New           | Other fashion and models   |
| 81519         | New           | Other fibre preparing, spinning and winding machine operators                          |
| 44159         | New           | Other filing and copying clerks  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 26549         | New           | Other film, stage and related producers, directors and actors           |
| 24139         | New           | Other financial analysts  |
| 54119         | New           | Other fire-fighters   |
| 92169         | New           | Other fishery and aquaculture labourers                                 |
| 62239         | New           | Other fishery workers, deep-sea   |
| 71229         | 71329         | Other floor layers and tile setters                                     |
| 75159         | 74149         | Other food and beverage tasters and graders                             |
| 52469         | New           | Other food service counter attendants                                   |
| 62119         | New           | Other forestry and related workers                                      |
| 92159         | 93199         | Other forestry labourers  |
| 81559         | New           | Other fur and leather preparing machine operators                       |
| 96119         | 91419         | Other garbage and recycling collectors                                  |
| 92149         | 93129         | Other garden and horticultural labourers                                |
| 61139         | New           | Other gardeners, horticultural and nursery growers                      |
| 75329         | 74339         | Other garment and related pattern-makers and cutters                    |
| 22119         | New           | Other general medical practitioners                                     |
| 41109         | New           | Other general office clerks   |
| 21149         | 21148         | Other geologists and geophysicists                                      |
| 81849         | 81319         | Other glass and ceramics kiln and related machine operators             |
| 73159         | 73229         | Other glass makers, cutters, grinders and finishers                     |
| 71259         | 71359         | Other glaziers  |
| 51419         | New           | Other hairdresser   |
| 53219         | New           | Other health care assistants  |
| 13429         | New           | Other health services managers  |
| 83329         | 83249         | Other heavy truck and lorry drivers                                     |
| 53229         | New           | Other home-based personal care workers                                  |
| 14119         | New           | Other hotel managers  |
| 42249         | New           | Other hotel receptionist  |
| 71119         | 71299         | Other house builder and related workers not elsewhere classified        |
| 21419         | New           | Other industry and production engineer                                  |
| 74229         | 72439         | Other information and communications technology installers and services |
| 62229         | New           | Other inland and coastal water fishery workers                          |
| 51659         | New           | Other instructors   |
| 71249         | 71349         | Other insulation workers  |
| 34329         | New           | Other interior designer and decorators                                  |
| 73139         | 73139         | Other jewellery and precious-metal workers                              |
| 26429         | New           | Other journalist  |
| 26129         | New           | Other judges  |
| 21629         | New           | Other landscape architect   |
| 26119         | New           | Other lawyer  |
| 26199         | New           | Other legal professionals not elsewhere classified                      |
| 11119         | New           | Other legislator  |
| 26229         | New           | Other librarians and related professionals                              |
| 44119         | New           | Other library clerks  |
| 32129         | 32112         | Other life science technicians  |
| 61219         | New           | Other livestock and dairy producers                                     |
| 82219         | 82119         | Other machine-tool setter-operators                                     |
| 44129         | New           | Other mail carriers and sorting clerks                                  |
| 24219         | New           | Other management and organization analysts                              |
| 93299         | 93299         | Other manufacturing labourers not elsewhere classified                  |
| 61149         | New           | Other market gardeners and crop growers                                 |
| 93339         | 93419         | Other material and freight handling worker                              |
| 31159         | New           | Other mechanical engineering technicians                                |
| 21449         | New           | Other mechanical engineers  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 82119         | New           | Other mechanical machinery assemblers                                       |
| 32569         | New           | Other medical assistant   |
| 96219         | 92019         | Other messengers and porters  |
| 81219         | 81249         | Other metal processing and finishing plant operators                        |
| 72239         | 72239         | Other metal working machine tool setters and operators                      |
| 21129         | New           | Other meteorologist   |
| 81129         | 81129         | Other mineral and stone processing plant operators                          |
| 81119         | New           | Other miners and quarries   |
| 31179         | New           | Other mining and metallurgical technicians                                  |
| 93119         | 93319         | Other mining and quarrying workers  |
| 21469         | New           | Other mining engineers and metallurgist                                     |
| 92139         | New           | Other mixed crop and livestock farm labourers                               |
| 72319         | New           | Other motor vehicle mechanics and repairs                                   |
| 83419         | New           | Other motorized farm and forestry plant operators                           |
| 73129         | 73129         | Other musical instrument makers and turners                                 |
| 26529         | New           | Other musician, singers and composers                                       |
| 32219         | 32313         | Other nursing associate professionals (except dental)                       |
| 71319         | 71419         | Other painters related workers  |
| 81439         | 82539         | Other paper products machine operators                                      |
| 42139         | New           | Other pawnbrokers and money-lenders   |
| 24239         | New           | Other personnel and careers professionals                                   |
| 44169         | New           | Other personnel clerks  |
| 51649         | New           | Other pet groomers and animal care workers                                  |
| 31349         | 81591         | Other petroleum and natural gas refining plant operators                    |
| 22629         | New           | Other pharmacist  |
| 26339         | New           | Other philosopher, historian and political scientists                       |
| 34319         | New           | Other photographer  |
| 81329         | New           | Other photographic products machine operator and related                    |
| 31199         | New           | Other physical and engineering science technicians not elsewhere classified |
| 21119         | New           | Other physicist and astronomers   |
| 32559         | New           | Other physiotherapy technician and assistants                               |
| 71239         | 71339         | Other plasterers  |
| 81429         | 82329         | Other plastics product machine operators                                    |
| 71269         | 71369         | Other plumbers and pipe fitters   |
| 54129         | New           | Other police officers   |
| 24229         | New           | Other policy administration professional                                    |
| 73149         | 73219         | Other potters and related workers   |
| 61229         | New           | Other poultry producers   |
| 73119         | 73119         | Other precision instrument makers and repairers                             |
| 73219         | New           | Other pre-press technicians   |
| 73239         | New           | Other print finishing and binding workers                                   |
| 73229         | 73359         | Other printers  |
| 73249         | 73349         | Other printing and photo engravers and etchers                              |
| 81919         | 82519         | Other printing paper machine operators                                      |
| 54139         | New           | Other prison guards   |
| 21639         | New           | Other product and garment designers   |
| 43229         | New           | Other production clerks   |
| 25149         | New           | Other programmers   |
| 51699         | New           | Other protective service and related workers not elsewhere classified       |
| 24329         | New           | Other public relation professional  |
| 81719         | 81429         | Other pulp and papermaking plant operators                                  |
| 83129         | 83129         | Other railway braker and related workers                                    |
| 83119         | New           | Other railway engine and LRT train drivers                                  |
| 42269         | New           | Other receptionists   |



| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 23709         | New           | Other religion teachers  |
| 34139         | 39603         | Other religious associate professionals                                      |
| 26369         | New           | Other religious professional   |
| 14129         | New           | Other restaurant managers  |
| 72159         | 72159         | Other riggers and cable splicer  |
| 71219         | 71319         | Other roofers  |
| 93229         | 93219         | Other rubber processing workers  |
| 81419         | 82319         | Other rubber production machine operators                                    |
| 52429         | New           | Other sales demonstrators  |
| 52229         | New           | Other sales supervisor   |
| 44149         | New           | Other scribes and related workers  |
| 41209         | New           | Other secretaries not elsewhere classified                                   |
| 33119         | 34125         | Other securities and finance dealers and brokers                             |
| 54149         | New           | Other security guards  |
| 11129         | 11201         | Other senior government officials  |
| 11149         | New           | Other senior officials of special – interest organizations                   |
| 53291         | New           | Other service centre-based personal care workers                             |
| 52459         | New           | Other service station attendants   |
| 81539         | New           | Other sewing machine operators   |
| 72139         | 72139         | Other sheet metal workers  |
| 83509         | 83409         | Other ship's deck crew and related workers                                   |
| 21729         | New           | Other ship's deck officers and pilot   |
| 21719         | New           | Other ship's engineers   |
| 75339         | 74429         | Other shoemakers and related workers   |
| 81569         | New           | Other shoemaking and related machine operators                               |
| 52239         | New           | Other shop sales assistants  |
| 52219         | New           | Other shopkeeper   |
| 34129         | New           | Other social work associate professionals                                    |
| 26329         | New           | Other sociologist, anthropologists and related professionals                 |
| 25129         | New           | Other software developer   |
| 71329         | 71429         | Other spray painters and varnishers  |
| 52119         | New           | Other stall and market salespersons  |
| 33149         | New           | Other statistical, mathematical and actual associate professionals           |
| 21209         | 21229         | Other statisticians  |
| 81829         | 81629         | Other steam engine and boiler operators                                      |
| 43219         | New           | Other stock clerks   |
| 71139         | 71129         | Other stonemasons, stone cutters, splitters and carvers                      |
| 52129         | New           | Other street food salespersons   |
| 72149         | 72149         | Other structural metal preparers and erectors                                |
| 25119         | New           | Other systems analysts   |
| 75319         | 74329         | Other tailors, dressmakers, furriers and hatters                             |
| 53129         | New           | Other teachers aide  |
| 24339         | New           | Other technical and medical sales  |
| 21539         | New           | Other telecommunication engineers  |
| 35229         | New           | Other telecommunications engineering technicians                             |
| 42239         | New           | Other telephone switchboard operators  |
| 81599         | 82699         | Other textile and leather products machine operator not elsewhere classified |
| 81549         | 82649         | Other textile treating machine operators                                     |
| 75169         | 74159         | Other tobacco preparers and tobacco products makers                          |
| 72229         | 72229         | Other toolmakers and related workers   |
| 21649         | New           | Other town and traffic planners  |
| 11139         | New           | Other traditional chiefs and heads of village                                |
| 32309         | 32420         | Other traditional medicine practitioner                                      |
| 51129         | New           | Other transport conductors and related workers                               |



| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 21799         | New           | Other transport controllers  |
| 31599         | 31452         | Other transport technicians  |
| 51119         | New           | Other travel attendants and travel stewards                        |
| 42219         | New           | Other travel consultants and related clerks                        |
| 51139         | New           | Other travel guides  |
| 51639         | New           | Other undertakers and embalmers                                    |
| 75349         | 74349         | Other upholsterers and related workers                             |
| 96239         | 92049         | Other vending machine operators, meter readers and related workers |
| 22509         | New           | Other veterinarian   |
| 26519         | New           | Other visual artists   |
| 23209         | New           | Other vocational education teacher                                 |
| 51319         | New           | Other waiter and waitress  |
| 81529         | New           | Other weaving and knitting machine operators                       |
| 25139         | New           | Other web and multimedia developer                                 |
| 72129         | New           | Other welders and flame cutters                                    |
| 81729         | 81419         | Other wood processing plant operators                              |
| 81739         | 82409         | Other wood products machine operators                              |
| 75219         | 74219         | Other wood treaters  |
| 41319         | New           | Other word processor and related operators                         |
| 43239         | New           | Others transport clerks  |
| 72119         | New           | Others metal moulders and coremakers                               |
| 22129         | 22219         | Otolaryngologist   |
| 34238         | New           | Outdoor adventure guides   |
| 81227         | 82225         | Oxidizer   |
| <b>P</b>      |               |  |
| 81832         | New           | Packer   |
| 93211         | 93296         | Packer, hand   |
| 22129         | 22219         | Paediatrician  |
| 22129         | 22219         | Paediatrician, cardiology  |
| 22129         | 22219         | Paediatrician, gastroenterology                                    |
| 22129         | 22219         | Paediatrician, haematology   |
| 22129         | 22219         | Paediatrician, nephrology  |
| 22129         | 22219         | Paediatrician, neurology   |
| 22129         | 22219         | Paediatrician, oncology  |
| 22129         | 22219         | Paediatrician, respiratory   |
| 71311         | 71411         | Painter, building  |
| 73162         | 73239         | Painter, ceramics  |
| 73162         | 73239         | Painter, glass   |
| 71323         | 71423         | Painter, manufactured articles                                     |
| 71324         | 71424         | Painter, metal   |
| 71328         | 71412         | Painter, ship's hull   |
| 71312         | 71412         | Painter, structural steel  |
| 21149         | 21149         | Palaeontologist  |
| 51612         | 51502         | Palmist  |
| 72135         | 72135         | Panel beater, aircraft   |
| 72135         | 72135         | Panel beater, vehicle  |
| 96213         | New           | Paper searcher   |
| 22401         | New           | Paramedic, emergency   |
| 21313         | 22113         | Parasitologist   |
| 33437         | JPA           | Parliament herald N11  |
| 11111         | 11101         | Parliamentarian  |
| 34121         | 39305         | Parole officer, associate professional                             |
| 34343         | New           | Pastry chef  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 24222         | 24908         | Patent agent  |
| 21347         | 22127         | Pathologist   |
| 21347         | 22127         | Pathologist, animal                                     |
| 21347         | 22127         | Pathologist, clinical                                   |
| 21347         | 22127         | Pathologist, forensic                                   |
| 21347         | 22127         | Pathologist, histopathology                             |
| 21347         | 22127         | Pathologist, medical                                    |
| 21347         | 22127         | Pathologist, neuropathology                             |
| 21347         | 22127         | Pathologist, plant                                      |
| 21347         | 22127         | Pathologist, surgical                                   |
| 21347         | 22127         | Pathologist, veterinary                                 |
| 54123         | 51422         | Patrol, police  |
| 75321         | 74331         | Pattern-maker, garment                                  |
| 75326         | 74336         | Pattern-maker, gloves                                   |
| 75322         | 74332         | Pattern-maker, hat and cap                              |
| 75326         | 74336         | Pattern-maker, mattres                                  |
| 72222         | 72222         | Pattern-maker, metal foundry                            |
| 75326         | New           | Pattern-maker, paper                                    |
| 75326         | 74336         | Pattern-maker, sails                                    |
| 75334         | 74424         | Pattern-maker, shoe                                     |
| 75326         | 74336         | Pattern-maker, tents                                    |
| 75326         | 74336         | Pattern-maker, umbrella                                 |
| 75229         | 74229         | Pattern-maker, wood patterns                            |
| 71124         | 71214         | Paviour   |
| 42131         | 42131         | Pawnbroker  |
| 43132         | New           | Paymaster   |
| 62211         | 62111         | Pearl culturist   |
| 51424         | 51313         | Pedicurist  |
| 95202         | 91104         | Pedlar  |
| 95101         | New           | Pedlar, ice-cream                                       |
| 22612         | 22222         | Pedodontist   |
| 92161         | New           | Peeler, anchovy   |
| 62113         | 61418         | Peeler, log   |
| 75351         | 74410         | Pelt dressers, tanners and fellmonger                   |
| 73182         | New           | 'Pencanting, batik'                                     |
| 11131         | New           | Penggawa  |
| 11135         | JPA           | Penghulu NP27   |
| 26325         | 29245         | Penologist  |
| 26582         | 39553         | Performer/trainer in crocodile farm                     |
| 26581         | 39552         | Performer/trainer in zoological, bird and aquatic parks |
| 22615         | 22225         | Periodontist  |
| 21752         | 31129         | Permanent-way inspector, railways                       |
| 41203         | New           | Personal assistant                                      |
| 42266         | New           | Personnel, front office                                 |
| 44141         | 49001         | Petition writer   |
| 21144         | 21144         | Petrologist   |
| 02204         | New           | Petty Officer   |
| 73131         | 73131         | Pewtersmith   |
| 22621         | 22241         | Pharmacist  |
| 22624         | 22244         | Pharmacist, hospital                                    |
| 22622         | 22242         | Pharmacist, industrial                                  |
| 22623         | 22243         | Pharmacist, retail                                      |
| 21346         | 22126         | Pharmacologist, toxicology                              |
| 21346         | 22126         | Pharmacologist, veterinary                              |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                             |
|---------------|---------------|---------------------------------------|
| 21346         | 22126         | Pharmacologists                       |
| 26433         | 39403         | Philologist                           |
| 26331         | 29221         | Philosopher                           |
| 26331         | 29221         | Philosopher, political                |
| 81328         | New           | Photo finisher                        |
| 73244         | 73344         | Photo-engraver                        |
| 21658         | 21487         | Photogrammetrist                      |
| 34311         | 31311         | Photographer                          |
| 34316         | JPA           | Photographer B27                      |
| 34314         | 31314         | Photographer, aerial                  |
| 34312         | 31312         | Photographer, commercial illustration |
| 34315         | 31314         | Photographer, medical                 |
| 34315         | 31314         | Photographer, microphotography        |
| 34313         | 31313         | Photographer, news                    |
| 34313         | 31313         | Photographer, press                   |
| 34315         | 31314         | Photographer, scientific              |
| 34313         | New           | Photo-journalist                      |
| 22129         | 22211         | Physician                             |
| 22129         | 22216         | Physician, cardiology                 |
| 22129         | 22219         | Physician, dermatology                |
| 22129         | 22219         | Physician, endocrinology              |
| 22129         | 22219         | Physician, family medicine            |
| 22129         | 22219         | Physician, gastroenterology           |
| 22129         | 22219         | Physician, haematology                |
| 22129         | 22219         | Physician, internal medicine          |
| 22129         | 22219         | Physician, nephrology                 |
| 22129         | 22218         | Physician, neurology                  |
| 22129         | 22219         | Physician, respiratory medicine       |
| 22129         | 22219         | Physician, rheumatology               |
| 21111         | 21111         | Physicist                             |
| 21113         | 21113         | Physicist, acoustics                  |
| 21117         | 21117         | Physicist, astronomer                 |
| 21112         | 21112         | Physicist, ballistics                 |
| 21114         | 21114         | Physicist, electricity and magnetism  |
| 21115         | 21115         | Physicist, electronics                |
| 21113         | 21113         | Physicist, heat                       |
| 21112         | 21112         | Physicist, hydrodynamics              |
| 21113         | 21113         | Physicist, light                      |
| 21112         | 21112         | Physicist, mechanics                  |
| 21113         | New           | Physicist, medical                    |
| 21116         | 21116         | Physicist, nuclear/atomic/molecular   |
| 21119         | 21119         | Physicist, rheology                   |
| 21112         | 21112         | Physicist, solid-state                |
| 21113         | 21113         | Physicist, sound                      |
| 21111         | 21111         | Physicist, theoretical                |
| 21113         | 21113         | Physicist, thermodynamics             |
| 21345         | 22125         | Physiologist, animal                  |
| 21345         | 22125         | Physiologist, endocrinology           |
| 21345         | 22125         | Physiologist, epidemiology            |
| 21345         | 22125         | Physiologist, neurology               |
| 21345         | 22125         | Physiologist, plant                   |
| 21345         | 22125         | Physiologists                         |
| 22641         | 32261         | Physiotherapist                       |
| 32552         | JPA           | Physiotherapist U29                   |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 75115         | 74115         | Pickler, meat/fish                                      |
| 21731         | JPA           | Pilot A41   |
| 21732         | 31431         | Pilot, aircraft/airline                                 |
| 21732         | 31434         | Pilot, helicopter                                       |
| 21722         | 31422         | Pilot, hovercraft                                       |
| 21722         | 31422         | Pilot, ship   |
| 21313         | 22113         | Pisciculturist  |
| 33341         | New           | Planner, estate   |
| 24121         | New           | Planner, financial                                      |
| 21641         | 21412         | Planner, town   |
| 21642         | 21414         | Planner, traffic  |
| 21641         | 21412         | Planner, urban and rural                                |
| 71231         | 71331         | Plasterer   |
| 71233         | 71333         | Plasterer, fibrous                                      |
| 71234         | 71334         | Plasterer, ornamental                                   |
| 71232         | 71332         | Plasterer, stucco                                       |
| 72143         | 72143         | Plater, ship  |
| 26412         | 29312         | Playwright  |
| 71261         | 71361         | Plumber   |
| 81723         | 81413         | Plywood core layer                                      |
| 22129         | 32264         | Podiatrist  |
| 26412         | 29312         | Poet  |
| 83125         | 83129         | Pointsman, railway                                      |
| 73137         | 73137         | Polisher, gem   |
| 73155         | 73225         | Polisher, glass   |
| 72237         | 72237         | Polisher, metal   |
| 81849         | 81319         | Polisher, plate-glass                                   |
| 71138         | 71128         | Polisher, stone   |
| 75229         | 74229         | Polisher, wood  |
| 26422         | New           | Political editor  |
| 26333         | 29223         | Political scientist                                     |
| 21333         | 22133         | Pomologist  |
| 91122         | New           | Porter, hotel/bellman                                   |
| 96212         | 92012         | Porter, luggage/baggage (except hotel)                  |
| 93336         | 93417         | Porter, warehouse                                       |
| 44121         | 43001         | Postman   |
| 13244         | 12223         | Postmaster  |
| 73141         | 73211         | Potter  |
| 32302         | 32412         | Practitioner, Chinese traditional medicine              |
| 32303         | 32413         | Practitioner, Indian traditional medicine (ayurvedic)   |
| 32304         | 32414         | Practitioner, Indian traditional medicine (homeopathic) |
| 32301         | 32411         | Practitioner, Malay traditional medicine                |
| 34133         | 39603         | Preacher  |
| 01207         | New           | Prebet  |
| 72148         | 72148         | Preparer, structural metal                              |
| 33227         | New           | Pre-sales support                                       |
| 26563         | 39526         | Presentation support assistant                          |
| 75141         | 74131         | Preserver, fruit  |
| 81605         | 82758         | Preserver, sauces and condiments                        |
| 75142         | 74132         | Preserver, vegetable                                    |
| 11142         | 11421         | President, employers' organization                      |
| 11201         | 12101         | President, enterprise                                   |
| 11202         | 12102         | President, organization                                 |
| 11141         | 11410         | President, political party                              |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 26124         | 25024         | President/Chairman industrial court                   |
| 82195         | 82909         | Press operator, baling                                |
| 91214         | New           | Presser, hand   |
| 73145         | 73215         | Presser, pottery and porcelain                        |
| 81422         | 82322         | Press-machine operator, laminating/plastics           |
| 81435         | 82535         | Press-operator, cardboard                             |
| 81605         | 82752         | Press-operator, edible oils                           |
| 73225         | 73355         | Press-operator, embossing                             |
| 81313         | 81531         | Press-operator, filter/chemical and related processes |
| 81849         | 81395         | Press-operator, filtering/clay                        |
| 81605         | 82751         | Press-operator, fruit                                 |
| 82211         | 82111         | Press-operator, metal/except forging                  |
| 81413         | 82313         | Press-operator, moulding/rubber                       |
| 81724         | 81414         | Press-operator, plywood                               |
| 81911         | 82511         | Press-operator, printing/cylinder                     |
| 81915         | 82515         | Press-operator, printing/direct lithographic          |
| 81912         | 82512         | Press-operator, printing/offset                       |
| 81913         | 82513         | Press-operator, printing/rotary                       |
| 81914         | 82514         | Press-operator, printing/rotogravure                  |
| 81916         | 82516         | Press-operator, printing/wallpaper                    |
| 82211         | 82111         | Press-operator, punching/metal                        |
| 82211         | 82111         | Press-operator, stamping/metal                        |
| 26365         | 29406         | Priest, church  |
| 26366         | 29407         | Priest, temple  |
| 11112         | 11102         | Prime minister  |
| 13452         | 12102         | Principal, college                                    |
| 13452         | 12293         | Principal, school                                     |
| 13452         | 12102         | Principal, university                                 |
| 73212         | 73312         | Printer   |
| 73224         | 73354         | Printer, block  |
| 73222         | 73352         | Printer, silk-screen                                  |
| 73223         | 73353         | Printer, textile                                      |
| 81916         | 82516         | Printer, wallpaper                                    |
| 34121         | 39305         | Probation officer, associate professional             |
| 44123         | 43003         | Process server  |
| 26546         | JPA           | Producer B41  |
| 61235         | New           | Producer, marine product                              |
| 26541         | 12292         | Producer, motion picture                              |
| 26543         | 12292         | Producer, stage                                       |
| 26543         | 12292         | Producer, television                                  |
| 26543         | 12292         | Producer, theatre                                     |
| 23103         | 23103         | Professor, university/college                         |
| 26563         | 39527         | Programme preparer                                    |
| 25145         | 21325         | Programmer, analyst                                   |
| 25133         | New           | Programmer, animation/computer games/multimedia       |
| 25145         | 21325         | Programmer, applications                              |
| 25142         | 21322         | Programmer, communication                             |
| 25141         | 21321         | Programmer, computer                                  |
| 25143         | 21323         | Programmer, data-base                                 |
| 25141         | New           | Programmer, information technology                    |
| 25146         | 21326         | Programmer, multimedia                                |
| 25141         | New           | Programmer, software                                  |
| 25144         | 21324         | Programmer, systems                                   |
| 25141         | 21321         | Programmer, technical                                 |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                              |
|---------------|---------------|--|
| 35213         | 31328         | Projectionist, cinema                  |
| 33395         | 34205         | Promoter, sports                       |
| 26562         | 39522         | Prompter                               |
| 26416         | 29316         | Proofreader                            |
| 44131         | 49002         | Proof-reader, clerical                 |
| 26111         | 25012         | Prosecutor                             |
| 26112         | JPA           | Prosecutor L41                         |
| 22129         | New           | Prostheist                             |
| 22614         | 22224         | Prosthodontistry                       |
| 22124         | 22214         | Psychiatrist                           |
| 26341         | 29230         | Psychologists                          |
| 26342         | JPA           | Psychologists S41                      |
| 42272         | New           | Public opinion interviewer             |
| 26193         | 25093         | Public trustee                         |
| 44142         | 49001         | Public writer                          |
| 24322         | 24904         | Publicity agent                        |
| 31341         | 81551         | Pumpman (petroleum refining)           |
| 51111         | 51111         | Purser, ship                           |
| <b>Q</b>      |               |  |
| 75164         | 74154         | Quality checker, cigarette             |
| 82191         | 82901         | Quality checker/tester                 |
| 81112         | 71112         | Quarier                                |
| 83501         | 83404         | Quatermaster, ship                     |
| <b>R</b>      |               |  |
| 22129         | 22219         | Radiologist                            |
| 22129         | 22219         | Radiologist, diagnostic                |
| 22129         | 22219         | Radiologist, interventional            |
| 22129         | 22219         | Radiologist, nuclear medicine          |
| 22129         | 22219         | Radiologist, radiotherapy              |
| 83506         | 83405         | Ram controller                         |
| 62112         | 61417         | Ranger, forest                         |
| 62114         | JPA           | Ranger, forest G17                     |
| 81314         | 81542         | Reactor-convertor (chemical processes) |
| 33343         | 34143         | Realtor (property)                     |
| 02102         | New           | Rear Admiral, Navy                     |
| 42261         | 42222         | Receptionist                           |
| 42263         | 42225         | Receptionist, dental                   |
| 42265         | New           | Receptionist, front office             |
| 42241         | 42222         | Receptionist, hotel                    |
| 42262         | 42223         | Receptionist, medical                  |
| 42264         | New           | Receptionist, telephone                |
| 41324         | 41207         | Records custodian                      |
| 81511         | 82615         | Reeler, silk                           |
| 26192         | 25092         | Registrar of court                     |
| 24252         | 23994         | Registrar, college or university       |
| 11124         | 11201         | Registrar-general, government          |
| 54197         | JPA           | Rehabilitation workers N1              |
| 71141         | 71221         | Reinforced concrete worker             |
| 72342         | New           | Repairer, beca                         |
| 72341         | 82816         | Repairer, bicycle                      |
| 74211         | 72421         | Repairer, electronics                  |
| 75319         | 74399         | Repairer, fabrics/knitted              |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 75333         | 74423         | Repairer, footwear   |
| 73132         | 73132         | Repairer, jewellery  |
| 72234         | 72234         | Repairer, saw  |
| 26421         | 29315         | Reporter, news   |
| 33227         | 34201         | Representative, business services (except advertising)                 |
| 11123         | 11201         | Representative, diplomatic   |
| 33224         | 34156         | Representative, sales  |
| 33225         | 34152         | Representatives, technical sales                                       |
| 51694         | 51494         | Rescue diver   |
| 25147         | 21391         | Researcher, information technology                                     |
| 26514         | 29324         | Restorer painting  |
| 33221         | New           | Retailer   |
| 33153         | New           | Revenue Assessor   |
| 21119         | 21119         | Rheologist   |
| 83212         | 83212         | Rider, despatch  |
| 72157         | 72157         | Rigger, aircraft   |
| 72152         | 72152         | Rigger, hoisting equipment   |
| 72151         | 72151         | Rigger, hoisting equipment/construction                                |
| 72153         | 72153         | Rigger, logging  |
| 72155         | 72155         | Rigger, petroleum and gas well drilling                                |
| 72158         | 72158         | Rigger, railway cable  |
| 72154         | 72154         | Rigger, ship   |
| 72144         | 72144         | Riveter  |
| 81312         | 81522         | Roaster, chemical processes  |
| 73135         | 73135         | Roller, precious metal   |
| 52423         | 52109         | Rollerboy  |
| 81311         | 81513         | Roll-mill operator, chemical and related processes                     |
| 71213         | 71313         | Roofer, asphalt / asbestos   |
| 71212         | 71312         | Roofer, composition  |
| 71214         | 71314         | Roofer, metal / zinc   |
| 71215         | 71315         | Roofer, slate and tile   |
| 71216         | 71316         | Roofer, wood-shingle   |
| 91121         | 91221         | Room boy   |
| 81313         | 81533         | Rotary drum filterer   |
| 73163         | 73329         | Router, printing plate   |
| 93221         | 93211         | Rubber coagulator  |
| 93225         | 93215         | Rubber sheet clipper and sorter  |
| <b>S</b>      |               |  |
| 52422         | New           | Safety promoter  |
| 83503         | 83407         | Sailor   |
| 52233         | New           | Sales associate  |
| 33227         | New           | Sales engineer   |
| 52422         | New           | Sales promoter   |
| 24333         | New           | Sales representatives, active implantable devices                      |
| 24334         | New           | Sales representatives, anaesthetic and respiratory devices             |
| 24342         | New           | Sales representatives, computer  |
| 24335         | New           | Sales representatives, dental devices                                  |
| 24336         | New           | Sales representatives, electromechanical medical devices               |
| 24332         | New           | Sales representatives, hospital hardware                               |
| 24341         | New           | Sales representatives, information and communications technology (ICT) |
| 24331         | 34151         | Sales representatives, medical   |
| 24332         | New           | Sales representatives, medical devices                                 |
| 24337         | New           | Sales representatives, ophthalmic and optical devices                  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                  |
|---------------|---------------|--|
| 33226         | 34201         | Salesperson, business services/advertising |
| 33228         | New           | Salesperson, car                           |
| 52441         | New           | Salesperson, customer relation centre      |
| 52433         | New           | Salesperson, direct selling                |
| 52113         | 52201         | Salesperson, kiosk                         |
| 52112         | 52202         | Salesperson, market                        |
| 52431         | New           | Salesperson, marketing                     |
| 33228         | New           | Salesperson, motor vehicle                 |
| 33228         | New           | Salesperson, motorcycle                    |
| 52111         | 52204         | Salesperson, street stall                  |
| 33225         | 34152         | Salesperson, technical                     |
| 52432         | New           | Salesperson, traveling                     |
| 33225         | 34156         | Salesperson, traveling                     |
| 52232         | 52102         | Salesperson, wholesale and retail          |
| 75115         | 74115         | Salter, meat/fish                          |
| 81111         | 71114         | Sampler, mine                              |
| 81112         | 71115         | Sampler, quarry                            |
| 71332         | 71432         | Sandblaster, building exteriors            |
| 73162         | 73239         | Sandblaster, glass                         |
| 81224         | 82226         | Sandblaster, metal                         |
| 22631         | 32221         | Sanitarian                                 |
| 23931         | 23993         | Satellite-instruction facilitator          |
| 72234         | 72234         | Saw doctor                                 |
| 81732         | 82402         | Sawyer, precision wood                     |
| 81721         | 81411         | Sawyer, sawmill                            |
| 71132         | 71122         | Sawyer, stone                              |
| 81721         | 81411         | Sawyer, wood                               |
| 71193         | 71293         | Scaffolder                                 |
| 62111         | 61413         | Scaler, logging                            |
| 21332         | 22132         | Scientist, agricultural                    |
| 21335         | 22135         | Scientist, animal                          |
| 21332         | 22132         | Scientist, crop research                   |
| 21336         | 22136         | Scientist, environmental research          |
| 21334         | 22134         | Scientist, forestry                        |
| 21334         | 22134         | Scientist, soil                            |
| 96113         | New           | Scrap handler                              |
| 44143         | 49001         | Scribes                                    |
| 26511         | 29321         | Sculptor                                   |
| 75212         | 74212         | Seasoner, wood                             |
| 01109         | New           | Second Lieutenant, Army                    |
| 41201         | 41111         | Secretary                                  |
| 33431         | New           | Secretary, administrative                  |
| 41203         | New           | Secretary, admission                       |
| 33431         | 24902         | Secretary, company                         |
| 41201         | 41111         | Secretary, confidential                    |
| 11123         | 11201         | Secretary, embassy                         |
| 41205         | New           | Secretary, golf                            |
| 11121         | 11201         | Secretary, government/non-legislative      |
| 33421         | New           | Secretary, legal                           |
| 33441         | New           | Secretary, medical                         |
| 41204         | New           | Secretary, sales                           |
| 33491         | New           | Secretary, school                          |
| 41201         | 41111         | Secretary, stenography                     |
| 41201         | 41111         | Secretary, stenography/typing              |



| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 41201         | 41111         | Secretary, typing                                      |
| 41201         | 41111         | Secretary, word processing                             |
| 11145         | 11430         | Secretary-general, environment protection organization |
| 11121         | 11201         | Secretary-general, government                          |
| 11121         | 11201         | Secretary-general, government administration           |
| 11121         | 11201         | Secretary-general, government administration/deputy    |
| 11145         | 11430         | Secretary-general, human rights organization           |
| 11145         | 11430         | Secretary-general, humanitarian organization           |
| 11141         | 11410         | Secretary-general, political party                     |
| 11145         | 11430         | Secretary-general, Red Crescent Organization           |
| 11145         | 11430         | Secretary-general, Red Cross Organization              |
| 11145         | 11430         | Secretary-general, special-interest organization       |
| 11145         | 11430         | Secretary-general, wild life protection organization   |
| 54144         | JPA           | Security guard KP11                                    |
| 54145         | New           | Security guard, internal                               |
| 25291         | New           | Security specialist, ICT                               |
| 21123         | 21145         | Seismologist   |
| 11113         | 11103         | Senator  |
| 03206         | New           | Senior Aircraftman                                     |
| 24452         | JPA           | Senior officer, police (inspector) YY41                |
| 11142         | 11421         | Senior officials, employers' organization              |
| 11121         | 11201         | Senior officials, government                           |
| 11145         | 11430         | Senior officials, humanitarian organization            |
| 11144         | 11423         | Senior officials, other economic-interest organization |
| 11141         | 11410         | Senior officials, political party organization         |
| 11145         | 11430         | Senior officials, special-interest organization        |
| 11122         | 11201         | Senior officials, statutory board                      |
| 11143         | 11422         | Senior officials, trade union                          |
| 11143         | 11422         | Senior officials, workers' organization                |
| 83507         | 83409         | Serang A17   |
| 83509         | 83409         | Serang, ferry service                                  |
| 01204         | New           | Sergeant   |
| 03204         | New           | Sergeant Air Force                                     |
| 54143         | New           | Sergeant major, security                               |
| 21316         | 22116         | Serologist   |
| 74222         | 72432         | Servicer telephone and telegraph                       |
| 73134         | 73134         | Setter, gem  |
| 71222         | 71322         | Setter, marble   |
| 71221         | 71321         | Setter, tile   |
| 81729         | 81419         | Setter, veneer   |
| 75233         | New           | Setter, wood machine                                   |
| 82214         | 82114         | Setter-operator, boring and drilling machine           |
| 82215         | 82115         | Setter-operator, honing machine                        |
| 82212         | 82112         | Setter-operator, lathe                                 |
| 71132         | 71122         | Setter-operator, lathe/stone                           |
| 82211         | 82111         | Setter-operator, metalworking machine                  |
| 82216         | 82116         | Setter-operator, milling machine                       |
| 82217         | 82117         | Setter-operator, planning machine                      |
| 82213         | 82113         | Setter-operator, shaping machine                       |
| 75314         | 74391         | Sewer  |
| 51534         | 91312         | Sexton   |
| 72232         | 72232         | Sharpener, cutting instruments                         |
| 72233         | 72233         | Sharpener, machine tools                               |
| 72234         | 72234         | Sharpener, saw   |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                        |
|---------------|---------------|----------------------------------|
| 72131         | 72131         | Sheet metal worker               |
| 72135         | 72135         | Sheet metal worker, aircraft     |
| 72135         | 72135         | Sheet metal worker, ornamental   |
| 72135         | 72135         | Sheet metal worker, vehicle      |
| 93222         | 93212         | Sheet rubber maker               |
| 61213         | 92121         | Shepherd, buffalo / cow / sheep  |
| 21721         | 31421         | Ship captain/master              |
| 21724         | 31424         | Ship navigator                   |
| 62225         | New           | Ships crew                       |
| 72146         | 72146         | Shipwright, metal                |
| 71155         | 71235         | Shipwright, wood                 |
| 72336         | New           | Shipyards                        |
| 75331         | 74421         | Shoemaker                        |
| 52211         | 52101         | Shopkeeper                       |
| 75421         | 71113         | Shot firer                       |
| 83123         | 83123         | Shunter, railway                 |
| 71142         | 71222         | Shutterer, concrete              |
| 71142         | 71222         | Shutterer, concrete moulding     |
| 51534         | 91312         | Siak/nuja                        |
| 11132         | New           | Sidang                           |
| 83122         | 83122         | Signaller, railway               |
| 62113         | 61418         | Signalman, logging               |
| 71327         | 71427         | Signpainter                      |
| 73162         | 73239         | Silverer, mirror                 |
| 73131         | 73131         | Silversmith                      |
| 21334         | 22134         | Silviculturist                   |
| 26436         | JPA           | Simultaneous linguist N41        |
| 26524         | 29336         | Singer/vocalist                  |
| 32211         | 32311         | Sister                           |
| 31522         | 31428         | Skipper, yacht                   |
| 75111         | 74111         | Slaughterer                      |
| 73133         | 73133         | Slicer, gem                      |
| 93224         | 93214         | Smokehouse stoker                |
| 26575         | 39547         | Snake charmer                    |
| 26321         | 29241         | Social ecologist                 |
| 34121         | 39302         | Social welfare worker            |
| 34121         | 39302         | Social welfare worker, case work |
| 34121         | 39301         | Social worker                    |
| 34121         | 39302         | Social worker, child welfare     |
| 34121         | 39304         | Social worker, community         |
| 34121         | 39305         | Social worker, delinquency       |
| 34121         | 39301         | Social worker, group work        |
| 34121         | 39304         | Social worker, medical           |
| 26351         | 29250         | Social worker, professional      |
| 34121         | 39303         | Social worker, psychiatric       |
| 26321         | 29241         | Sociologist                      |
| 26321         | 29241         | Sociologist, social pathology    |
| 25121         | 21316         | Software developer               |
| 21334         | 22134         | Soil conservationist             |
| 72126         | 72125         | Solderer                         |
| 72124         | 72123         | Solderer, metal                  |
| 26111         | 25014         | Solicitor                        |
| 26113         | JPA           | Solicitor L41                    |
| 93292         | 93292         | Sorter                           |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 35212         | 31318         | Sound mixer                                      |
| 34343         | New           | Sous chef  |
| 11113         | 11103         | Speaker  |
| 22121         | 22219         | Specialist ear, nose and throat                  |
| 21663         | 21313         | Specialist graphics and sound/computer           |
| 23915         | 23913         | Specialist, audio-visual and other teaching aids |
| 23915         | 23913         | Specialist, audio-visual teaching                |
| 24211         | 24901         | Specialist, business efficiency                  |
| 42293         | New           | Specialist, eligibility                          |
| 22121         | 22215         | Specialist, eye                                  |
| 33591         | 31513         | Specialist, fire prevention                      |
| 22121         | 22216         | Specialist, heart                                |
| 24231         | 24301         | Specialist, personnel                            |
| 24211         | 24903         | Specialist, sales promotion method               |
| 23915         | 23913         | Specialist, teaching aids                        |
| 23915         | 23913         | Specialist, visual teaching aids                 |
| 96292         | JPA           | Specialized general worker R3                    |
| 81511         | 82611         | Spinner, thread and yarn                         |
| 72156         | 72156         | Splicer, rope and cable                          |
| 71131         | 71121         | Splitter, stone                                  |
| 34211         | 39561         | Sportsperson                                     |
| 71329         | New           | Spray painter                                    |
| 71322         | 71422         | Spray-painter, automobile                        |
| 71321         | 71421         | Spray-painter, metal                             |
| 01203         | New           | Staff sergeant                                   |
| 11113         | 11103         | State assemblyman                                |
| 31591         | 31451         | Station master                                   |
| 21203         | 21221         | Statistician                                     |
| 21204         | JPA           | Statistician E41                                 |
| 21209         | 21229         | Statistician, agricultural                       |
| 21203         | 21221         | Statistician, applied statistics                 |
| 21205         | 21223         | Statistician, biological                         |
| 21206         | 21224         | Statistician, business and economics             |
| 21209         | 21222         | Statistician, demography                         |
| 21206         | 21224         | Statistician, economics                          |
| 21207         | 21225         | Statistician, education                          |
| 21208         | 21226         | Statistician, engineering                        |
| 21206         | 21224         | Statistician, finance                            |
| 21205         | 21223         | Statistician, health                             |
| 21206         | 21224         | Statistician, market research                    |
| 21208         | 21227         | Statistician, mathematical                       |
| 21209         | 21229         | Statistician, opinion-polling                    |
| 21208         | 21226         | Statistician, science physics                    |
| 21207         | 21225         | Statistician, social science                     |
| 21203         | 21221         | Statistics, survey                               |
| 71143         | 71223         | Steel bender                                     |
| 71196         | 71297         | Steeplejack                                      |
| 41311         | 41121         | Stenographer                                     |
| 73163         | 73321         | Stereotyper                                      |
| 93331         | 93411         | Stevedore  |
| 51112         | New           | Steward, coordinator                             |
| 51115         | 51114         | Steward, flight                                  |
| 51113         | New           | Steward, floor                                   |
| 51521         | 51214         | Steward, floor/hotel and lodging                 |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 51517         | 51211         | Steward, house   |
| 51114         | 51113         | Steward, ship/mess/cabin                               |
| 51112         | New           | Steward, supervisor                                    |
| 51116         | 51115         | Steward, train   |
| 51115         | 51114         | Stewardess, flight                                     |
| 42226         | 42224         | Stewardess, floor                                      |
| 51114         | 51113         | Stewardess, ship/cabin                                 |
| 51114         | 51234         | Stewardess, ship/mess                                  |
| 51116         | 51115         | Stewardess, train                                      |
| 31342         | 81552         | Stillman (petroleum refining)                          |
| 71122         | 71212         | Stonemason, construction                               |
| 71135         | 71125         | Stonework layout man                                   |
| 96112         | 91412         | Stool carrier  |
| 93351         | New           | Store attendant  |
| 43211         | New           | Store hand   |
| 43211         | 41511         | Storekeeper  |
| 43211         | New           | Storekeeper, finished goods                            |
| 43211         | New           | Storekeeper, material                                  |
| 26552         | 29359         | Story teller   |
| 26552         | 29359         | Story teller, radio or television                      |
| 21149         | 21149         | Stratigraph  |
| 75169         | 74159         | Stripper, tobacco                                      |
| 72141         | 72141         | Structural steel worker, workshop                      |
| 24233         | 24304         | Student counselor, vocational                          |
| 02207         | New           | Sub Able Rate  |
| 43118         | JPA           | Sub assistant administrative, finance W17              |
| 43228         | JPA           | Sub assistant inspector, factory and machinery J17     |
| 53122         | JPA           | Sub assistant officer, training E17                    |
| 41206         | JPA           | Sub assistant secretary, office/ Secretary, office N27 |
| 54152         | JPA           | Sub assistant superintendent, custom W17               |
| 43116         | JPA           | Sub assistant, accountant W17                          |
| 61115         | JPA           | Sub assistant, agricultural G17                        |
| 43238         | JPA           | Sub assistant, air traffic control A17                 |
| 44194         | JPA           | Sub assistant, anti-drug S17                           |
| 43113         | JPA           | Sub assistant, appraiser W17                           |
| 44197         | JPA           | Sub assistant, archives S17                            |
| 43114         | JPA           | Sub assistant, auditor W17                             |
| 96298         | JPA           | Sub assistant, camera/driver N3                        |
| 54153         | JPA           | Sub assistant, civil defence KP17                      |
| 44193         | JPA           | Sub assistant, conservation S17                        |
| 43125         | JPA           | Sub assistant, economic affair E17                     |
| 54154         | JPA           | Sub assistant, enforcer N17                            |
| 43126         | JPA           | Sub assistant, evaluation W17                          |
| 81322         | JPA           | Sub assistant, film laboratory C17                     |
| 62224         | JPA           | Sub assistant, fishery G17                             |
| 31194         | JPA           | Sub assistant, geology C17                             |
| 44162         | JPA           | Sub assistant, industrial relation N17                 |
| 54195         | JPA           | Sub assistant, investigation KR17                      |
| 44191         | JPA           | Sub assistant, Islamic affairs S17                     |
| 54128         | JPA           | Sub assistant, Kesatria S17                            |
| 31118         | JPA           | Sub assistant, laboratory C17                          |
| 44195         | JPA           | Sub assistant, legal administrative L17                |
| 34111         | JPA           | Sub assistant, legal L29                               |
| 44114         | JPA           | Sub assistant, librarian S17                           |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                      |
|---------------|---------------|--|
| 32533         | JPA           | Sub assistant, medical U29                     |
| 31113         | JPA           | Sub assistant, meteorology C17                 |
| 31176         | JPA           | Sub assistant, mining C17                      |
| 44198         | JPA           | Sub assistant, museum S17                      |
| 53112         | New           | Sub assistant, nursery school                  |
| 54193         | JPA           | Sub assistant, park/estate G17                 |
| 32133         | JPA           | Sub assistant, pharmacist U29                  |
| 44161         | JPA           | Sub assistant, pupils management N17           |
| 44163         | JPA           | Sub assistant, registration KP17               |
| 41207         | JPA           | Sub assistant, reporter/Journalist S17         |
| 43127         | JPA           | Sub assistant, research Q17                    |
| 54142         | JPA           | Sub assistant, security KP17                   |
| 44164         | JPA           | Sub assistant, social development S17          |
| 44165         | JPA           | Sub assistant, social research N17             |
| 43124         | JPA           | Sub assistant, statistician E17                |
| 44196         | JPA           | Sub assistant, Syariah LS17                    |
| 32405         | JPA           | Sub assistant, veterinary G17                  |
| 23803         | JPA           | Sub assistant, vocational training J17         |
| 54198         | JPA           | Sub assistant, wildlife G17                    |
| 01207         | New           | Sub leutenant, Navy                            |
| 31196         | JPA           | Sub technical assistant surveyor, building J29 |
| 31193         | JPA           | Sub technical assistant surveyor, quantity J29 |
| 31157         | JPA           | Sub technical assistant, aircraft A29          |
| 31122         | JPA           | Sub technical assistant, architecture J29      |
| 31123         | JPA           | Sub technical assistant, civil J29             |
| 31135         | JPA           | Sub technical assistant, electrical J29        |
| 31143         | JPA           | Sub technical assistant, electronics J29       |
| 31152         | JPA           | Sub technical assistant, mechanical J29        |
| 31195         | JPA           | Sub technical assistant, surveyor J29          |
| 63201         | New           | Subsistence livestock farmers                  |
| 63301         | New           | Subsistence mixed crop and livestock farmers   |
| 81314         | 81599         | Sulphur burner                                 |
| 44123         | 43003         | Summon server                                  |
| 34115         | JPA           | Superintendent, water supply J17               |
| 24496         | JPA           | Superintendent officer, maritime X13           |
| 21827         | New           | Superintendent, boiler                         |
| 24411         | JPA           | Superintendent, customs W41                    |
| 24491         | JPA           | Superintendent, fireman KB41                   |
| 24412         | JPA           | Superintendent, immigration KP41               |
| 24451         | New           | Superintendent, police                         |
| 24493         | JPA           | Superintendent, prison KX41                    |
| 21826         | New           | Superintendent, sawmill                        |
| 21203         | New           | Superintendent, statistician                   |
| 31424         | New           | Superintendent/ground master                   |
| 33411         | New           | Supervisor, account                            |
| 33411         | New           | Supervisor, administrative                     |
| 51511         | 51214         | Supervisor, banquet/hotel & lodging            |
| 31227         | New           | Supervisor, boiler                             |
| 51522         | New           | Supervisor, camp                               |
| 31226         | New           | Supervisor, chief hookman                      |
| 33411         | New           | Supervisor, clerical                           |
| 34239         | New           | Supervisor, clubhouse                          |
| 31221         | New           | Supervisor, compounding                        |
| 31232         | New           | Supervisor, construction                       |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                    |
|---------------|---------------|--|
| 33121         | New           | Supervisor, credit                           |
| 42222         | New           | Supervisor, customer service                 |
| 31222         | New           | Supervisor, cutter                           |
| 33411         | New           | Supervisor, data entry                       |
| 31131         | New           | Supervisor, electrical                       |
| 31131         | New           | Supervisor, electrical and instrument        |
| 35111         | New           | Supervisor, Electronic Data Processing (EDP) |
| 31291         | New           | Supervisor, environmental                    |
| 61114         | New           | Supervisor, estate/plantation                |
| 31292         | New           | Supervisor, facilities                       |
| 33411         | New           | Supervisor, filling clerks                   |
| 33133         | New           | Supervisor, financial                        |
| 31222         | New           | Supervisor, finished goods                   |
| 31222         | New           | Supervisor, finishing                        |
| 51511         | 51214         | Supervisor, floor/hotel & lodging            |
| 51314         | New           | Supervisor, food and beverage                |
| 42266         | New           | Supervisor, front office                     |
| 31293         | New           | Supervisor, general                          |
| 31442         | New           | Supervisor, hatchery/prawn                   |
| 33411         | New           | Supervisor, hospital admitting clerks        |
| 51518         | JPA           | Supervisor, hostel N17                       |
| 51524         | New           | Supervisor, housekeeping                     |
| 33412         | New           | Supervisor, human resource                   |
| 43236         | JPA           | Supervisor, jetty N3                         |
| 41108         | JPA           | Supervisor, land planning G17                |
| 51512         | New           | Supervisor, laundry                          |
| 62113         | New           | Supervisor, log                              |
| 31294         | New           | Supervisor, logistic                         |
| 31532         | New           | Supervisor, LRT railway                      |
| 31223         | New           | Supervisor, maintenance                      |
| 41101         | New           | Supervisor, management information systems   |
| 31224         | New           | Supervisor, manufacturing                    |
| 33411         | New           | Supervisor, medical records unit             |
| 31211         | New           | Supervisor, mining                           |
| 31231         | New           | Supervisor, operation                        |
| 51314         | New           | Supervisor, outlet                           |
| 31222         | New           | Supervisor, packaging                        |
| 33412         | New           | Supervisor, personnel clerks                 |
| 31331         | New           | Supervisor, plant                            |
| 31225         | New           | Supervisor, plywood inspection               |
| 31224         | New           | Supervisor, production                       |
| 31231         | New           | Supervisor, project                          |
| 31228         | New           | Supervisor, quality control                  |
| 31531         | New           | Supervisor, railway services                 |
| 51532         | New           | Supervisor, recreation                       |
| 42243         | New           | Supervisor, reservation                      |
| 51314         | New           | Supervisor, restaurant                       |
| 31592         | 31452         | Supervisor, road transport service           |
| 52221         | 52101         | Supervisor, sales                            |
| 31225         | New           | Supervisor, sawmill                          |
| 31225         | New           | Supervisor, sawyer                           |
| 31224         | New           | Supervisor, shift                            |
| 31232         | New           | Supervisor, site                             |
| 31224         | New           | Supervisor, store                            |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                 |
|---------------|---------------|---|
| 51516         | JPA           | Supervisor, wardrobe N17                  |
| 22129         | 22212         | Surgeon                                   |
| 22129         | 22212         | Surgeon, cardiology                       |
| 22129         | 22212         | Surgeon, cardiothoracic                   |
| 22129         | 22212         | Surgeon, ear, nose and throat             |
| 22129         | 22212         | Surgeon, hepatic                          |
| 22129         | 22212         | Surgeon, neurosurgery                     |
| 22129         | 22212         | Surgeon, ophthalmology                    |
| 22616         | 22226         | Surgeon, oral/dentistry                   |
| 22129         | 22212         | Surgeon, orthopedic                       |
| 22129         | 22212         | Surgeon, osteopathic                      |
| 22129         | 22212         | Surgeon, paediatric                       |
| 22129         | 22212         | Surgeon, plastic and reconstructive       |
| 22129         | 22212         | Surgeon, thoracic                         |
| 22129         | 22212         | Surgeon, transplant                       |
| 22129         | 22212         | Surgeon, traumatology                     |
| 22129         | 22212         | Surgeon, urology                          |
| 22129         | 22212         | Surgeon, vascular                         |
| 22502         | 22232         | Surgeon, veterinary                       |
| 42273         | New           | Survey interviewer                        |
| 21652         | 21481         | Surveyor                                  |
| 21655         | JPA           | Surveyor J41                              |
| 21658         | 21486         | Surveyor, aerial                          |
| 21657         | JPA           | Surveyor, building J41                    |
| 21658         | 21489         | Surveyor, cadastral                       |
| 21658         | 21489         | Surveyor, geodesic                        |
| 21658         | 21485         | Surveyor, hydrographic                    |
| 21658         | 21485         | Surveyor, marine                          |
| 21653         | 21484         | Surveyor, mine                            |
| 21658         | 21487         | Surveyor, photographic                    |
| 21652         | 21497         | Surveyor, quantity                        |
| 21656         | JPA           | Surveyor, quantity J41                    |
| 21653         | 21483         | Surveyor, soil                            |
| 21653         | 21483         | Surveyor, topographic                     |
| 96132         | 91422         | Sweeper, park                             |
| 96131         | 91421         | Sweeper, road                             |
| 91295         | New           | Swimming pool cleaner                     |
| 42232         | 42232         | Switchboard-operator, telephone           |
| <b>T</b>      |               |   |
| 75311         | 74321         | Tailor                                    |
| 92112         | New           | Tapper, plantation                        |
| 75157         | 74147         | Taster, juice                             |
| 26516         | 39516         | Tattooist                                 |
| 24114         | 24104         | Tax consultant                            |
| 31416         | 32116         | Taxidermist                               |
| 21311         | 22111         | Taxonomist                                |
| 21313         | 22113         | Taxonomist, animals                       |
| 21312         | 22112         | Taxonomist, plant                         |
| 91125         | New           | Tea lady                                  |
| 23601         | 23991         | Teacher for the exceptionally intelligent |
| 23914         | 33901         | Teacher, adult education                  |
| 23202         | 23203         | Teacher, commercial                       |
| 23913         | 33905         | Teacher, correspondence                   |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 23521         | 33902         | Teacher, fine arts  |
| 23912         | 33903         | Teacher, home economics                                   |
| 23701         | 33907         | Teacher, Islamic religion                                 |
| 23421         | 33200         | Teacher, kindergarten                                     |
| 23601         | New           | Teacher, language   |
| 23531         | 33904         | Teacher, modeling   |
| 23511         | New           | Teacher, music  |
| 23421         | 33200         | Teacher, nursery  |
| 23421         | 33200         | Teacher, pre-primary                                      |
| 23302         | 23201         | Teacher, pre-university                                   |
| 23411         | 33100         | Teacher, primary education                                |
| 23602         | 23992         | Teacher, remedial/professional                            |
| 23301         | 23202         | Teacher, secondary education                              |
| 23923         | 23303         | Teacher, special education/for the blind                  |
| 23921         | 23301         | Teacher, special education/for the deaf                   |
| 23922         | 23302         | Teacher, special education/for the dumb                   |
| 23924         | 23304         | Teacher, special education/for the mentally handicapped   |
| 23925         | 23305         | Teacher, special education/for the physically handicapped |
| 23201         | 23201         | Teacher, technical  |
| 23201         | 23203         | Teacher, vocational                                       |
| 53121         | New           | Teachers aide   |
| 34223         | 39563         | Team manager, sports/games                                |
| 31131         | 31131         | Technical assistant, electrical                           |
| 31191         | 31123         | Technical assistant, surveyor                             |
| 31424         | New           | Technical, turf/golf                                      |
| 31421         | 32121         | Technician, agronomy                                      |
| 31511         | 31493         | Technician, air traffic safety                            |
| 32121         | 32111         | Technician, anatomy                                       |
| 31431         | 32122         | Technician, arboriculture                                 |
| 31125         | JPA           | Technician, architecture J17                              |
| 31414         | 32114         | Technician, artificial breeding                           |
| 31119         | 31119         | Technician, astronomy                                     |
| 35216         | 31145         | Technician, audio and video equipment                     |
| 81324         | JPA           | Technician, audio-visual N17                              |
| 31191         | 31192         | Technician, automation/robot                              |
| 32121         | 32111         | Technician, bacteriology                                  |
| 32121         | 32111         | Technician, biochemistry                                  |
| 31411         | 32111         | Technician, biological                                    |
| 32121         | 32111         | Technician, biophysics                                    |
| 32121         | 32111         | Technician, blood-bank                                    |
| 31413         | 32113         | Technician, botanical                                     |
| 35216         | New           | Technician, broadcast                                     |
| 31191         | 31191         | Technician, CAD/CAM                                       |
| 31111         | 31112         | Technician, chemistry                                     |
| 31124         | JPA           | Technician, civil J17                                     |
| 35111         | 31143         | Technician, computer                                      |
| 35114         | JPA           | Technician, computer FT17                                 |
| 35131         | New           | Technician, computer network                              |
| 31422         | 32121         | Technician, crop research                                 |
| 31222         | New           | Technician, cutting                                       |
| 32121         | 32111         | Technician, cytology                                      |
| 31181         | 31181         | Technician, draughting                                    |
| 32121         | 32111         | Technician, ecology                                       |
| 31136         | JPA           | Technician, electrical J17                                |



| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE   |
|---------------|---------------|---|
| 31144         | JPA           | Technician, electronics J17   |
| 31525         | New           | Technician, engine (boat)   |
| 31151         | 31154         | Technician, engineering/aeronautical (mechanical)                               |
| 31151         | 31154         | Technician, engineering/aerospace (mechanical)                                  |
| 35221         | 31142         | Technician, engineering/aerospace (telecommunication)                           |
| 31151         | 31153         | Technician, engineering/automobile  |
| 31161         | 31161         | Technician, engineering/chemical  |
| 31162         | 31162         | Technician, engineering/chemical (petroleum)                                    |
| 31121         | 31121         | Technician, engineering/civil   |
| 31131         | 31131         | Technician, engineering/electrical  |
| 31133         | 31133         | Technician, engineering/electrical (electric power transmission)                |
| 31132         | 31132         | Technician, engineering/electrical (high voltage)                               |
| 31141         | 31141         | Technician, engineering/electronics   |
| 31191         | 31195         | Technician, engineering/industrial efficiency                                   |
| 31191         | 31195         | Technician, engineering/industrial layout                                       |
| 31155         | 31156         | Technician, engineering/marine  |
| 31151         | 31151         | Technician, engineering/mechanical  |
| 31151         | 31151         | Technician, engineering/mechanical (agriculture)                                |
| 31151         | 31151         | Technician, engineering/mechanical (industrial machinery and tools)             |
| 31151         | 31151         | Technician, engineering/mechanical (instruments)                                |
| 31151         | 31151         | Technician, engineering/mechanical (lubrication)                                |
| 31151         | 31152         | Technician, engineering/mechanical (motors and engines)                         |
| 31156         | 31156         | Technician, engineering/mechanical (ship construction)                          |
| 31191         | 31195         | Technician, engineering/methods   |
| 31173         | 31173         | Technician, engineering/mining  |
| 31162         | 31162         | Technician, engineering/petroleum   |
| 31191         | 31195         | Technician, engineering/planning  |
| 31161         | 31161         | Technician, engineering/process   |
| 31191         | 31195         | Technician, engineering/production  |
| 31151         | 31155         | Technician, engineering/refrigeration and air-conditioning system and equipment |
| 31191         | 31197         | Technician, engineering/safety  |
| 31191         | 31195         | Technician, engineering/systems (except computers)                              |
| 35221         | 31142         | Technician, engineering/telecommunications                                      |
| 31191         | 31195         | Technician, engineering/time and motion study                                   |
| 31191         | 31196         | Technician, engineering/value   |
| 31191         | 31195         | Technician, engineering/work study  |
| 31412         | 32112         | Technician, entomological   |
| 31424         | 32124         | Technician, floriculture  |
| 31393         | New           | Technician, food processing   |
| 31431         | 32122         | Technician, forestry  |
| 32121         | 32111         | Technician, genetics  |
| 31116         | 31116         | Technician, geological  |
| 31111         | 31113         | Technician, geophysics  |
| 32121         | 32111         | Technician, haematology   |
| 31442         | New           | Technician, hatchery/prawn  |
| 32571         | New           | Technician, health and safety   |
| 35121         | 31201         | Technician, help desk   |
| 32121         | 32111         | Technician, histology   |
| 31424         | 32124         | Technician, horticulture  |
| 31158         | New           | Technician, hydraulic hose  |
| 31121         | New           | Technician, industrial instrument   |
| 35113         | New           | Technician, information systems   |
| 35121         | 31201         | Technician, information technology  |
| 31111         | 31112         | Technician, laboratory (science physics)  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE  |
|---------------|---------------|--|
| 31183         | JPA           | Technician, landscape J17                        |
| 31225         | New           | Technician, log yard                             |
| 31223         | New           | Technician, maintenance                          |
| 31224         | New           | Technician, material store                       |
| 31153         | JPA           | Technician, mechanical J17                       |
| 31191         | 31193         | Technician, mechatronics                         |
| 32521         | New           | Technician, medical record                       |
| 32122         | 32111         | Technician, medical science                      |
| 32125         | JPA           | Technician, medical U19                          |
| 31171         | 31171         | Technician, metallurgy                           |
| 31172         | 31172         | Technician, metallurgy/assaying                  |
| 31171         | 31171         | Technician, metallurgy/extractive                |
| 31172         | 31172         | Technician, metallurgy/foundry                   |
| 31172         | 31172         | Technician, metallurgy/physics                   |
| 31172         | 31172         | Technician, metallurgy/radioactive minerals      |
| 31115         | 31115         | Technician, meteorological                       |
| 35131         | 31202         | Technician, network support                      |
| 31119         | 31119         | Technician, oceanography                         |
| 31424         | 32124         | Technician, olericulture                         |
| 32152         | 32291         | Technician, orthopedic                           |
| 32122         | 32111         | Technician, pathology                            |
| 35121         | 31201         | Technician, personal computer support            |
| 31174         | 31174         | Technician, petroleum and natural gas extraction |
| 31162         | 31162         | Technician, petroleum refining                   |
| 32121         | 32111         | Technician, pharmacology                         |
| 31111         | 31113         | Technician, physics                              |
| 32122         | 32111         | Technician, physiology                           |
| 31424         | New           | Technician, plant nursery                        |
| 31424         | 32124         | Technician, pomology                             |
| 32152         | 32291         | Technician, prosthetic                           |
| 31228         | New           | Technician, quality control                      |
| 31191         | 31194         | Technician, quantity surveyor                    |
| 31197         | JPA           | Technician, quantity surveyor J17                |
| 31151         | New           | Technician, rotary                               |
| 31111         | 31113         | Technician, science physics                      |
| 35112         | 31145         | Technician, semi-conductor                       |
| 32122         | 32111         | Technician, serology                             |
| 31174         | 31174         | Technician, shoot, oil and gas wells             |
| 31431         | 32122         | Technician, silviculture                         |
| 31114         | 31114         | Technician, soil                                 |
| 31423         | 32123         | Technician, soil science                         |
| 35212         | 31318         | Technician, sound-effects                        |
| 31198         | JPA           | Technician, surveyor J17                         |
| 31158         | 31158         | Technician, test                                 |
| 32122         | 32111         | Technician, tissue                               |
| 31188         | JPA           | Technician, urban and rural planning J17         |
| 31224         | New           | Technician, warehouse                            |
| 35141         | New           | Technician, website                              |
| 31131         | New           | Technician, wire cutting                         |
| 32111         | JPA           | Technician, x-ray U29                            |
| 31415         | 32115         | Technician, zoological                           |
| 21456         | 21466         | Technologist, alcohol                            |
| 21456         | 21466         | Technologist, brewing                            |
| 21422         | 21422         | Technologist, building materials                 |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                     |
|---------------|---------------|---|
| 21416         | 21496         | Technologist, cement                          |
| 21416         | 21496         | Technologist, ceramics                        |
| 21451         | 21461         | Technologist, chemical process                |
| 32141         | JPA           | Technologist, dental U29                      |
| 21421         | 21421         | Technologist, engineering civil               |
| 21532         | 21442         | Technologist, engineering, telecommunications |
| 21451         | 21461         | Technologist, engineering/chemical            |
| 21511         | 21431         | Technologist, engineering/electrical          |
| 21521         | 21441         | Technologist, engineering/electronics         |
| 21441         | 21451         | Technologist, engineering/mechanical          |
| 21465         | 21474         | Technologist, extractive                      |
| 21457         | 21467         | Technologist, fiber                           |
| 21456         | 21466         | Technologist, food and drinks                 |
| 21452         | 21462         | Technologist, fuel                            |
| 21416         | 21496         | Technologist, glass                           |
| 21416         | 21496         | Technologist, leather                         |
| 32124         | JPA           | Technologist, medical laboratoryU29           |
| 31162         | 31162         | Technologist, oil                             |
| 21416         | 21496         | Technologist, packaging                       |
| 21453         | 21463         | Technologist, paint                           |
| 21458         | 21468         | Technologist, paper                           |
| 21457         | 21467         | Technologist, plastics                        |
| 21457         | 21467         | Technologist, polymer                         |
| 21416         | 21496         | Technologist, printing                        |
| 21458         | 21468         | Technologist, rubber                          |
| 21416         | 21496         | Technologist, textile                         |
| 21458         | 21468         | Technologist, tire                            |
| 21449         | 21459         | Technologist, welding                         |
| 21417         | 21498         | Technologist, wood                            |
| 42233         | 42239         | Telecommunication service operator            |
| 52422         | 52104         | Telemarketer                                  |
| 42224         | New           | Telemarketer, salesperson                     |
| 74221         | 72431         | Telephone wireman                             |
| 42231         | 42231         | Telephonist                                   |
| 41311         | 41123         | Tele-typist                                   |
| 81845         | 81315         | Temperer, glass                               |
| 81215         | 81233         | Temperer, metal                               |
| 33566         | New           | Territorial army                              |
| 25192         | New           | Tester, software                              |
| 25193         | New           | Tester, systems                               |
| 71211         | 71311         | Thatcher / nipah / sagu                       |
| 22642         | New           | Therapist, masclar                            |
| 22642         | New           | Therapist, massage                            |
| 22681         | 32262         | Therapist, occupational                       |
| 22662         | 32293         | Therapist, orientation of the blind           |
| 22642         | 32261         | Therapist, physical                           |
| 22662         | 32293         | Therapist, speech                             |
| 21112         | 21112         | Thermodynamics                                |
| 73145         | 73215         | Thrower, pottery and porcelain                |
| 81119         | 71119         | Timberman, underground                        |
| 11134         | New           | Tok Batin                                     |
| 72215         | 72215         | Toolsmith                                     |
| 21346         | 22126         | Toxicologist                                  |
| 31181         | 31181         | Tracer  |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                        |
|---------------|---------------|----------------------------------|
| 73226         | 73356         | Tracer, textile design           |
| 93135         | 93325         | Trackman, railway                |
| 71263         | JPA           | Tradesman K1 R17                 |
| 71264         | JPA           | Tradesman K2 R11                 |
| 71265         | JPA           | Tradesman K3 R9                  |
| 54123         | New           | Traffic controller               |
| 31523         | 31453         | Traffic supervisor (ships cargo) |
| 26583         | 39559         | Trainer, dog                     |
| 26584         | 39559         | Trainer, horse                   |
| 23805         | New           | Trainer, skill training          |
| 26431         | 39401         | Translator                       |
| 62242         | 62210         | Trapper                          |
| 31174         | 31174         | Treater, well acidising          |
| 75211         | 74211         | Treater, wood                    |
| 11133         | New           | Tribe leader (Ketua anak negeri) |
| 93311         | 93420         | Trishaw pedaller                 |
| 96299         | New           | Trolley boy                      |
| 11134         | New           | Tuai rumah                       |
| 73121         | 73121         | Turner, musical instrument       |
| 73145         | 73215         | Turner, pottery and porcelain    |
| 75229         | 74229         | Turner, wood (hand)              |
| 81733         | 82403         | Turner, wood (machine)           |
| 23104         | 23104         | Tutor, university                |
| 73213         | 73313         | Typesetter                       |
| 41311         | 41122         | Typist                           |
| 41311         | 41121         | Typist, audio                    |
| 41311         | 41121         | Typist, shorthand                |
| 41311         | 41121         | Typist, statistical              |
| 41311         | 41121         | Typist, stenography              |
| 81416         | 82317         | Tyre retreader                   |
| <b>U</b>      |               |                                  |
| 34221         | 39562         | Umpire                           |
| 51631         | 51322         | Undertaker                       |
| 33213         | 34133         | Underwriter, insurance           |
| 75347         | 74347         | Upholsterer, aircraft            |
| 75341         | 74341         | Upholsterer, furniture           |
| 75348         | 74348         | Upholsterer, railway carriage    |
| 75342         | 74342         | Upholsterer, vehicle             |
| 22129         | 22219         | Urologist                        |
| 23701         | 33907         | Ustaz/Ustazah                    |
| <b>V</b>      |               |                                  |
| 61224         | 61354         | Vaccinator, poultry              |
| 32403         | 32273         | Vaccinator, veterinary           |
| 51622         | New           | Valet/ Personal maid             |
| 33153         | 34172         | Valuer                           |
| 81717         | 81427         | Valve operator, paper pulp       |
| 71325         | 71425         | Varnisher, manufactured articles |
| 71326         | 71426         | Varnisher, metal                 |
| 92114         | 61316         | Vegetable workers, bean sprout   |
| 95201         | 91102         | Vendor, newspapers               |
| 52121         | 91101         | Vendor, refreshments theatre     |
| 52122         | 91101         | Vendor, street/food              |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                                    |
|---------------|---------------|--|
| 95201         | 91102         | Vendor, street/non-food products             |
| 75227         | 74227         | Veneer applier                               |
| 22129         | 22219         | Venereologist                                |
| 26574         | 39544         | Ventriloquist                                |
| 33431         | New           | Verbatim reporter                            |
| 41202         | 41111         | Verbatim/hansard reporter                    |
| 26412         | 29312         | Versifier                                    |
| 22501         | 22231         | Veterinarian                                 |
| 22503         | 22233         | Veterinarian, abattoir (government services) |
| 22501         | 22231         | Veterinarian, epidemiology                   |
| 22503         | 22233         | Veterinarian, public health                  |
| 22502         | 22232         | Veterinarian, surgery                        |
| 02101         | New           | Vice Admiral                                 |
| 13452         | 12102         | Vice Chancellor, university                  |
| 32307         | New           | Village healer                               |
| 21316         | 22116         | Virologist                                   |
| 34322         | 39512         | Visual merchandiser                          |
| 54123         | New           | Volunteer, police                            |
| <b>W</b>      |               |  |
| 51311         | 51231         | Waiter                                       |
| 51313         | New           | Waiter and waitress, food and beverage       |
| 51314         | New           | Waiter, banquet                              |
| 51311         | 51233         | Waiter, head                                 |
| 51311         | 51235         | Waiter, railway dining car                   |
| 51312         | 51231         | Waitress                                     |
| 51312         | 51233         | Waitress, head                               |
| 51312         | 51235         | Waitress, railway dining car                 |
| 71313         | 71413         | Wall/ceiling paperhanger                     |
| 54192         | New           | Warden park, animal/recreation               |
| 51522         | 51215         | Warden, camp                                 |
| 51522         | 51215         | Warden, dormitory                            |
| 51522         | 51215         | Warden, hostel                               |
| 54132         | 51430         | Warden, prison                               |
| 54124         | 51429         | Warden, traffic                              |
| 54192         | 51492         | Warden, wild life                            |
| 01201         | New           | Warrant officer 1, Army                      |
| 01202         | New           | Warrant officer 2, Army                      |
| 03201         | New           | Warrant Officer Air Force I                  |
| 03202         | New           | Warrant Officer Air Force II                 |
| 02201         | New           | Warrant Officer I, Navy                      |
| 02202         | New           | Warrant Officer II, Navy                     |
| 91123         | 91223         | Washer, hand/dish                            |
| 93295         | 93297         | Washer, hand/manufacturing                   |
| 91222         | 91322         | Washer, hand/vehicle                         |
| 54147         | 92031         | Watchman                                     |
| 73181         | New           | Weaver, 'songket'                            |
| 75319         | 74399         | Weaver, hand/cloth                           |
| 73176         | 74233         | Weaver, mat                                  |
| 35141         | New           | Webmaster                                    |
| 75129         | 74129         | Weigher, ingredients                         |
| 72121         | 72121         | Welder                                       |
| 72127         | New           | Welder, tig                                  |
| 34121         | 39302         | Welfare officer, industry                    |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                         |
|---------------|---------------|-----------------------------------|
| 34121         | 39305         | Welfare officer, probation        |
| 34121         | 39302         | Welfare organizer, women          |
| 43235         | 44005         | Wharfinger                        |
| 71314         | 71414         | Whitewasher                       |
| 14202         | 13041         | Wholesaler                        |
| 83426         | 83326         | Winchman, dredging                |
| 93293         | 93293         | Winder, coil/hand                 |
| 81511         | 82612         | Winder, thread and yarn           |
| 74123         | New           | Wireman                           |
| 21334         | 22134         | Wood analyst                      |
| 21334         | 22134         | Wood anatomist                    |
| 91224         | New           | Worker, auto sanding              |
| 61294         | 61361         | Worker, bee keeping               |
| 71125         | New           | Worker, brickwork                 |
| 71191         | 71291         | Worker, building maintenance      |
| 53111         | 51391         | Worker, child care                |
| 73245         | 73345         | Worker, darkroom                  |
| 71194         | 71294         | Worker, demolition                |
| 92112         | New           | Worker, estate/plantation         |
| 92111         | 93111         | Worker, farm                      |
| 62113         | 61418         | Worker, forestry (skilled)        |
| 96111         | 91411         | Worker, garbage disposal          |
| 92145         | 93125         | Worker, golf course               |
| 92144         | 93124         | Worker, ground maintenance        |
| 93227         | 93217         | Worker, heavecrumb process        |
| 53215         | New           | Worker, hospital                  |
| 51524         | New           | Worker, housekeeping              |
| 51524         | New           | Worker, housekeeping room         |
| 61131         | New           | Worker, hydroponics               |
| 96295         | New           | Worker, inflatable                |
| 71143         | 71223         | Worker, iron reinforcing          |
| 74223         | New           | Worker, IT support                |
| 96294         | New           | Worker, kindergarten              |
| 92129         | New           | Worker, livestock farm            |
| 93132         | New           | Worker, maintenance               |
| 92113         | New           | Worker, manuring                  |
| 81123         | 81123         | Worker, minerals floatation       |
| 53114         | New           | Worker, nursery                   |
| 71223         | 71323         | Worker, parquetry                 |
| 41101         | New           | Worker, politic                   |
| 51524         | New           | Worker, public area housekeeping  |
| 96296         | New           | Worker, sawing                    |
| 61293         | 61362         | Worker, sericulture               |
| 75315         | New           | Worker, sewing                    |
| 96293         | New           | Worker, site general              |
| 81129         | New           | Worker, stone                     |
| 93353         | New           | Worker, store                     |
| 91292         | New           | Worker, sundries                  |
| 91291         | New           | Worker, sundries and toiletries   |
| 93111         | 93311         | Worker, tin mine                  |
| 75411         | 72160         | Worker, underwater                |
| 92114         | 61313         | Worker, vegetables                |
| 93354         | New           | Worker, warehouse                 |
| 91211         | 91230         | Workers, laundry and dry cleaning |

| MASCO<br>2008 | MASCO<br>1998 | JOB TITLE                         |
|---------------|---------------|-----------------------------------|
| 72316         | New           | Workshop, assistant               |
| 72317         | New           | Workshop, maintenance worker      |
| 81523         | 82621         | Wrinkle machine operator, textile |
| 26412         | 29312         | Writer, comedy                    |
| 26414         | 29314         | Writer, fiction                   |
| 26414         | 29314         | Writer, publicity                 |
| 26414         | 29314         | Writer, script                    |
| 26414         | 29314         | Writer, song                      |
| 26414         | 29314         | Writer, technical                 |
| <b>Y</b>      |               |                                   |
| 83124         | 83124         | Yardman                           |
| 43232         | 44002         | Yardmaster railway                |
| 81314         | 81596         | Yarn maker, synthetic             |
| <b>Z</b>      |               |                                   |
| 21313         | 22113         | Zoologist                         |
| 21315         | 22115         | Zoologist, ecology                |
| 21313         | 22113         | Zoologist, embryology             |
| 21313         | 22113         | Zoologist, entomology             |
| 21313         | 22113         | Zoologist, histology              |
| 21313         | 22113         | Zoologist, ichthyology            |
| 21313         | 22113         | Zoologist, mammalogy              |
| 21313         | 22113         | Zoologist, ornithology            |
| 21313         | 22113         | Zoologist, parasitology           |
| 21313         | 22113         | Zoologist, pisciculture           |
| 21313         | 22113         | Zoologist, taxonomy               |

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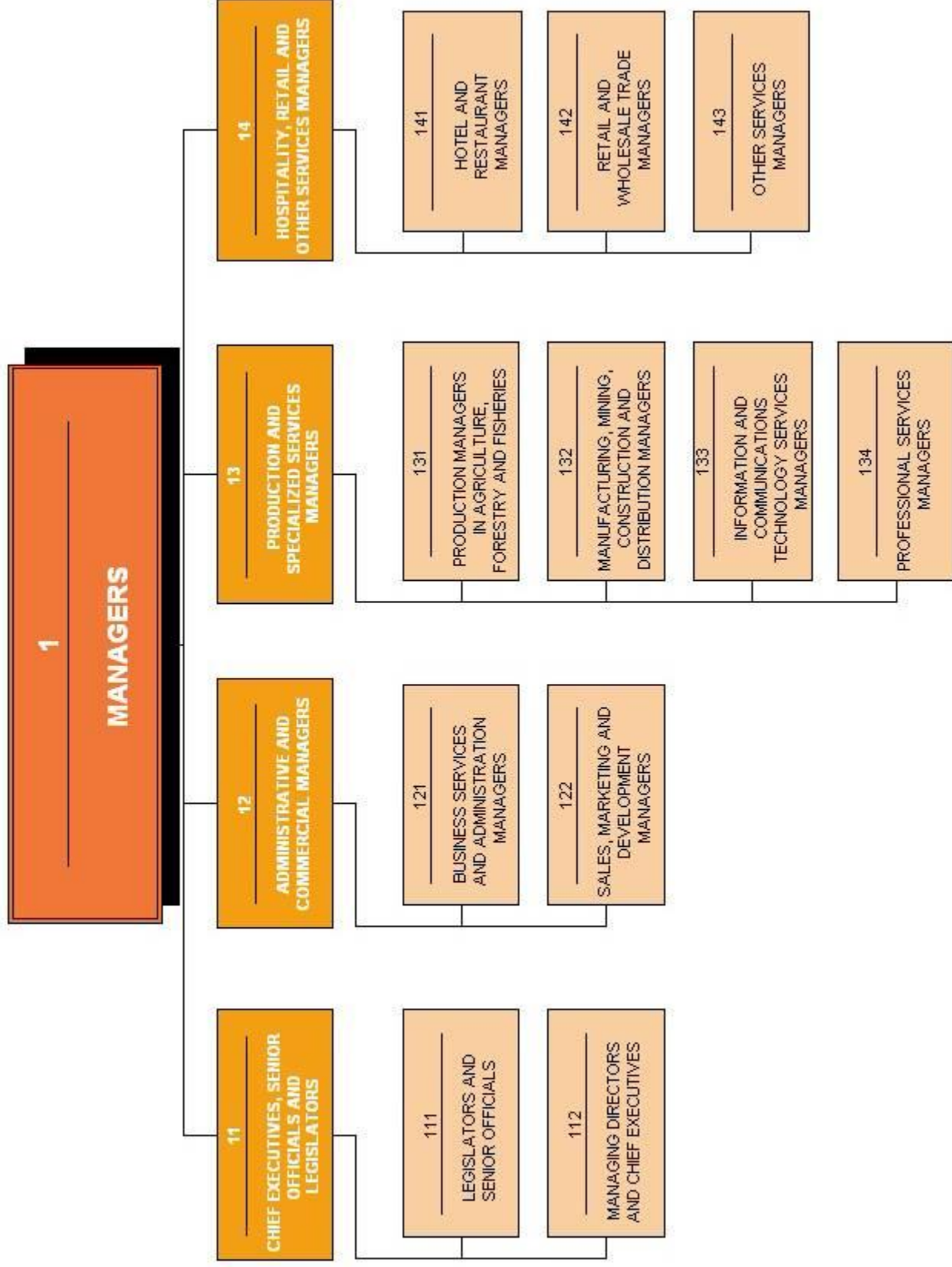
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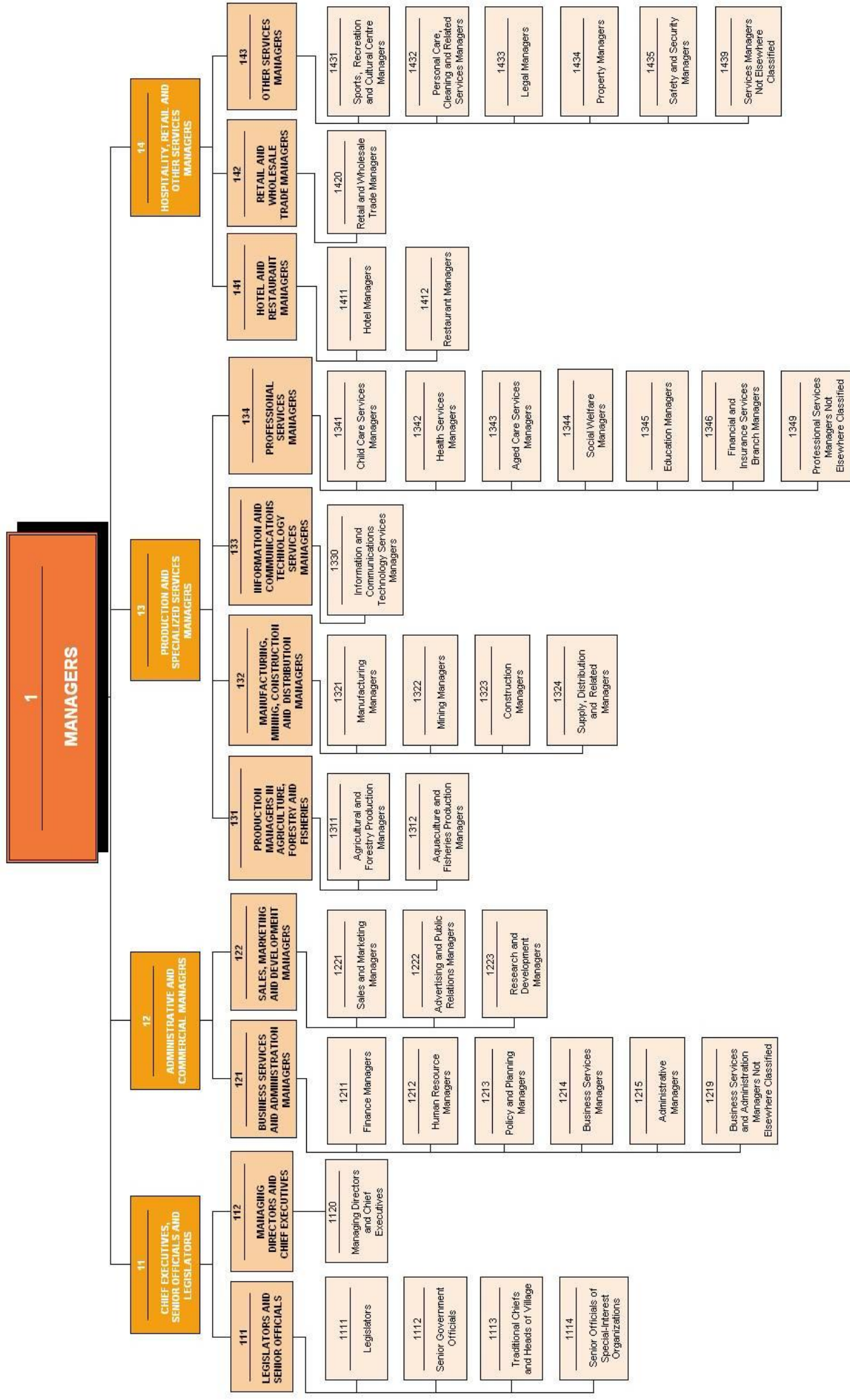
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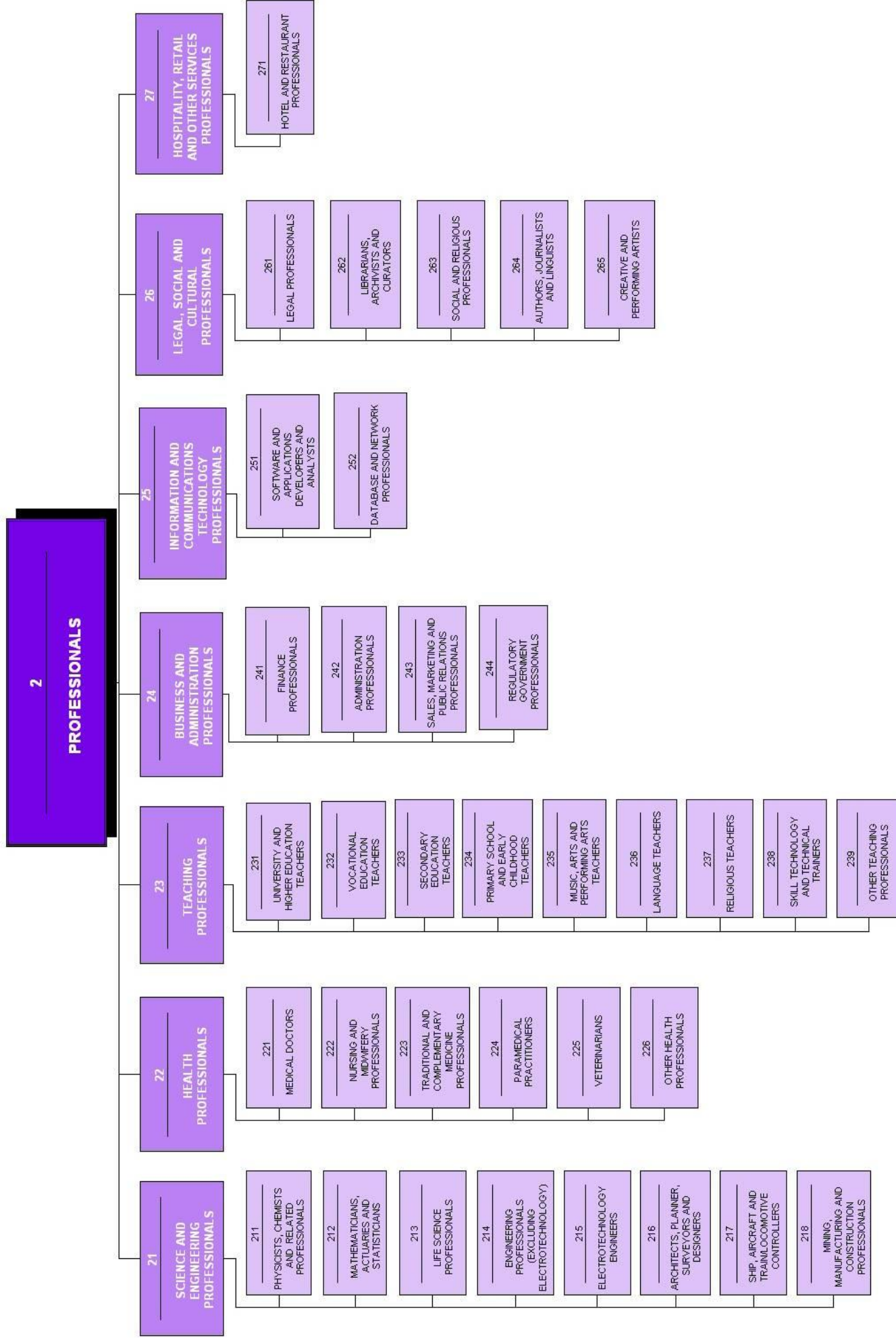
# MAJOR GROUP 1 MANAGERS



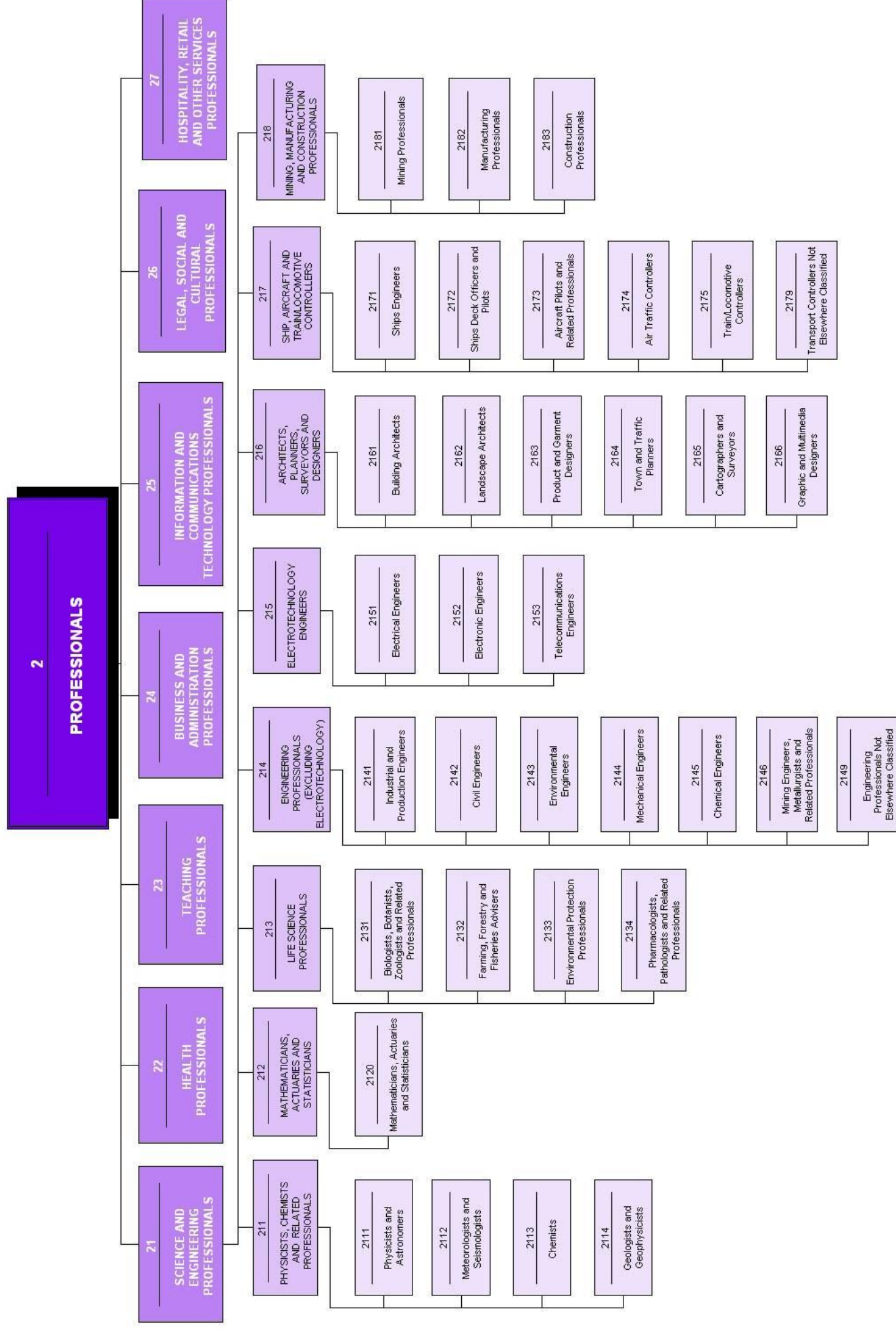
# MAJOR GROUP 1 MANAGERS



## MAJOR GROUP 2 PROFESSIONALS

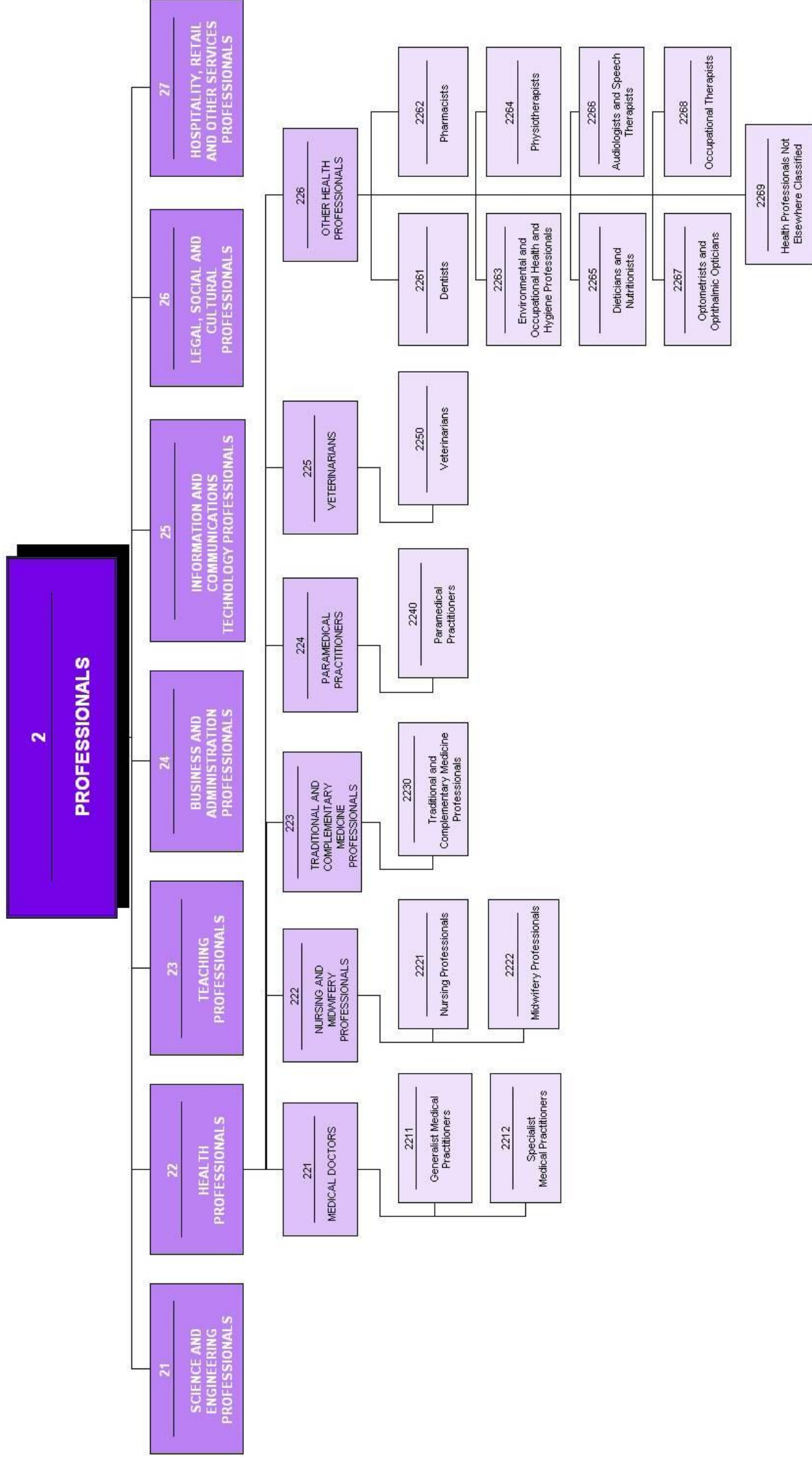


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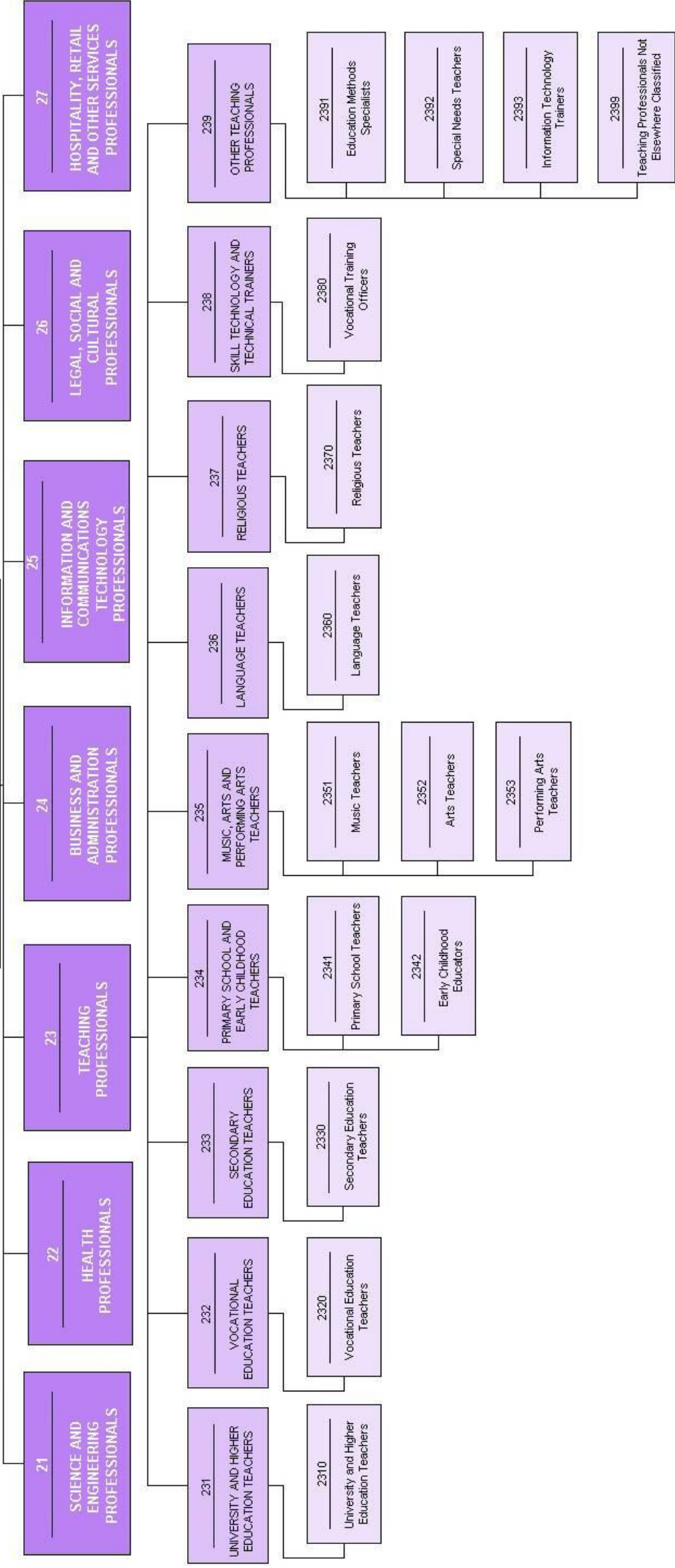




## MAJOR GROUP 2 PROFESSIONALS



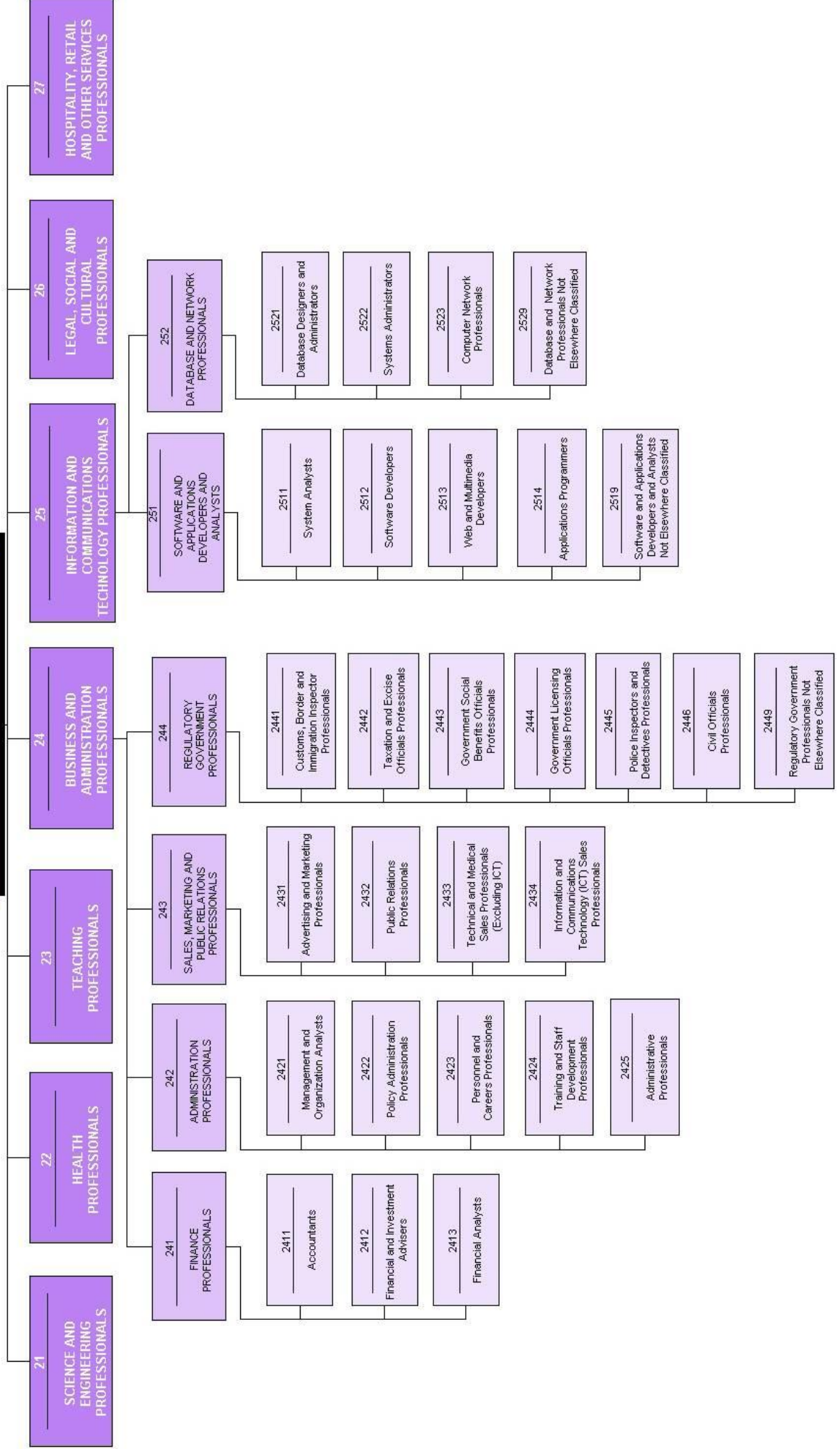
MAJOR GROUP 2  
PROFESSIONALS



# MAJOR GROUP 2 PROFESSIONALS

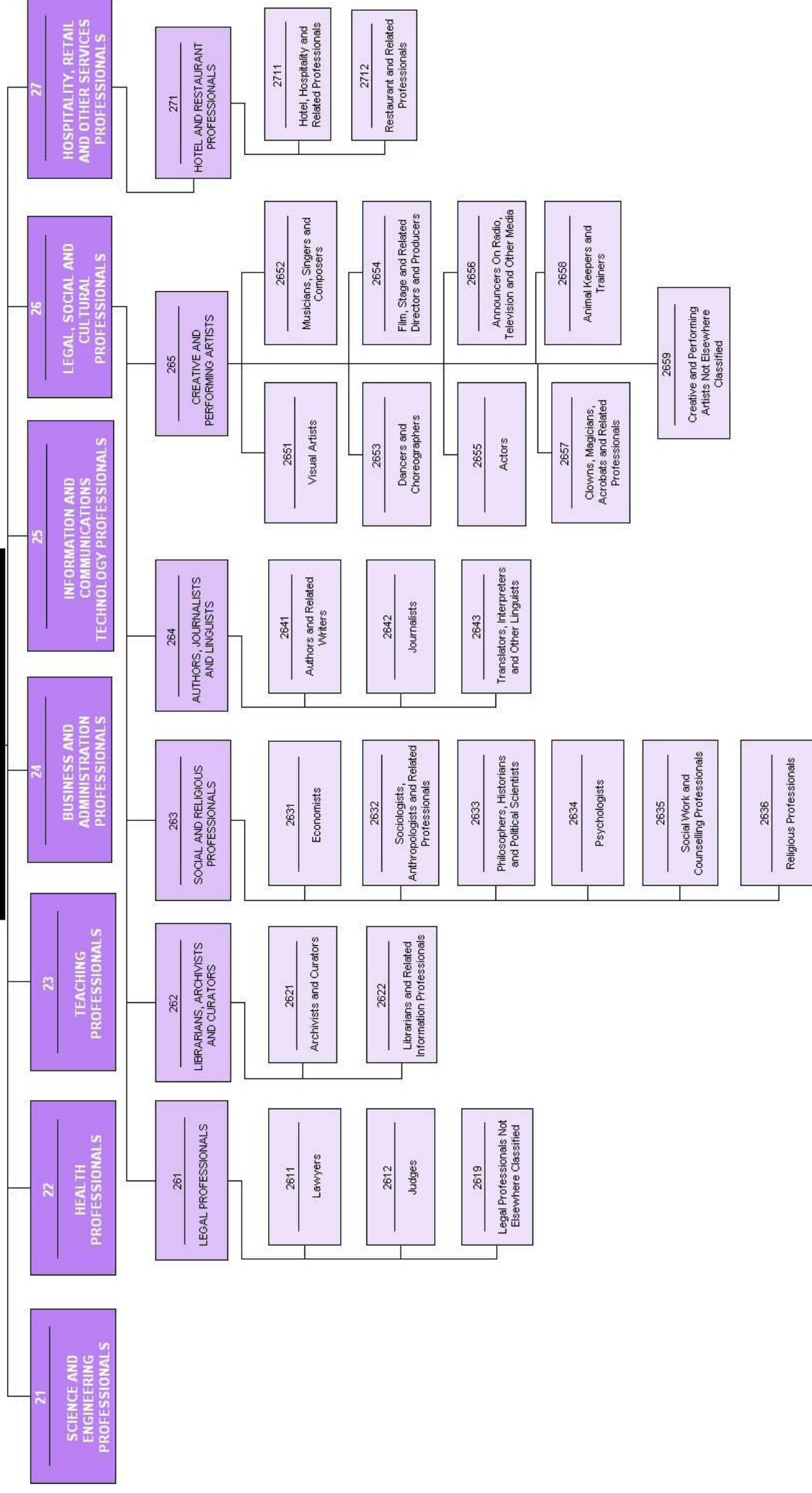
2

## PROFESSIONALS



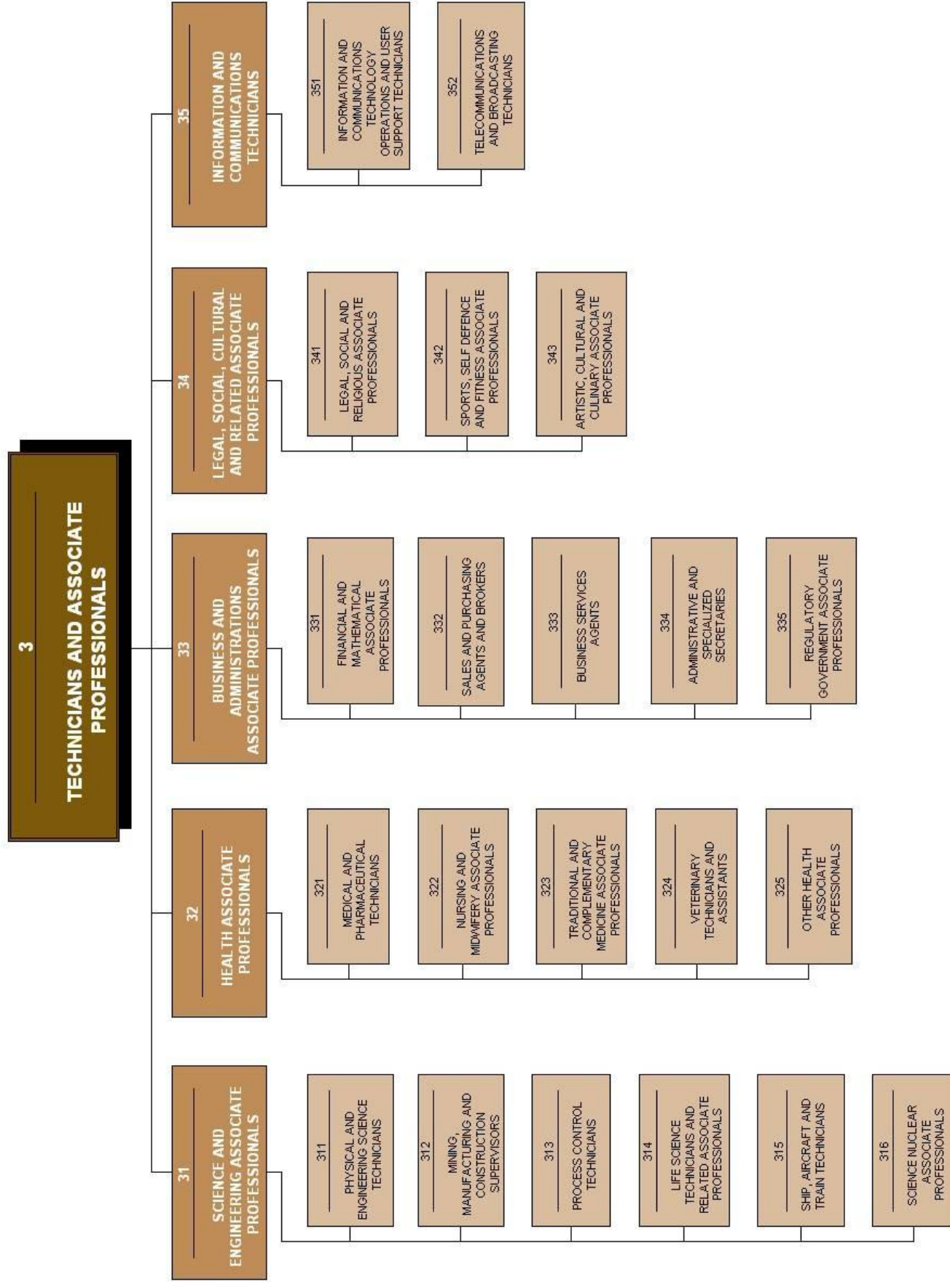
# MAJOR GROUP 2 PROFESSIONALS

## 2 PROFESSIONALS

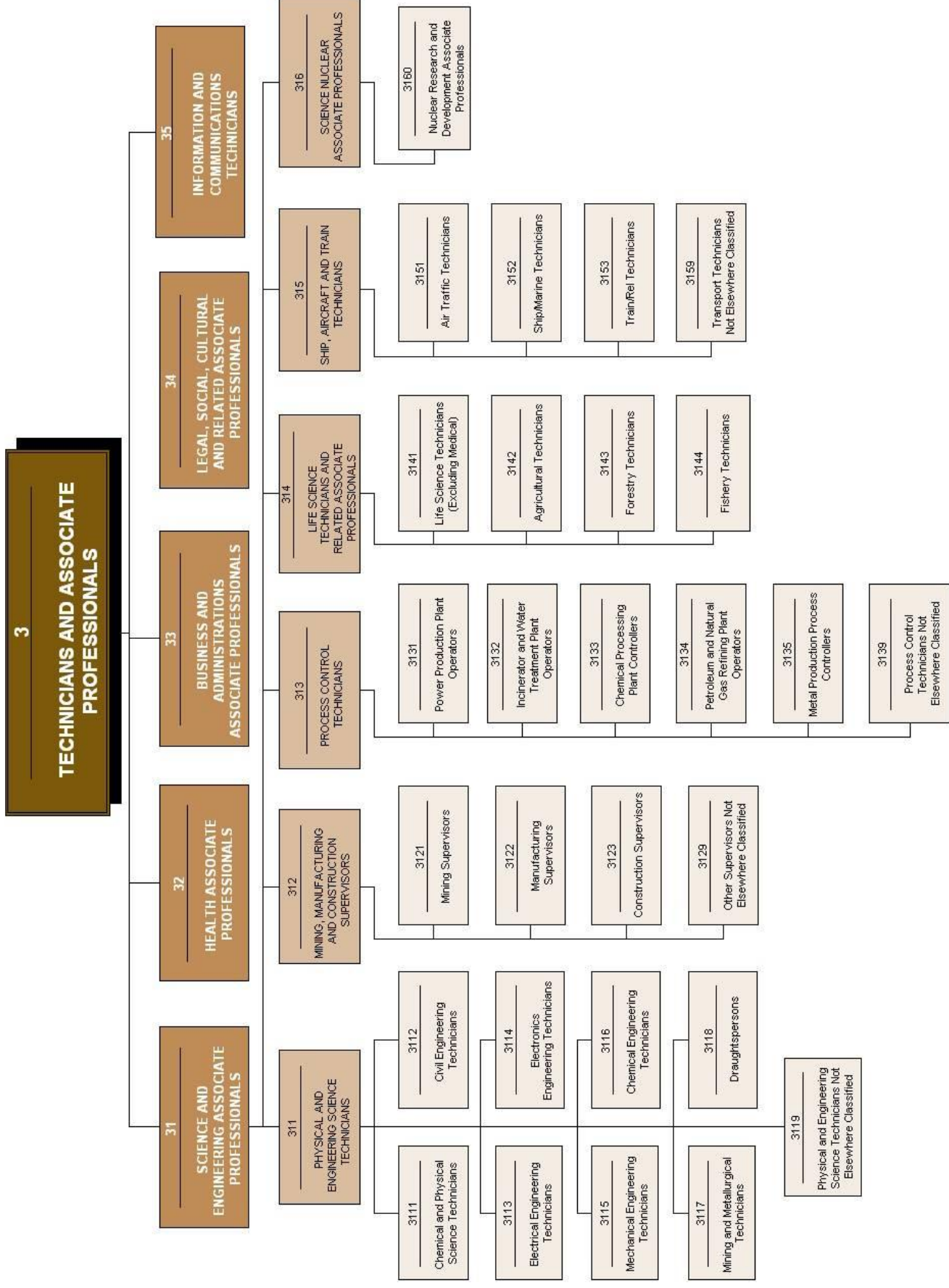




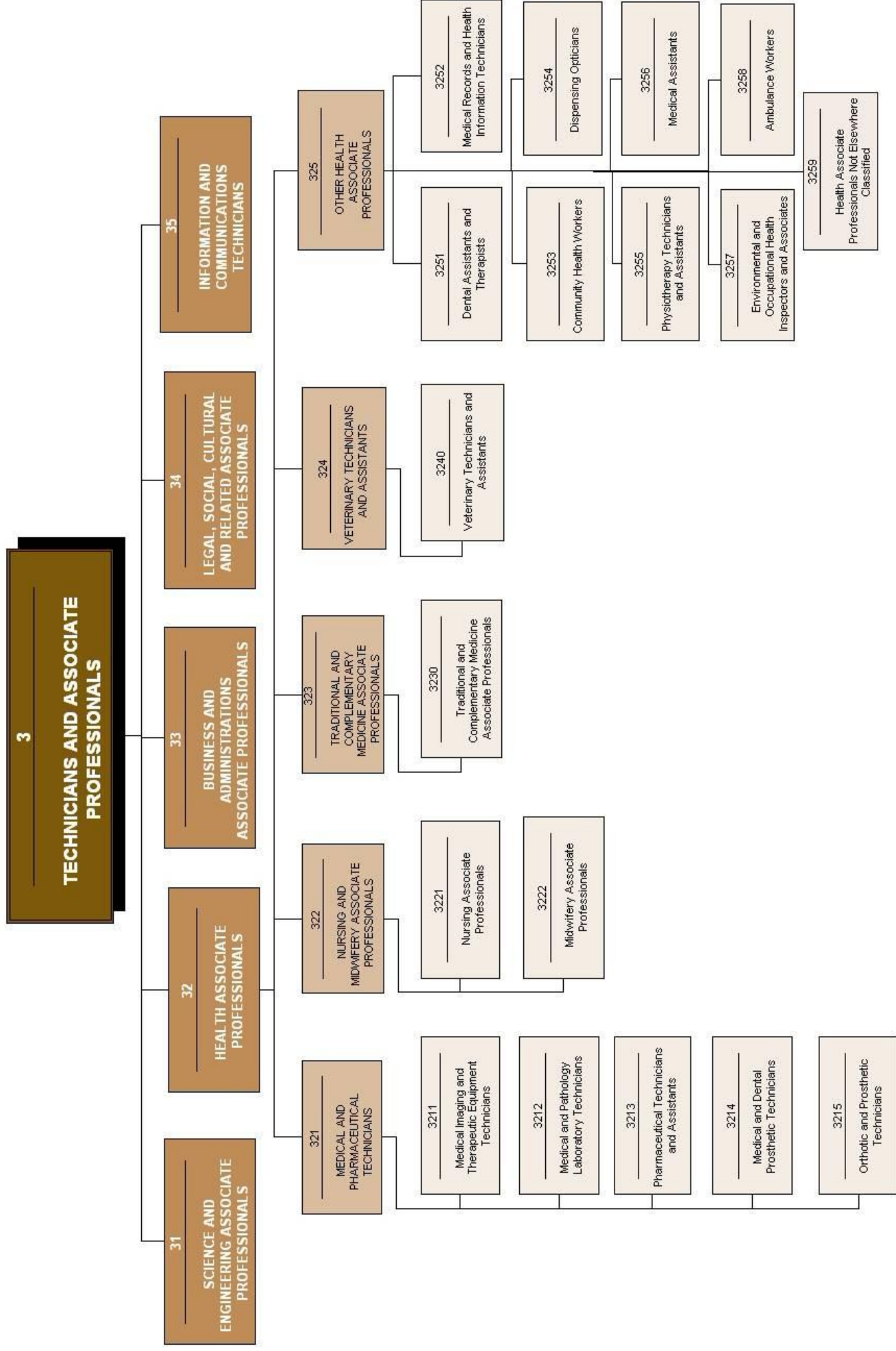
# MAJOR GROUP 3 TECHNICIANS AND ASSOCIATE PROFESSIONALS



# MAJOR GROUP 3 TECHNICIANS AND ASSOCIATE PROFESSIONALS

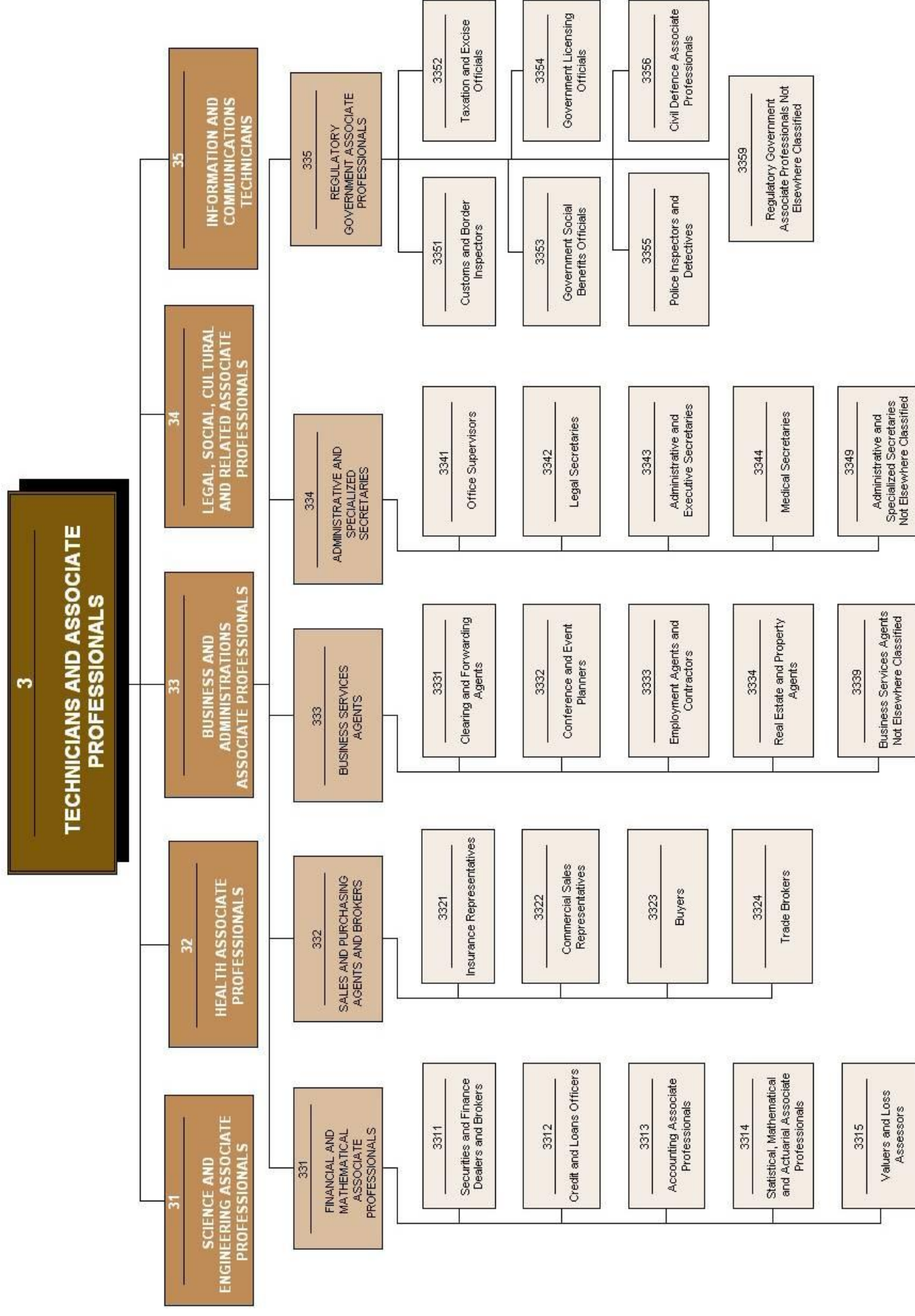


# MAJOR GROUP 3 TECHNICIANS AND ASSOCIATE PROFESSIONALS



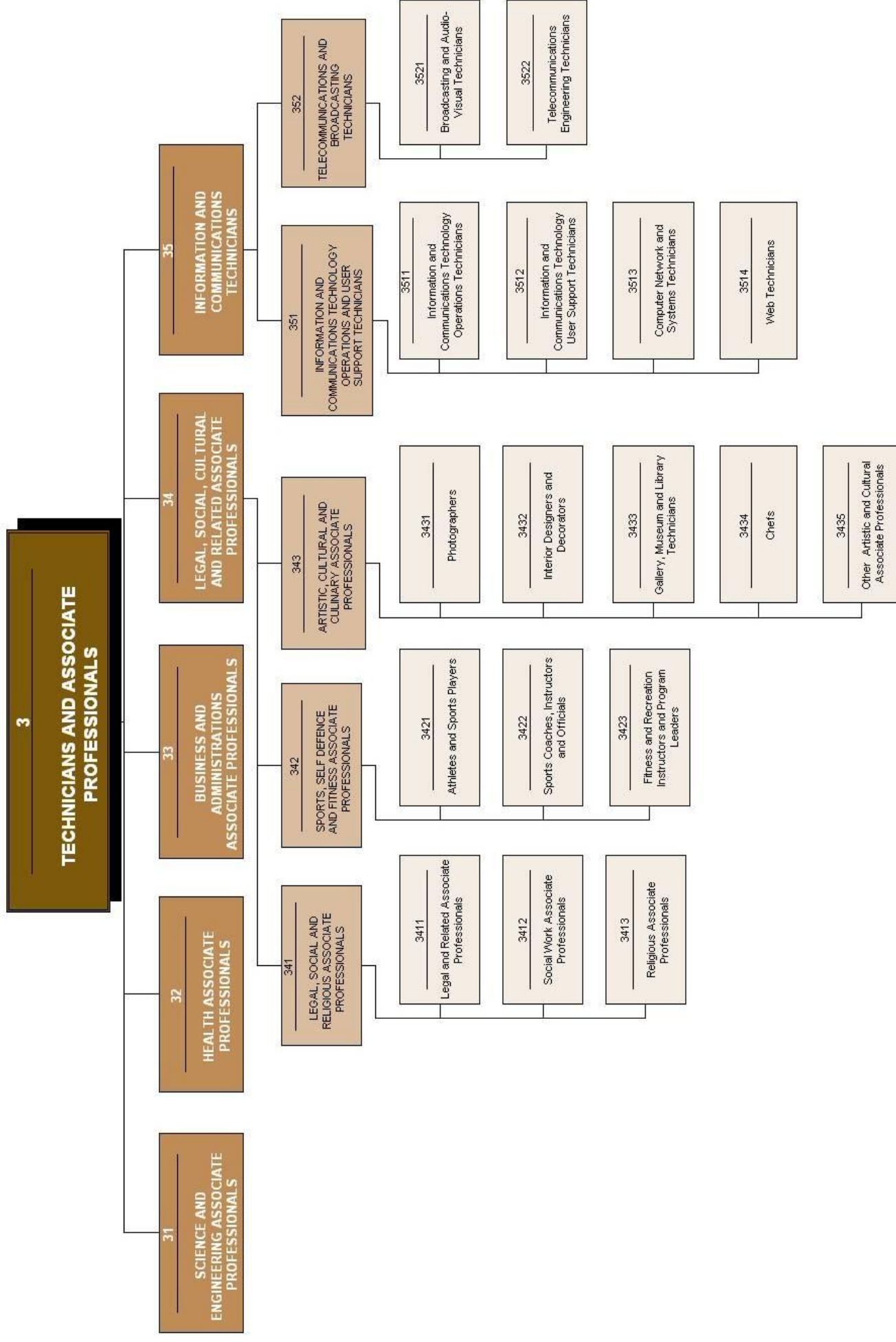
# MAJOR GROUP 3

## TECHNICIANS AND ASSOCIATE PROFESSIONALS

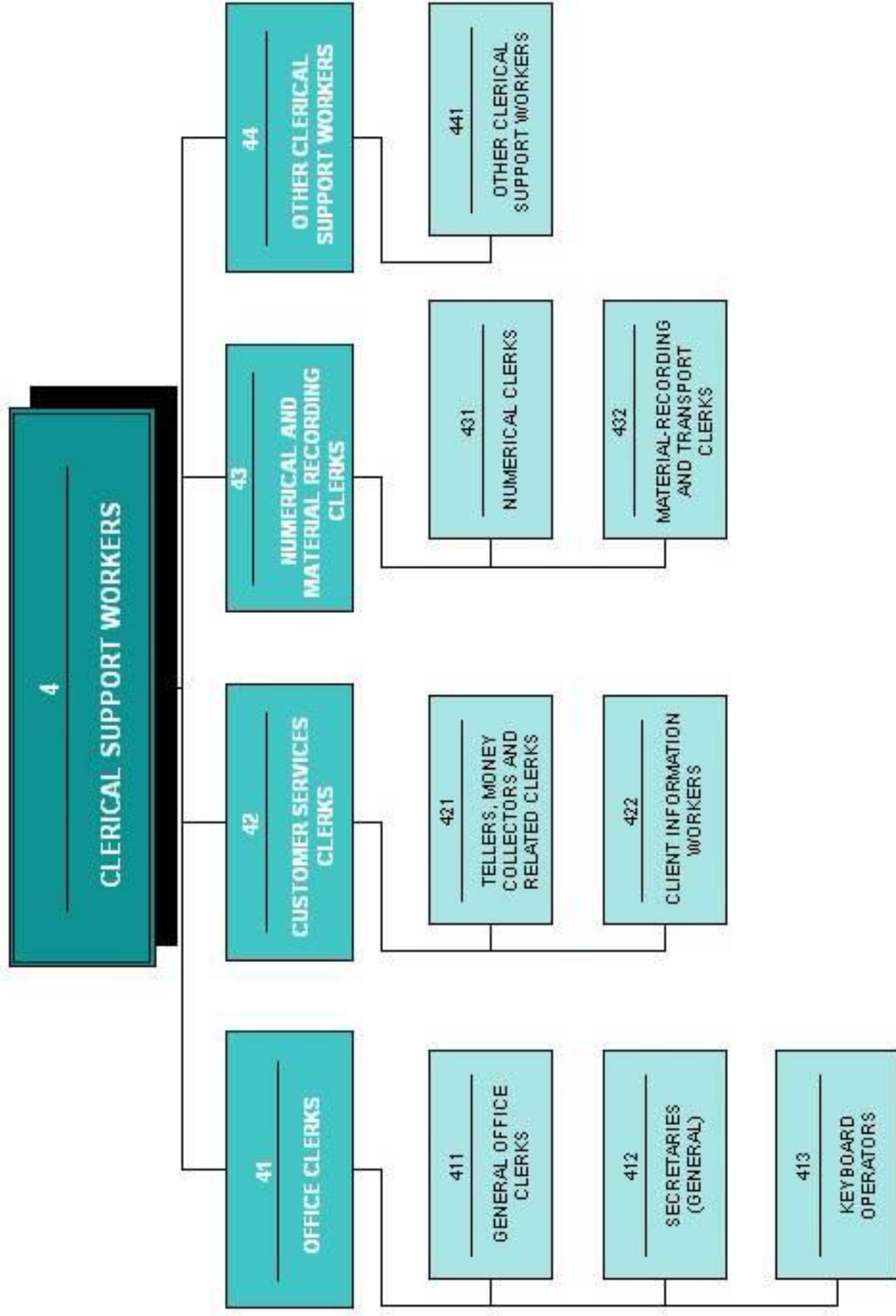




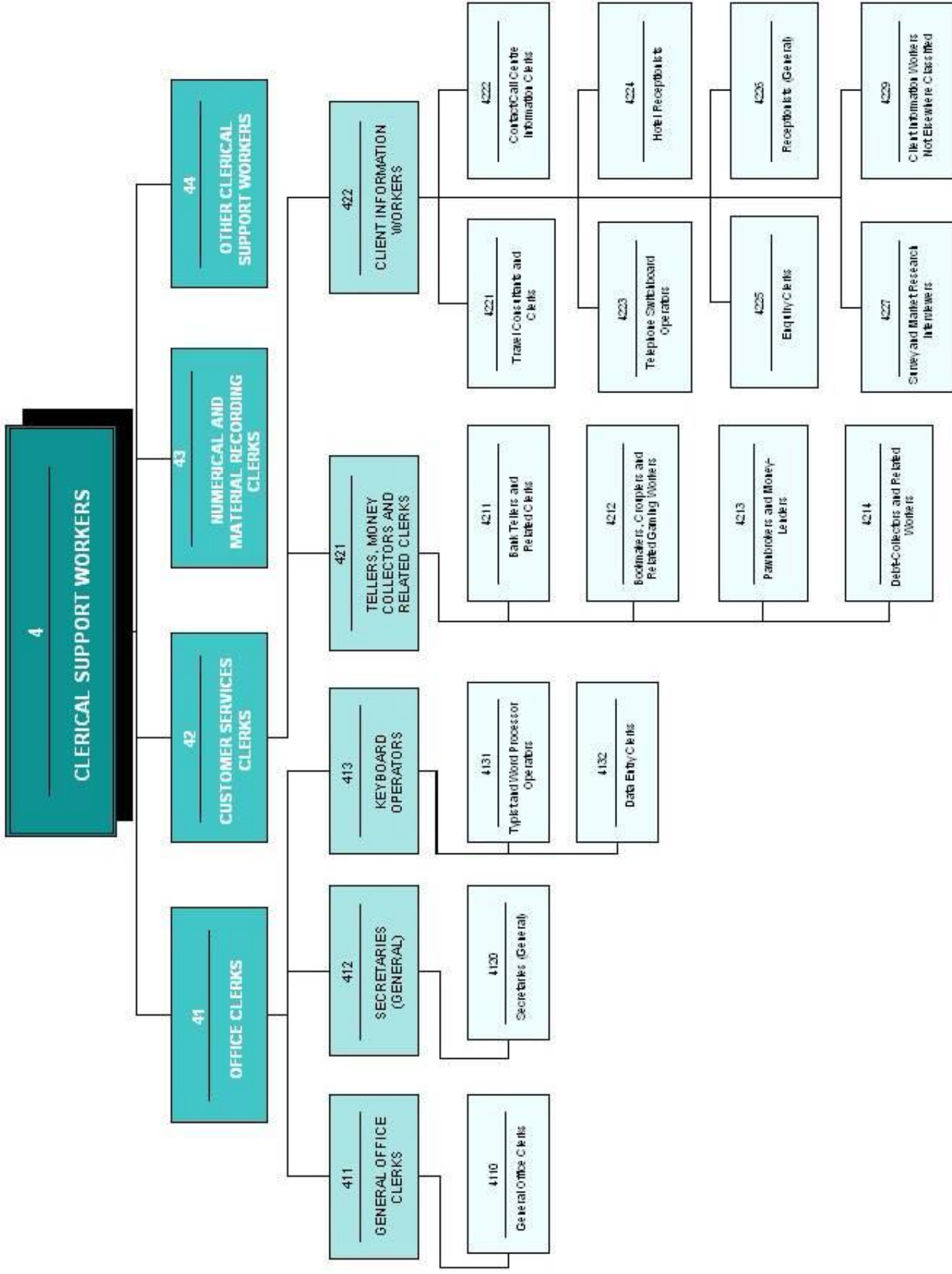
# MAJOR GROUP 3 TECHNICIANS AND ASSOCIATE PROFESSIONALS



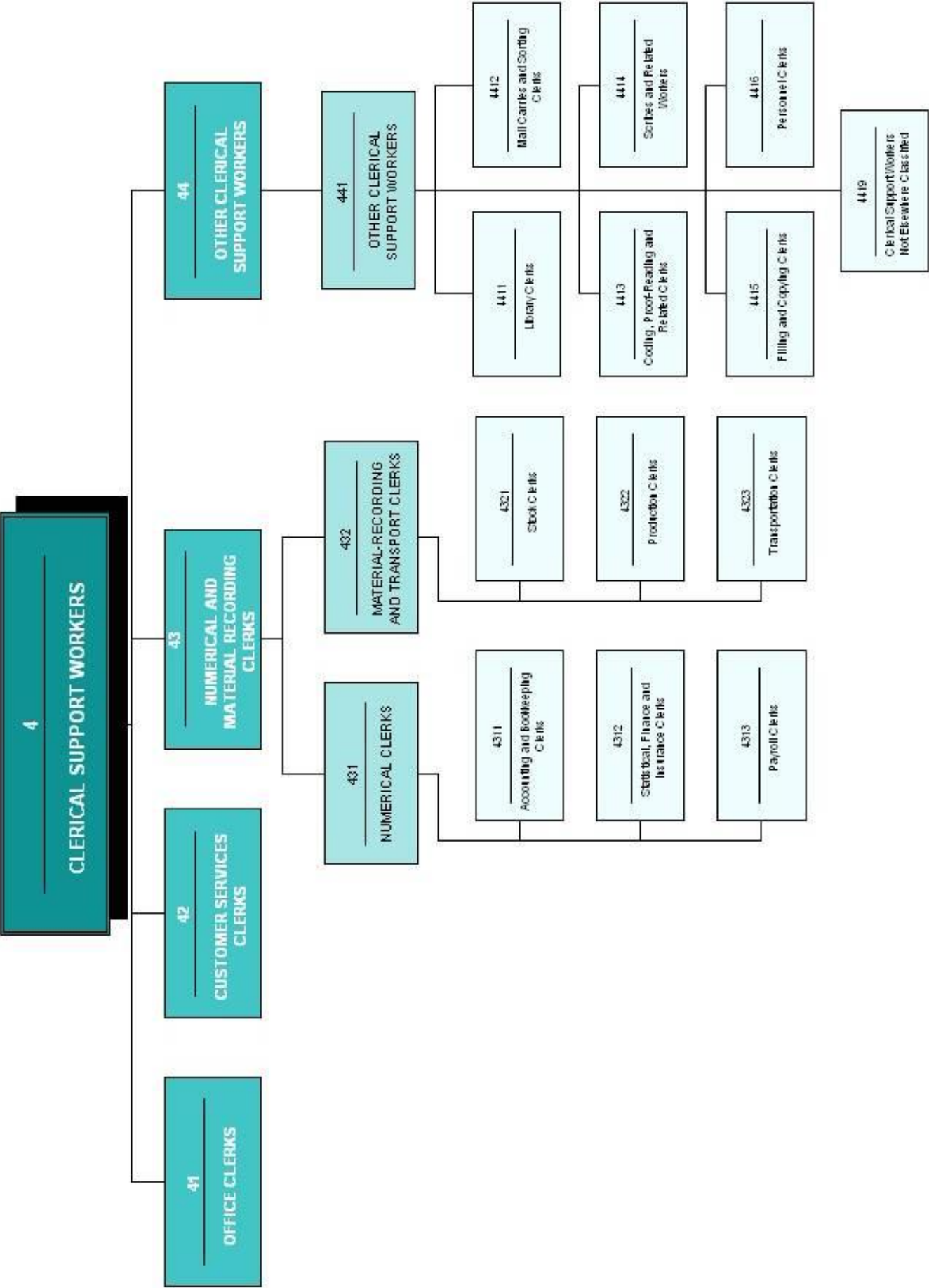
# MAJOR GROUP 4 CLERICAL SUPPORT WORKERS



# MAJOR GROUP 4 CLERICAL SUPPORT WORKERS

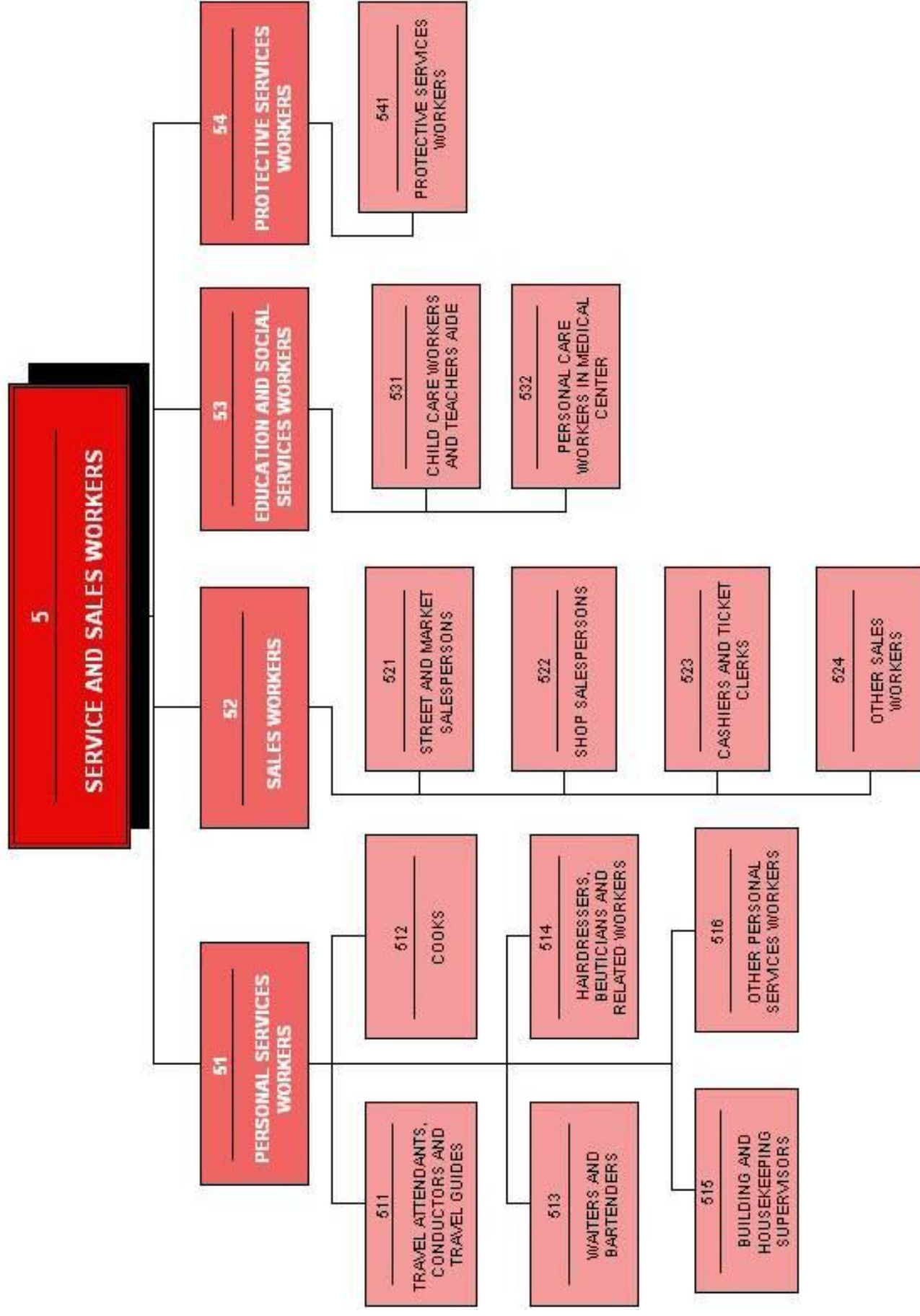


MAJOR GROUP 4  
CLERICAL SUPPORT WORKERS



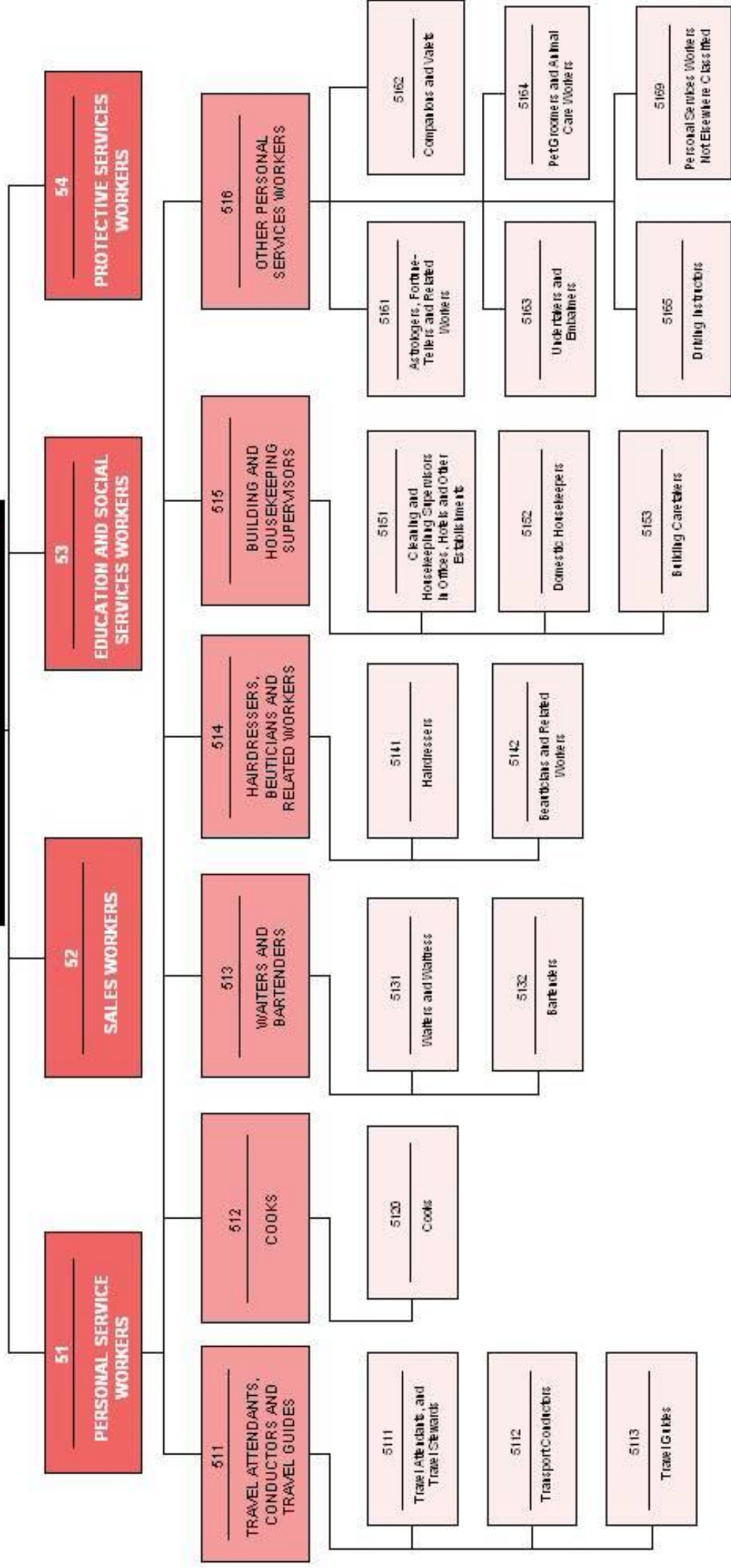


**MAJOR GROUP 5**  
**SERVICE AND SALES WORKERS**



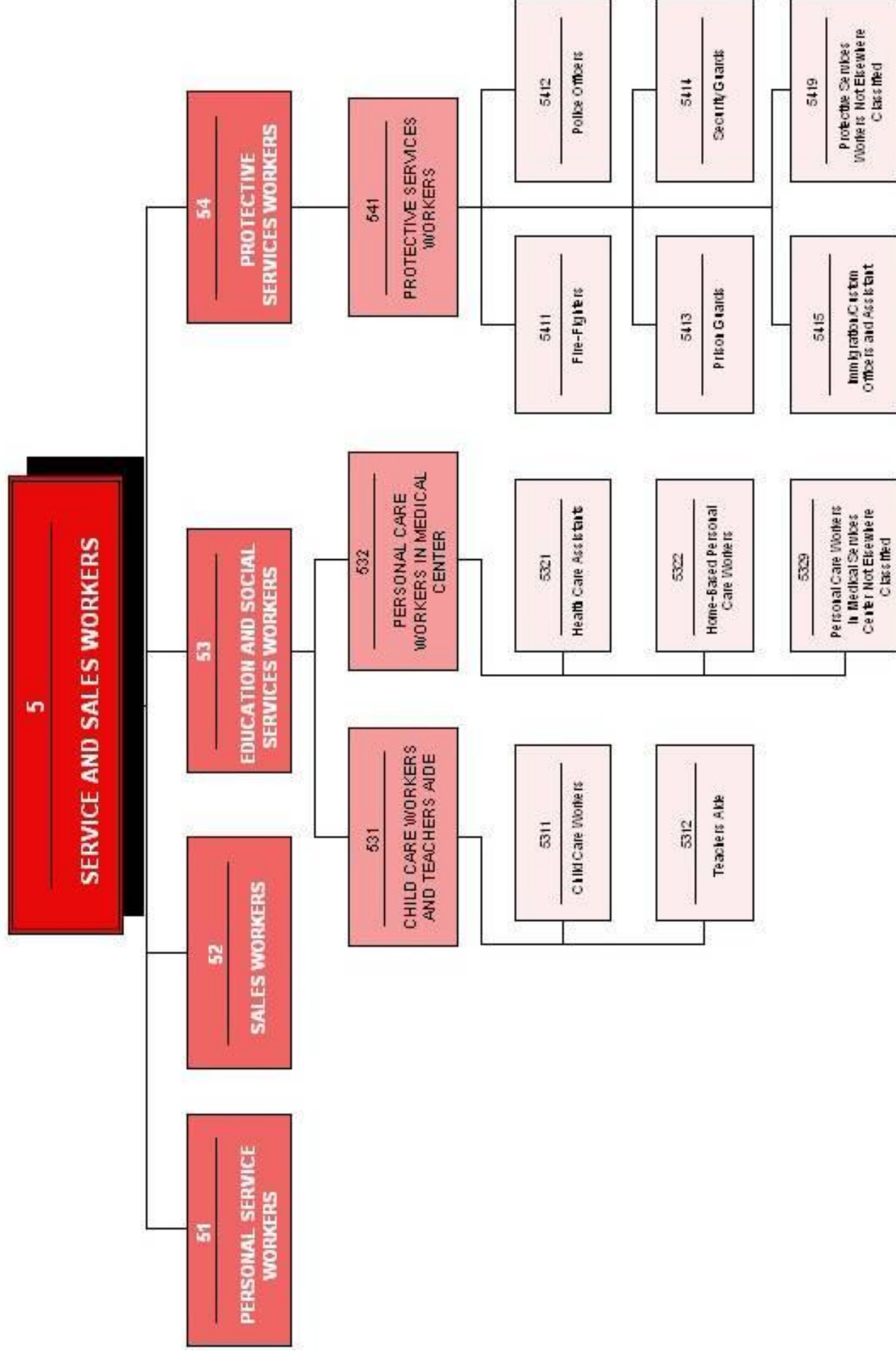
# MAJOR GROUP 5 SERVICE AND SALES WORKERS

## 5 SERVICE AND SALES WORKERS



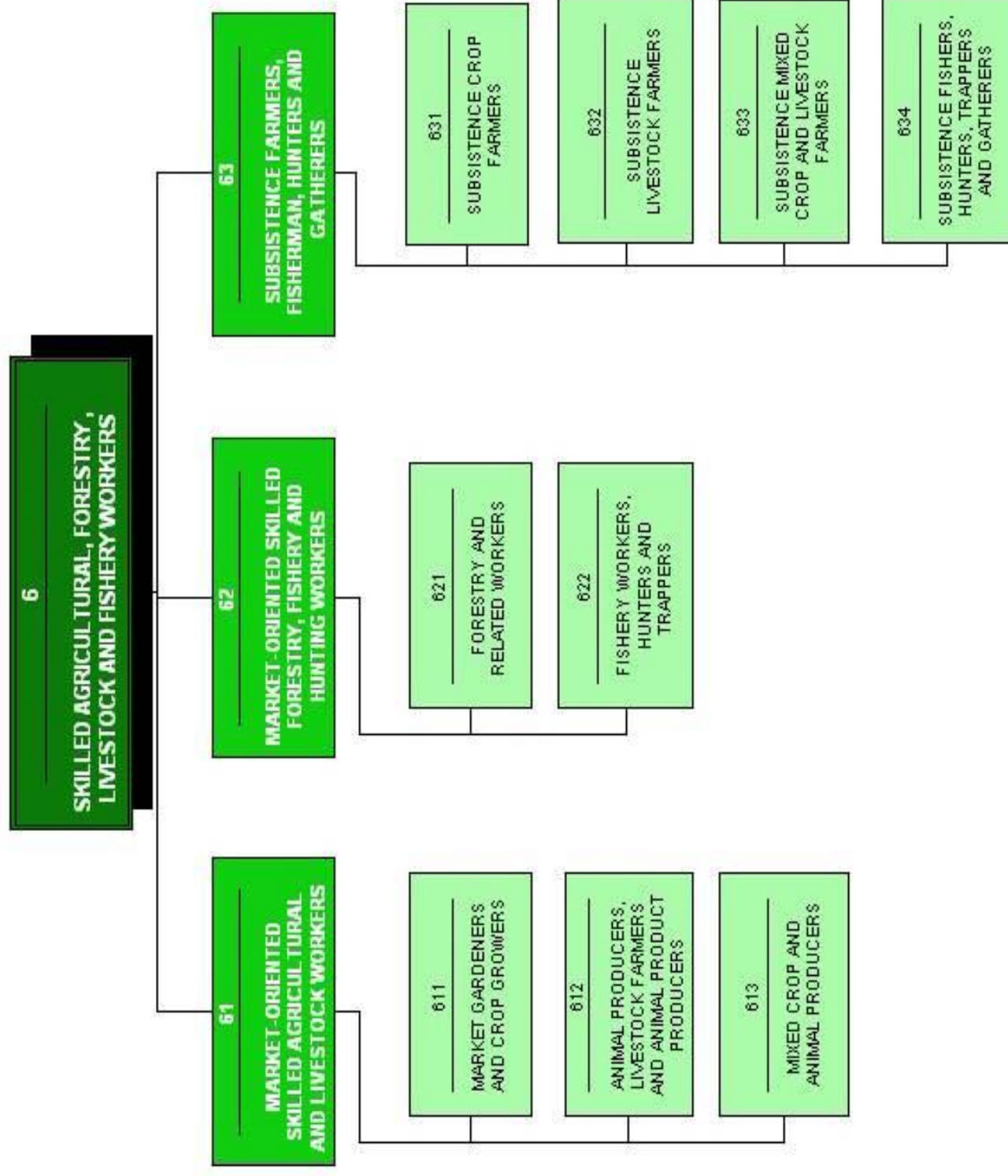


## MAJOR GROUP 5 SERVICE AND SALES WORKERS

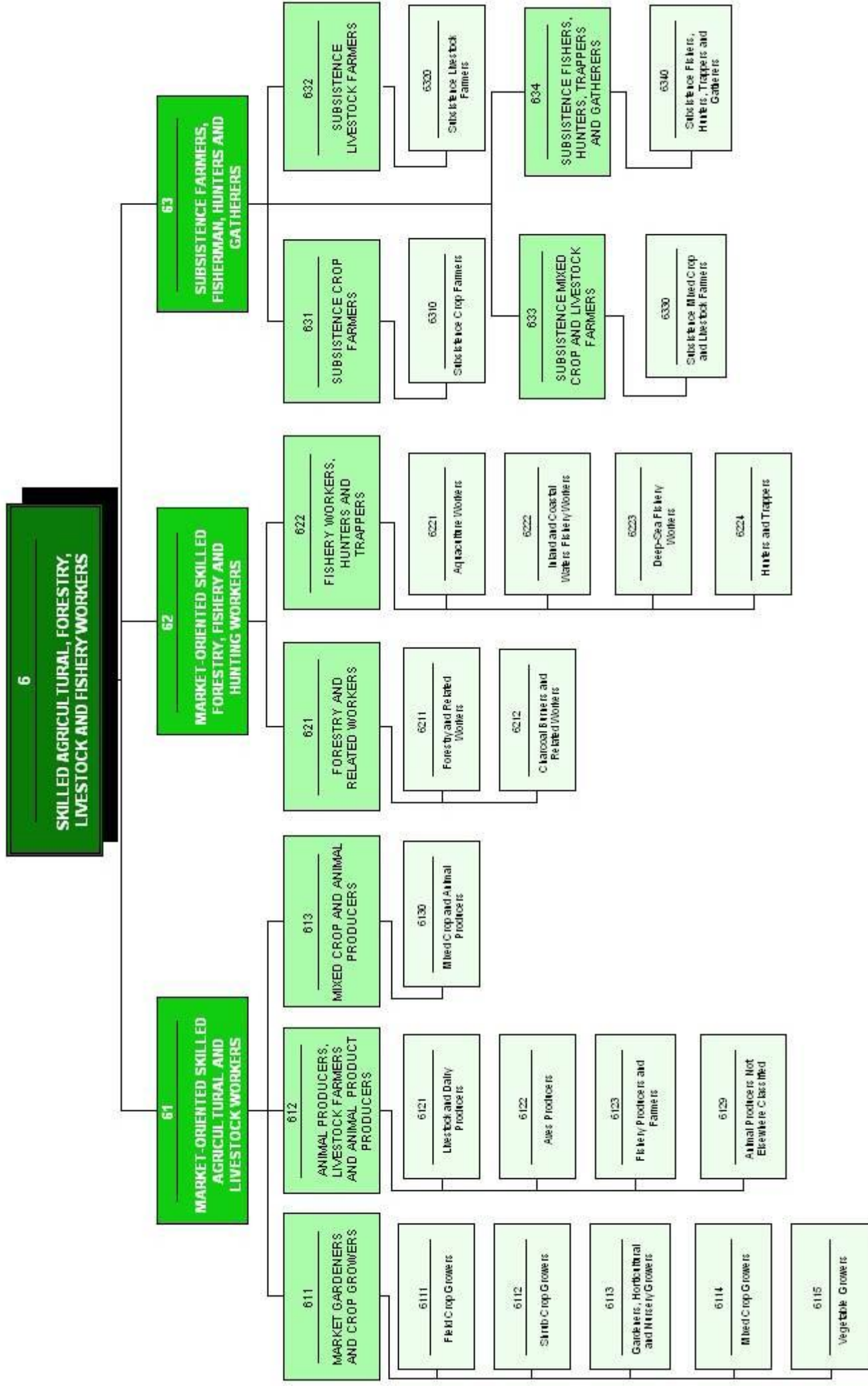




**MAJOR GROUP 6**  
**SKILLED AGRICULTURAL, FORESTRY, LIVESTOCK AND FISHERY WORKERS**

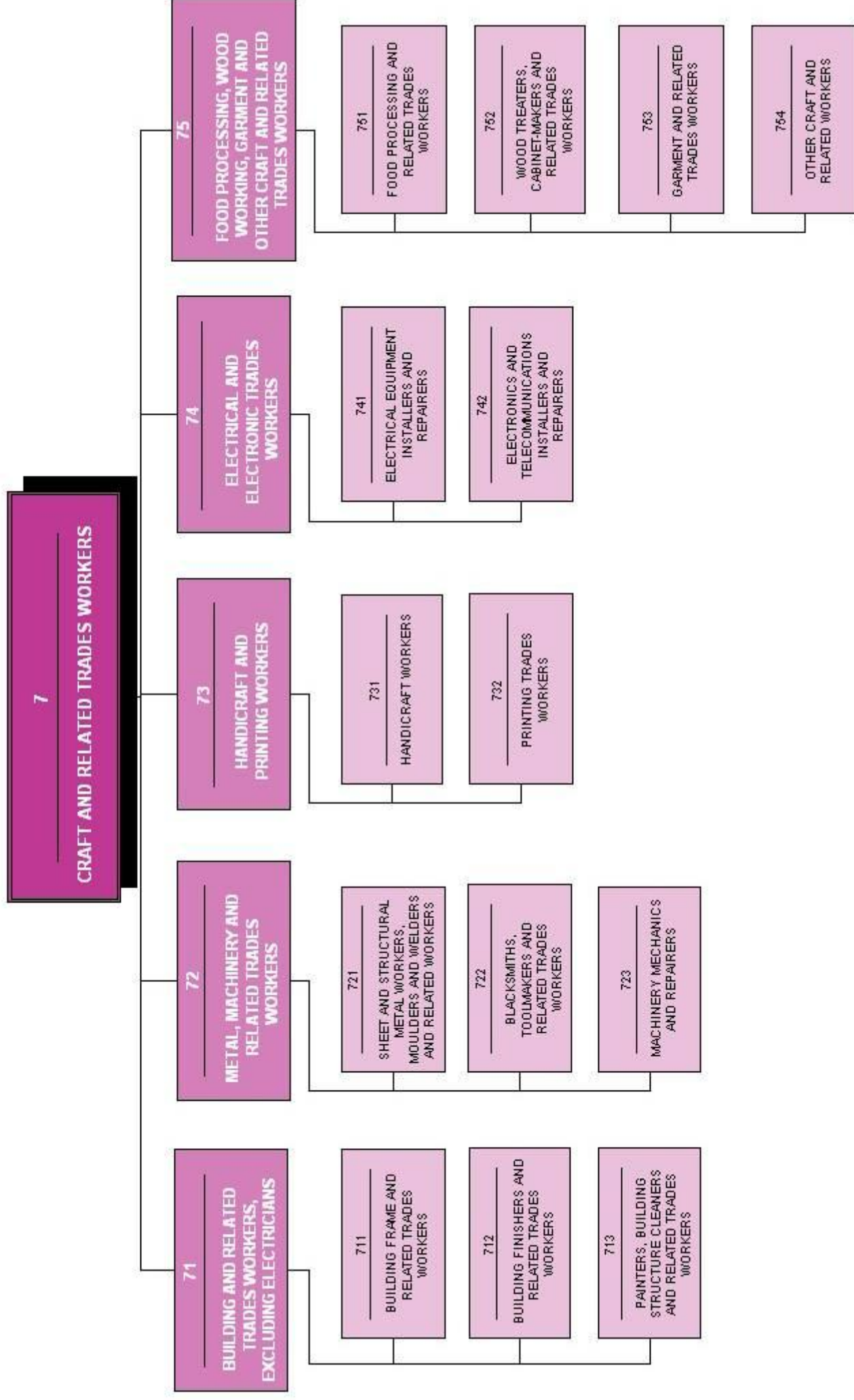


# MAJOR GROUP 6 SKILLED AGRICULTURAL, FORESTRY, LIVESTOCK AND FISHERY WORKERS



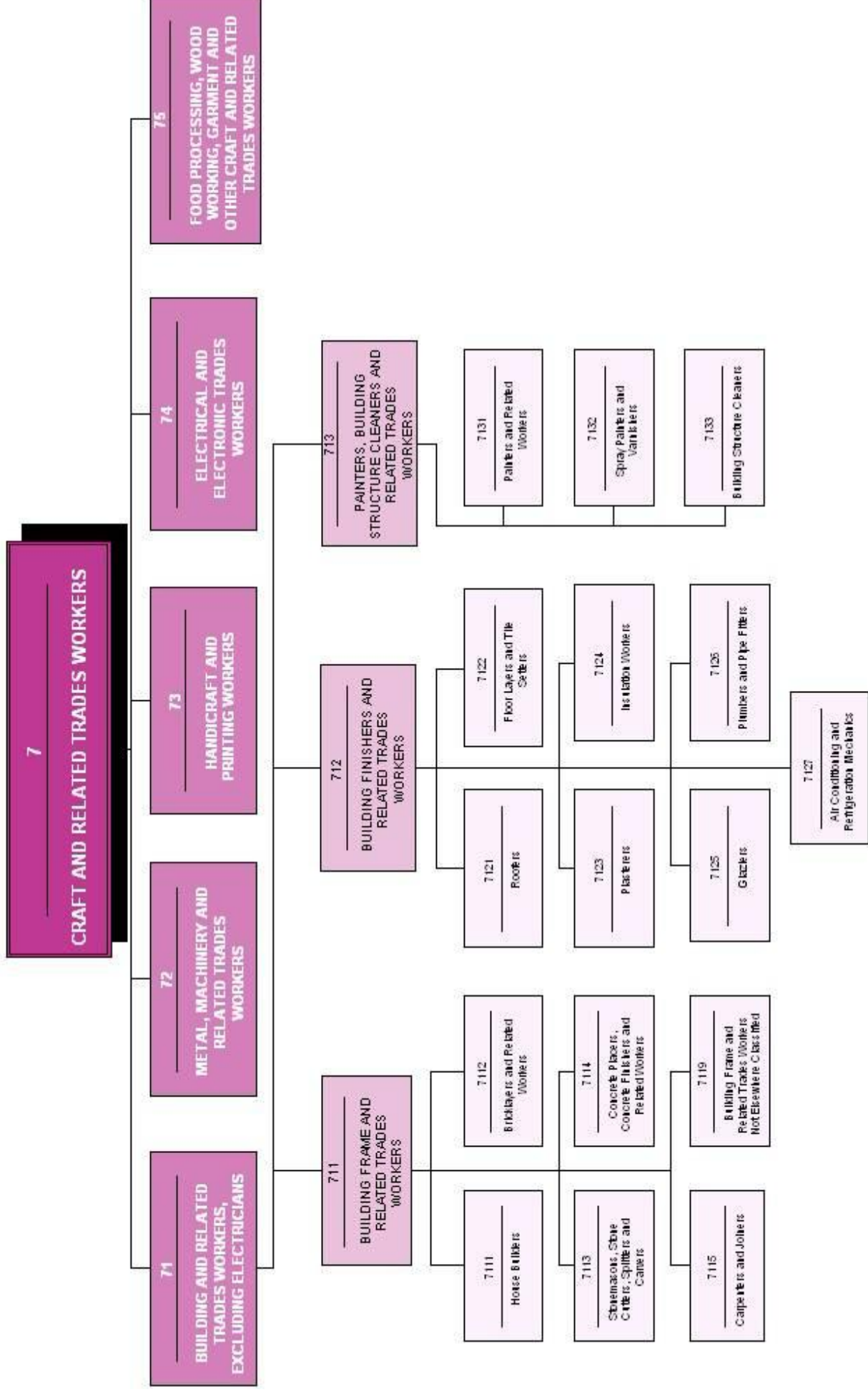
# MAJOR GROUP 7

## CRAFT AND RELATED TRADES WORKERS



# MAJOR GROUP 7

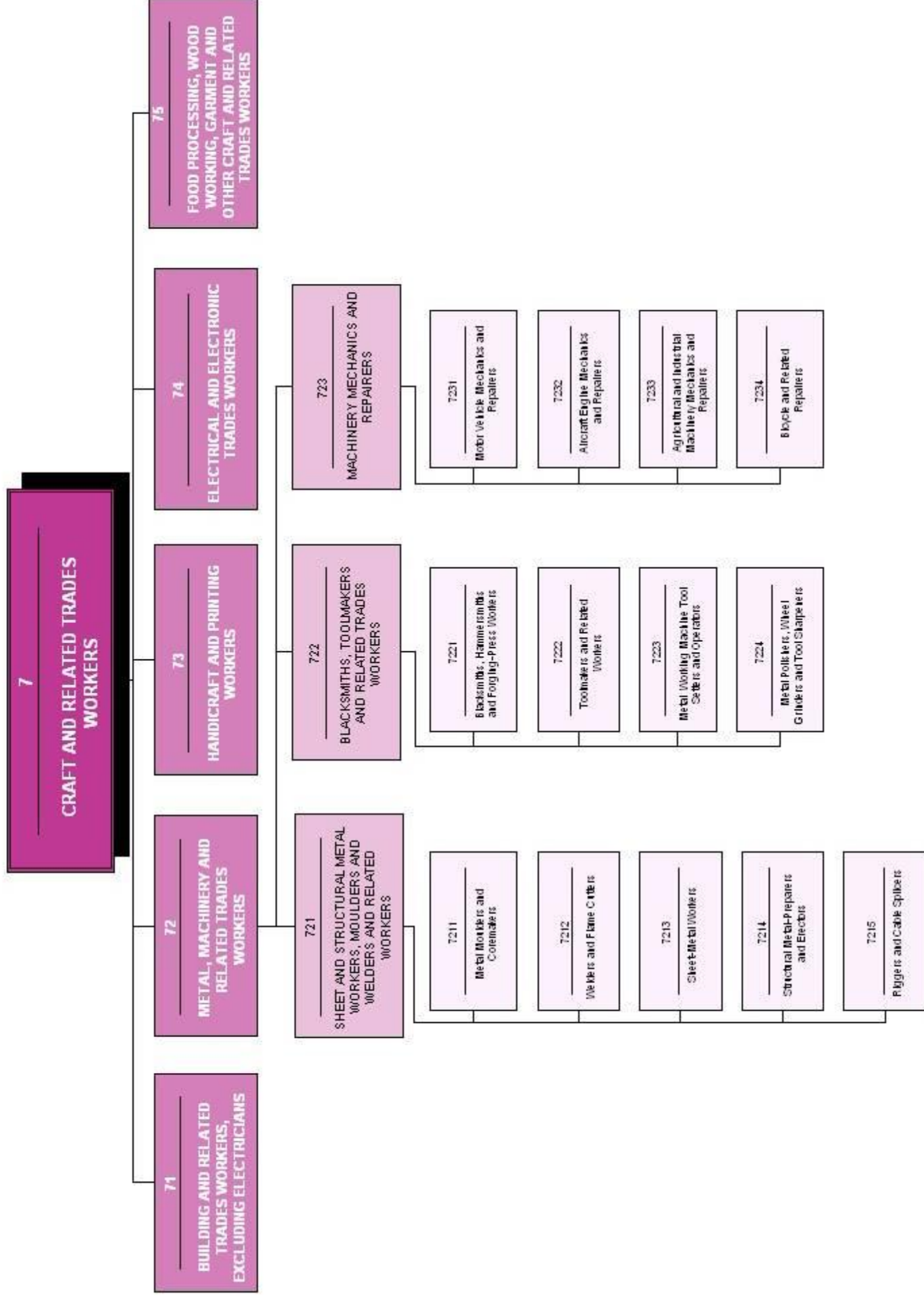
## CRAFT AND RELATED TRADES WORKERS



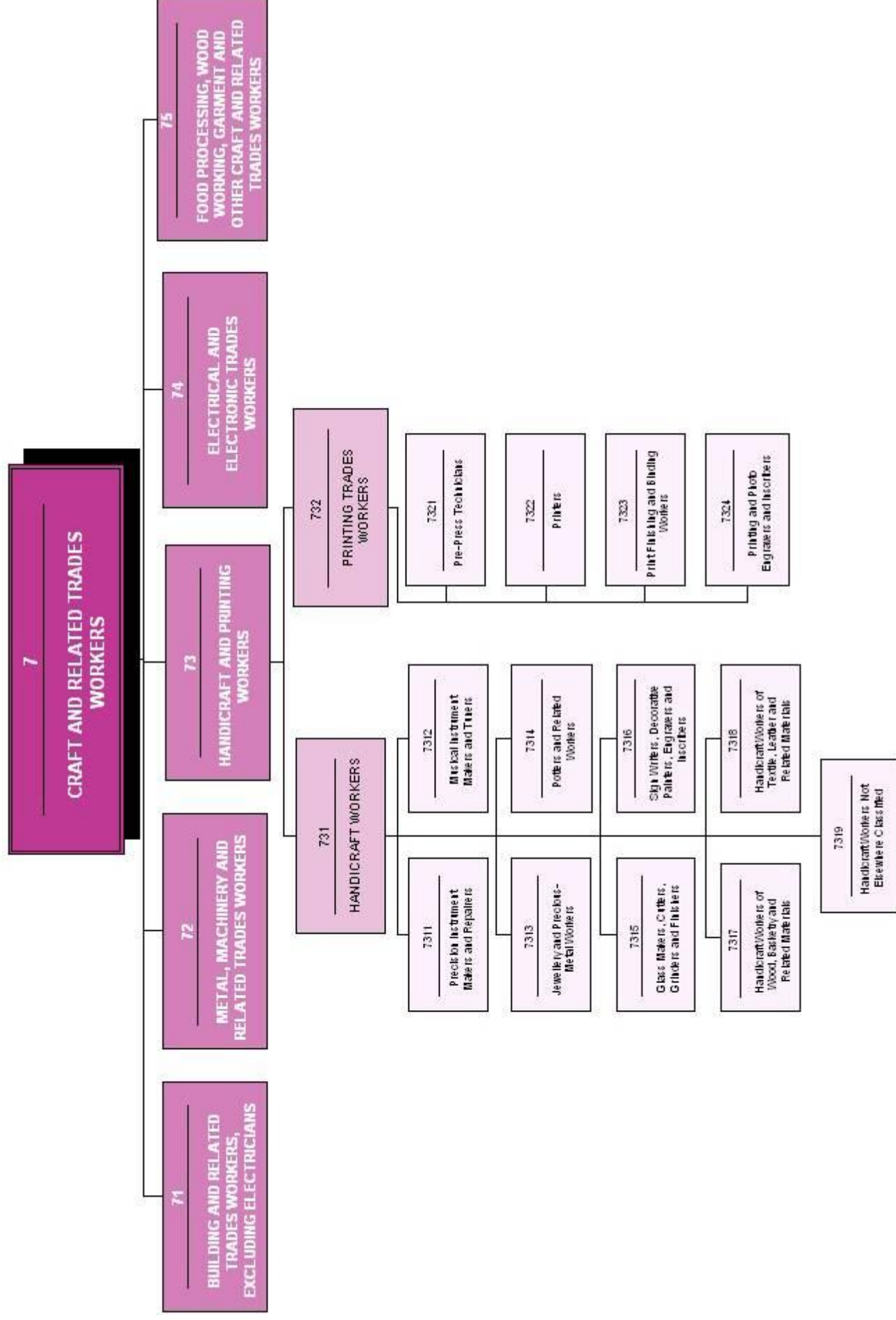


# MAJOR GROUP 7

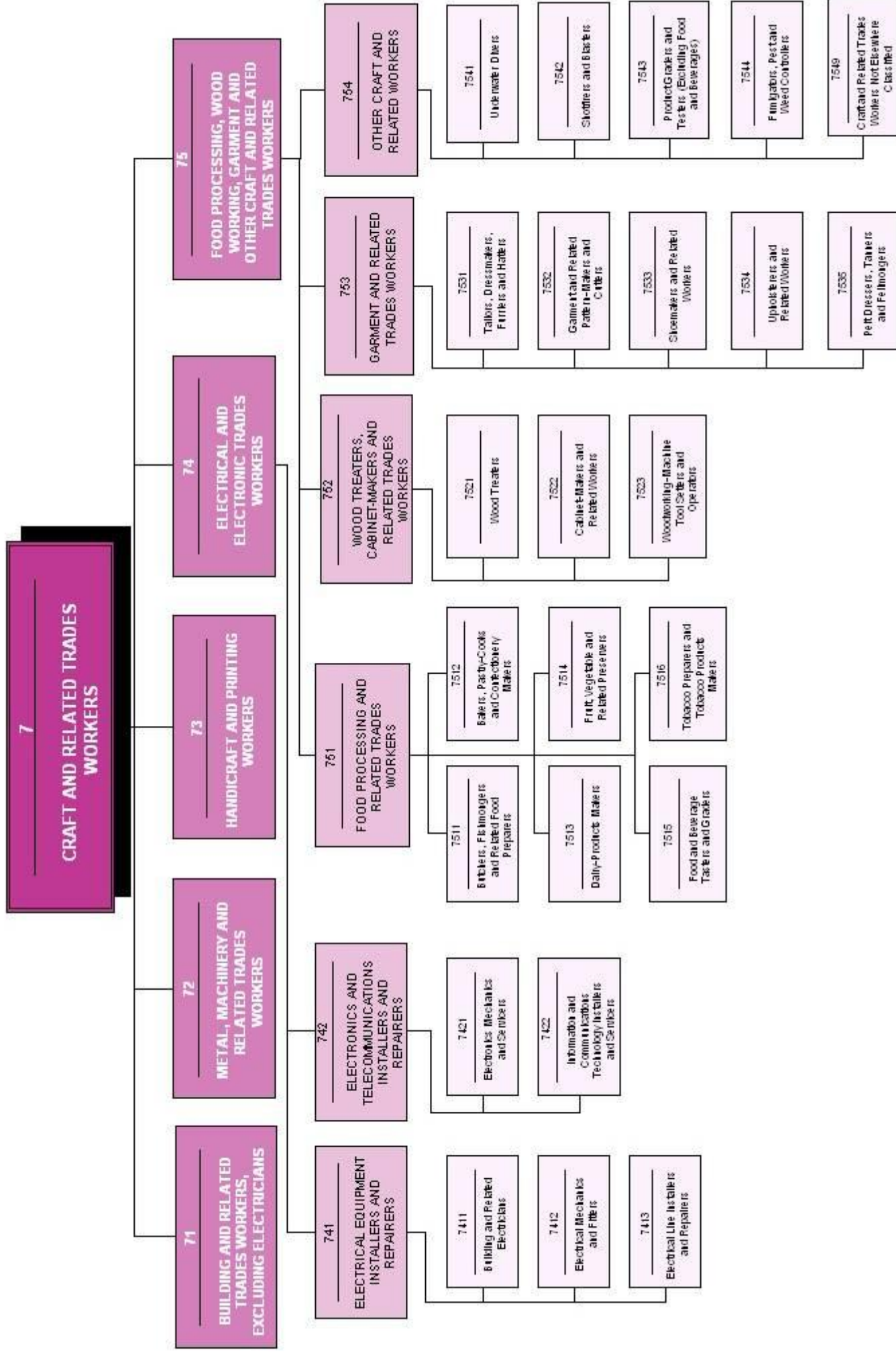
## CRAFT AND RELATED TRADES WORKERS



# MAJOR GROUP 7 CRAFT AND RELATED TRADES WORKERS

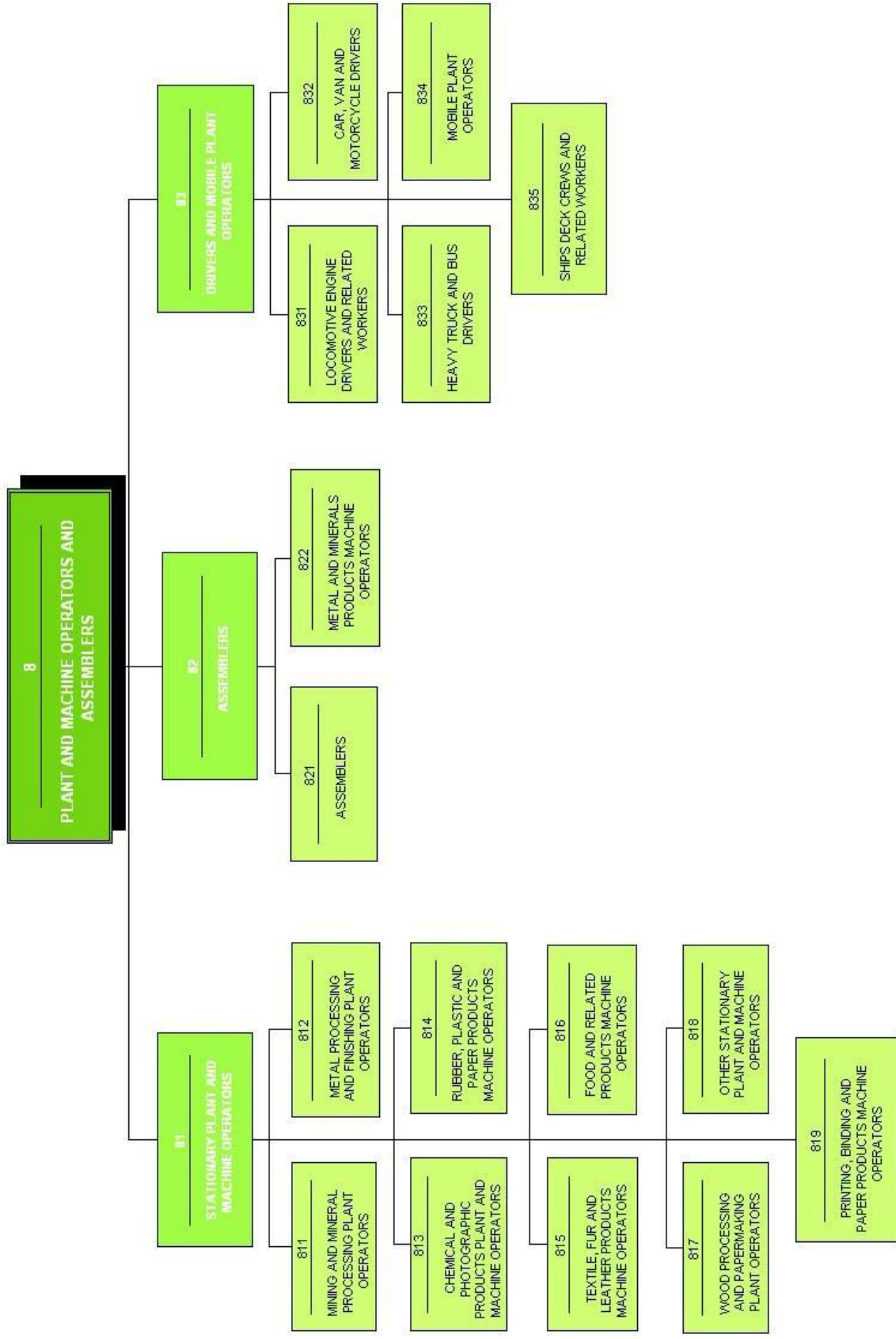


# MAJOR GROUP 7 CRAFT AND RELATED TRADES WORKERS



# MAJOR GROUP 8

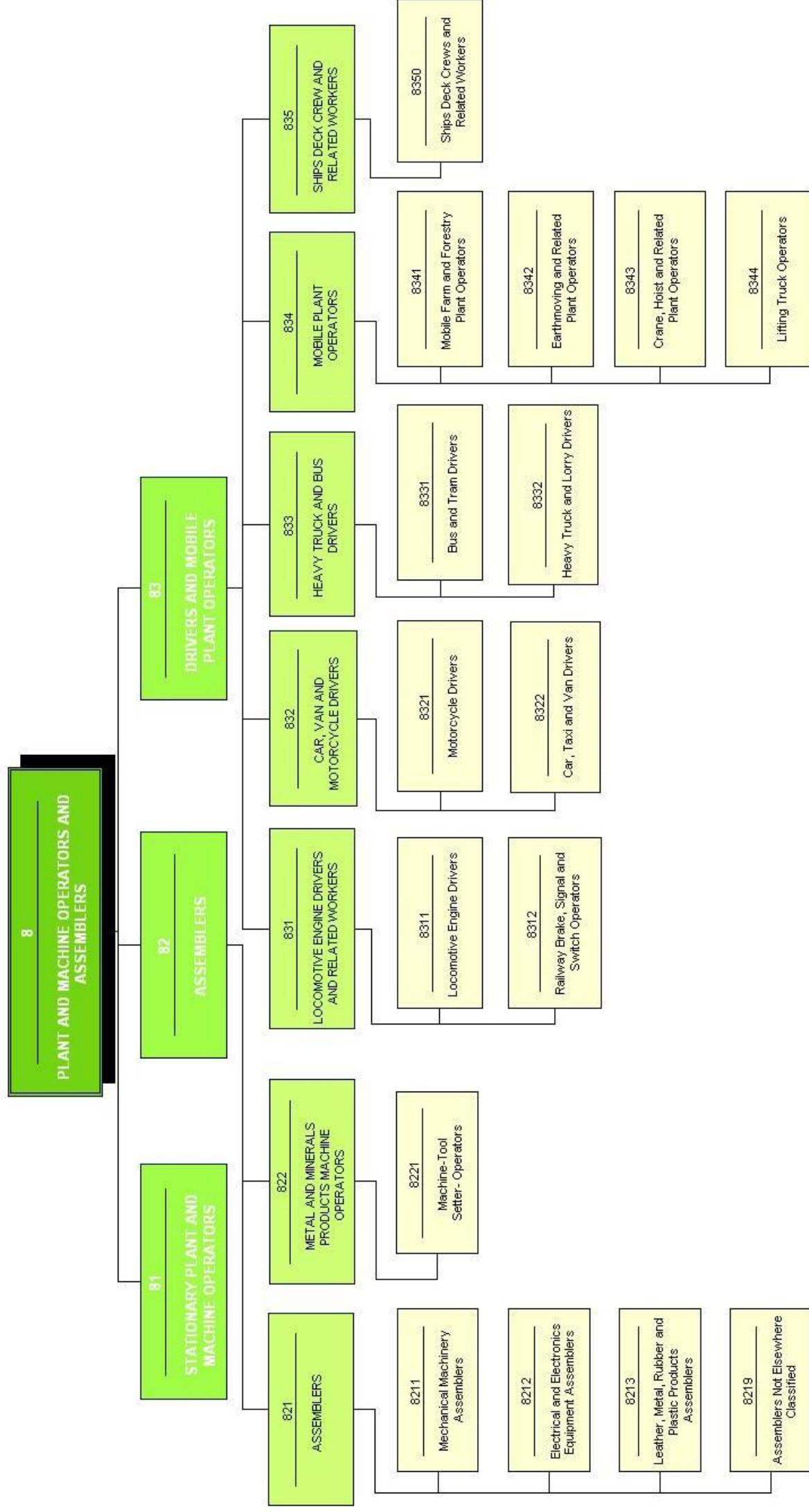
## PLANT AND MACHINE OPERATORS AND ASSEMBLERS





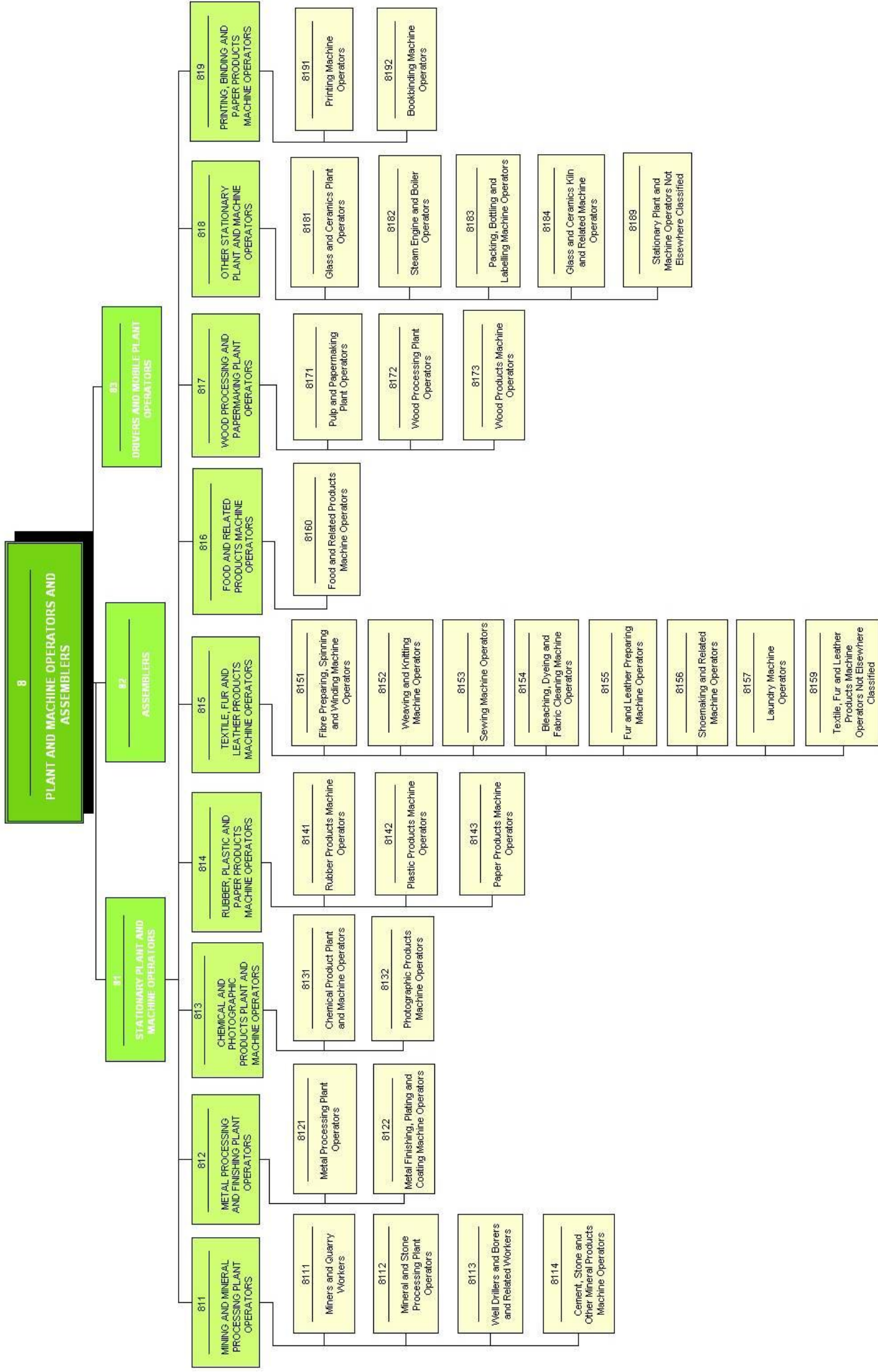
# MAJOR GROUP 8

## PLANT AND MACHINE OPERATORS AND ASSEMBLERS



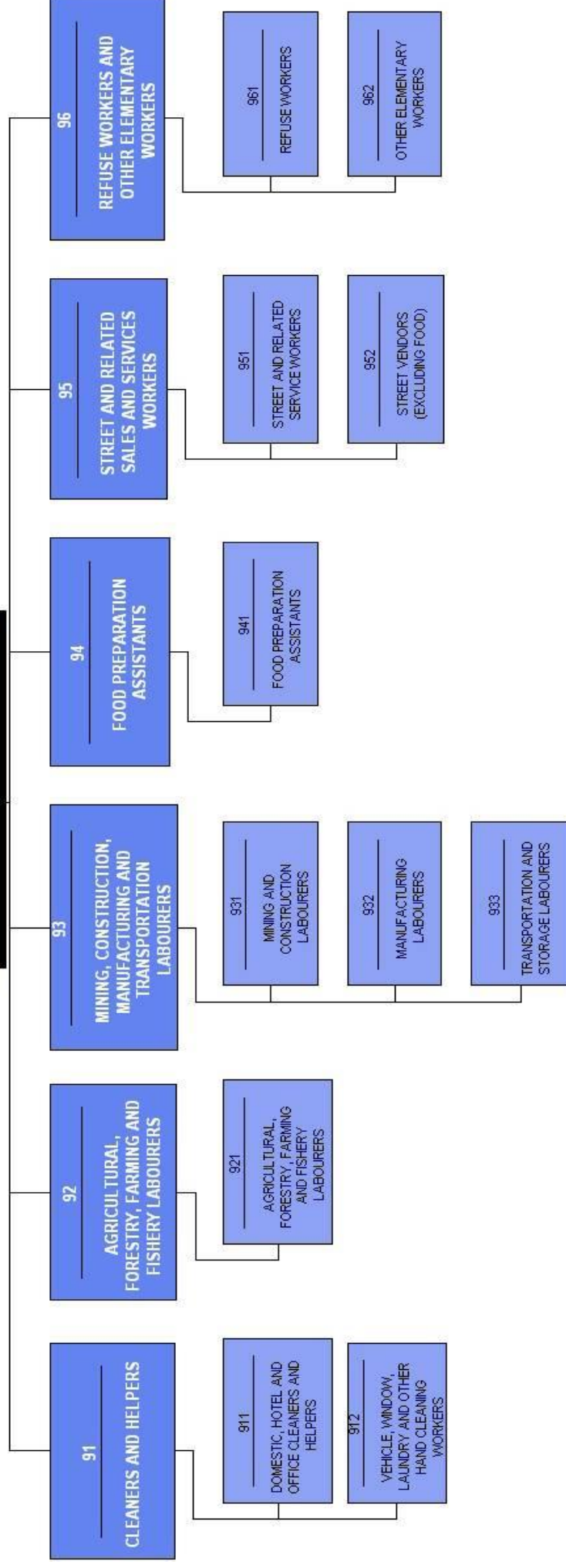
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## PLANT AND MACHINE OPERATORS AND ASSEMBLERS

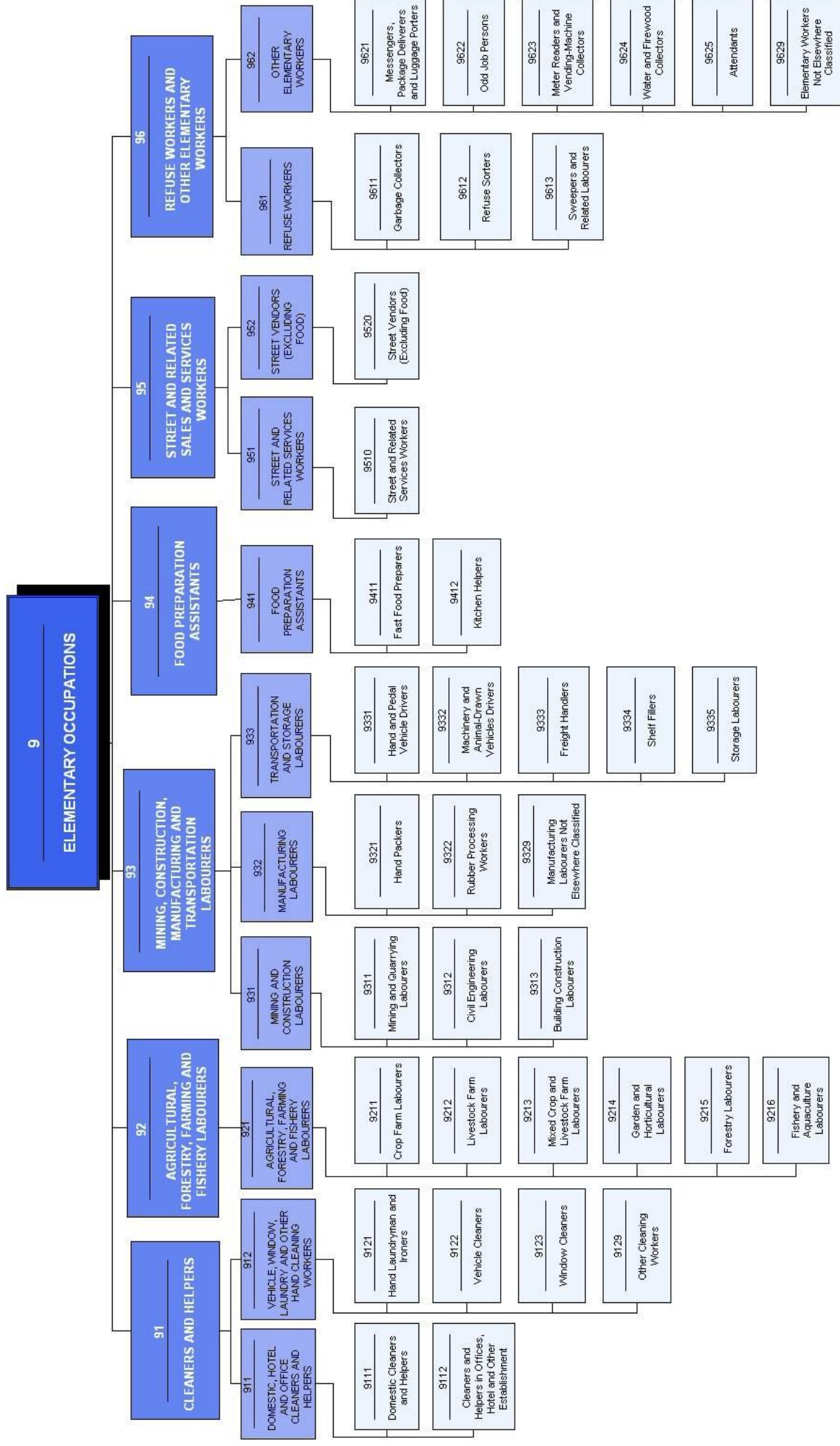


## MAJOR GROUP 9 ELEMENTARY OCCUPATIONS

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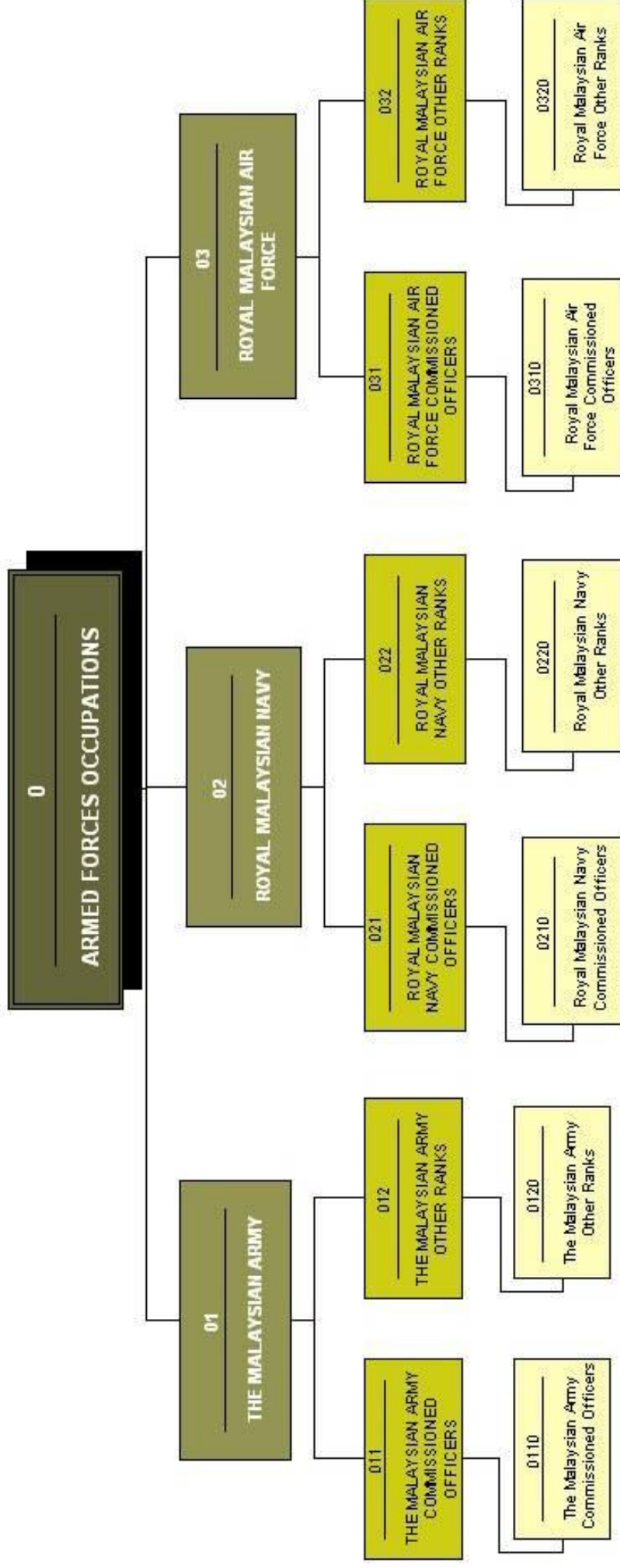
# MAJOR GROUP 9 ELEMENTARY OCCUPATIONS





# MAJOR GROUP 0

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