



Ministry of Human Resources
Malaysia

M

A

S

C

O

2008

**MALAYSIA
STANDARD
CLASSIFICATION
OF OCCUPATIONS
2008**

3rd Edition

MALAYSIA STANDARD CLASSIFICATION OF OCCUPATIONS 2008 THIRD EDITION

First Edition, August 2008
Second Edition, May 2009
Third Edition, Jun 2010

All inquiries should be address to:
Ministry of Human Resources
Human Resource Policy Division
Level 7, Block D3, Complex D
Federal Government Administrative Centre
62530, PUTRAJAYA

Tel: +603-8886 5000
Fax: +603-8889 2377
E-mail: ksm@mohr.gov.my

This publication is available in the MoHR website: <http://www.mohr.gov.my>

Copyright @ 2008 by Ministry of Human Resources.

All right reserved. No part of this document may be reproduced or transmitted in any form or by any means, electronic or mechanical or stored in a database or retrieval system, including photocopying, recording and duplication without written approval from the Ministry of Human Resources.

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.

ISBN 978-967-5236-28-0

TABLE OF CONTENTS

PREFACE	V
ACKNOWLEDGEMENTS	VI
CHALLENGES IN DEVELOPING MASCO-08	
PRINCIPLES OF CLASSIFICATION OF OCCUPATIONS	VII
STRUCTURE OF CLASSIFICATION	IX
NOTES ON SOME PARTICULAR OCCUPATIONS	XI
SUMMARY OF MAJOR GROUPS	XII
MAJOR, SUB – MAJOR, MINOR AND UNIT GROUP TITLES	XIV
MAJOR GROUP 1 MANAGERS	1
MAJOR GROUP 2 PROFESSIONALS	25
MAJOR GROUP 3 TECHNICIANS AND ASSOCIATE PROFESSIONALS	98
MAJOR GROUP 4 CLERICAL SUPPORT WORKERS	149
MAJOR GROUP 5 SERVICE AND SALES WORKERS	167
MAJOR GROUP 6 SKILLED AGRICULTURAL, FORESTRY AND FISHERY WORKERS	192
MAJOR GROUP 7 CRAFT AND RELATED TRADES WORKERS	204
MAJOR GROUP 8 PLANT AND MACHINE-OPERATORS AND ASSEMBLERS	237
MAJOR GROUP 9 ELEMENTARY OCCUPATIONS	263
MAJOR GROUP 0 ARMED FORCES OCCUPATIONS	281
OCCUPATIONS IN SYSTEMATICAL ORDER	287
OCCUPATIONS IN ALPHABETICAL ORDER	377
REFERENCES	459

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.

Deepest gratitude is also conveyed to Dr. Kamal bin Abd. Hamid, Encik Mohd. Nawi bin Isa, Encik Jagdev Singh s/o Kulbant Singh, Encik Abu Bakar bin Mansor and Puan Suriati binti Che Noh who were involved in the early stage of MASCO-08.

Last but not least, thanks to Encik Shamsul Anuar bin Lope Ab. Rahman, Puan Norhaili binti Kamsan, Cik Noryati binti Mohamed, Cik Wan Hamidah bt. Wan Ab. Hamid and En. Safri b. Mohd. Sarip for their dedication and effort throughout the whole journey to map, code, edit, and compile MASCO-08 to what it is now.

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; 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:

Skill Level	Educational Level	Major Groups
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 5. Service and Sales Workers 6. Skilled Agricultural, Forestry and Fishery Workers 7. Craft and Related Trades Workers 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 (1-digit)	Sub-major Groups (2-digit)	Minor Groups (3-digit)	Unit Groups (4-digit)	Small Unit Groups (5-digit)
1 Managers	4	11	37	310
2 Professionals	7	35	119	1,245
3 Technicians and Associate 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 Fishery Workers	3	9	20	144
7 Craft and Related Trades Workers	5	14	66	580
8 Plant and Machine-operators and Assemblers	3	16	46	682
9 Elementary Occupations	6	11	36	230
0 Armed Forces Occupations	3	6	6	60
10	44	144	489	4,804

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:

<i>Group</i>	<i>Title</i>	<i>Code</i>
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 Mangers. 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

MAJOR GROUP 1
MANAGERS

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

MAJOR GROUP 2
PROFESSIONALS

- 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

MAJOR GROUP 3

TECHNICIANS AND ASSOCIATE PROFESSIONALS

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

MAJOR GROUP 4

CLERICAL SUPPORT WORKERS

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

MAJOR GROUP 5

SERVICE AND SALES WORKERS

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

MAJOR GROUP 6

SKILLED AGRICULTURAL, FORESTRY, LIVESTOCK AND FISHERY WORKERS

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

MAJOR GROUP 7**CRAFT AND RELATED TRADES WORKERS**

- 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

MAJOR GROUP 8

PLANT AND MACHINE OPERATORS AND ASSEMBLERS

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
- 822 METAL AND MINERALS PRODUCTS MACHINE OPERATORS**
- 8221 Machine-Tool Setter-Operators
- 83 DRIVERS AND MOBILE PLANT OPERATORS**
- 831 LOCOMOTIVE ENGINE DRIVERS AND RELATED WORKERS**
- 8311 Locomotive Engine Drivers
- 8312 Railway Brake, Signal and Switch Operators
- 832 CAR, VAN AND MOTORCYCLE DRIVERS**
- 8321 Motorcycle Drivers
- 8322 Car, Taxi and Van Drivers
- 833 HEAVY TRUCK AND BUS DRIVERS**
- 8331 Bus and Tram Drivers
- 8332 Heavy Truck and Lorry Drivers
- 834 MOBILE PLANT OPERATORS**
- 8341 Mobile Farm and Forestry Plant Operators
- 8342 Earthmoving and Related Plant Operators
- 8343 Crane, Hoist and Related Plant Operators
- 8344 Lifting Truck Operators
- 835 SHIPS DECK CREWS AND RELATED WORKERS**
- 8350 Ships Deck Crews and Related Workers

MAJOR GROUP 9

ELEMENTARY OCCUPATIONS

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

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

MAJOR GROUP 0

ARMED FORCES OCCUPATIONS

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

M

A

S

C

O

2008

2nd 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

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.

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

M

A

S

C

O

2008

2nd 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***

21533 Engineer, telecommunications/microwave

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 harmonize 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 basic 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**

M

A

S

C

O

2008

2nd 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 supervisor 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 worked 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 works within the Royal Malaysian Customs Department apply legislation and make sure that company and individuals pay the correct amount of tax. Tax inspectors are responsible for detecting tax evasion and, in disputed cases; they represent 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 Royal Malaysian Customs Department at independent appeal tribunals in disputed cases;
- revising 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;
- supervising, scheduling and monitoring task 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 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;
- supervising, scheduling and monitoring task 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 examines applications, visas, and passports and interviews 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 Superintendent, 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 harmonize 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

S

C

O

2008

2nd 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 Justewriter**
- 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**

M

A

S

C

O

2008

2nd 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 kafan.
- 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

S

C

O

2008

2nd 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 fishermans, 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 frearms 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**

M

A

S

C

O

2008

2nd 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

A

S

C

O

2008

2nd 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 workface, 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

S

C

O

2008

2nd 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 LABOURERS 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;
- sticking 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.

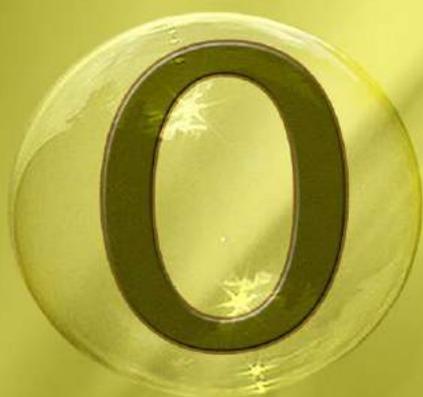
Tasks include:

- 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

2nd 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 1998	JOB TITLE
32122	32111	Technician, serology
32122	32111	Technician, tissue
32123	32112	Assistant, parasitological
32124	JPA	Technologist, medical laboratory U29
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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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	Shipyards
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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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	Newsvendor (street)

MASCO 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 1998	JOB TITLE
A		
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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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		
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 2008	MASCO 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 2008	MASCO 1998	JOB TITLE
33231	New	Buyer, purchasing
C		
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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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/despatching
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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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, mattress
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 2008	MASCO 1998	JOB TITLE
---------------	---------------	-----------

D

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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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
E		
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 chargeman R17
74128	72418	Electrical repairman, household appliance
74126	72416	Electrician, aircraft
74111	74123	Electrician, building
74112	New	Electrician, construction

MASCO 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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, mechatronics
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 2008	MASCO 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 2008	MASCO 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
F		
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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 1998	JOB TITLE
81845	81315	Furnace-operator, tempering/glass
93339	93419	Furniture mover
G		
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 2008	MASCO 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 2008	MASCO 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
H		
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 2008	MASCO 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
I		
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 2008	MASCO 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
J		
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	Jointer, cable/electric
26421	29315	Journalist
26423	JPA	Journalist S41
26121	25021	Judge, federal court

MASCO 2008	MASCO 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
K		
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
L		
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 2008	MASCO 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 2008	MASCO 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
M		
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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 1998	JOB TITLE
75335	74425	Maker, leather goods
62113	61418	Maker, log-raft
75343	74343	Maker, mattres
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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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
N		
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	News vendor (street)
43112	41301	Night auditor
54147	New	Night watchman

MASCO 2008	MASCO 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
O		
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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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
P		
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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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
Q		
75164	74154	Quality checker, cigarette
82191	82901	Quality checker/tester
81112	71112	Quarier
83501	83404	Quatermaster, ship
R		
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 2008	MASCO 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 proceses
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 / zink
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
S		
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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 lieutenant, 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 2008	MASCO 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 2008	MASCO 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
T		
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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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 2008	MASCO 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, muscular
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 2008	MASCO 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
U		
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
V		
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 2008	MASCO 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
W		
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 2008	MASCO 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 2008	MASCO 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
Y		
83124	83124	Yardman
43232	44002	Yardmaster railway
81314	81596	Yarn maker, synthetic
Z		
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

References

Malaysia Standard Classification of Occupations 1998, Manpower Department, Ministry of Human Resources.

International Standard Classification of Occupations 1988, International Labour Office Geneva, Printed in Belgium, 1990.

Kerangka Latihan dan Pembangunan Kemahiran Pekerjaan Malaysia 2008, Department of Skill Development, Ministry of Human Resources.

300 Best Jobs without a Four-Year Degree, Second Edition, Michael Farr With database Work by Laurence Shatkin, Ph.D, jist works America's Career Publisher, 2006.

150 Best Jobs for a Better World, The Editors @ Jist and Laurence Shatkin, Ph.D, jist works America's Career Publisher, 2008.

200 Best Jobs for College Graduates third Edition, Michael Farr With database Work by Laurence Shatkin, Ph.D, jist works America's Career Publisher, 2006.

250 Best Jobs Through Apprenticeships, Michael Farr and Laurence Shatkin, Ph.D, jist works America's Career Publisher, 2005.

150 Best Jobs for Your Skills, Michael Farr America's Career Expert and Laurence Shatkin, Ph.D, jist works America's Career Publisher, 2008.

Best Jobs for the 21st Century Fourth Edition, Michael Farr With database Work by Laurence Shatkin, Ph.D, jist works America's Career Publisher, 2006.

40 Best Fields for Your Career, Michael Farr and Laurence Shatkin, Ph.D, jist works America's Career Publisher, 2006.

175 Best jobs Not Behind a Desk, Michael Farr and Laurence Shatkin, Ph.D, jist works America's Career Publisher, 2007.

225 Best Jobs for Baby Boomers, Michael Farr and Laurence Shatkin, Ph.D, jist works America's Career Publisher, 2007.

*O*NET, Dictionary of Occupational Titles, Fourth Edition*, Developed under the Direction of Michael Farr and Laurence Shatkin, Ph.D, jist works America's Career Publisher, 2007.

Dictionary of Occupational Titles Volume II, Fourth Edition, Employment and Training Administration, Roberts T. Jones Assistant Secretary of Labor, U.S. Government Printing Office, 1991.

Kamus Dwibahasa Oxford Fajar, Joyce M. Hawkins, Oxford Fajar Sdn. Bhd., 2006.

<http://www.jobsmalaysia.gov.my>

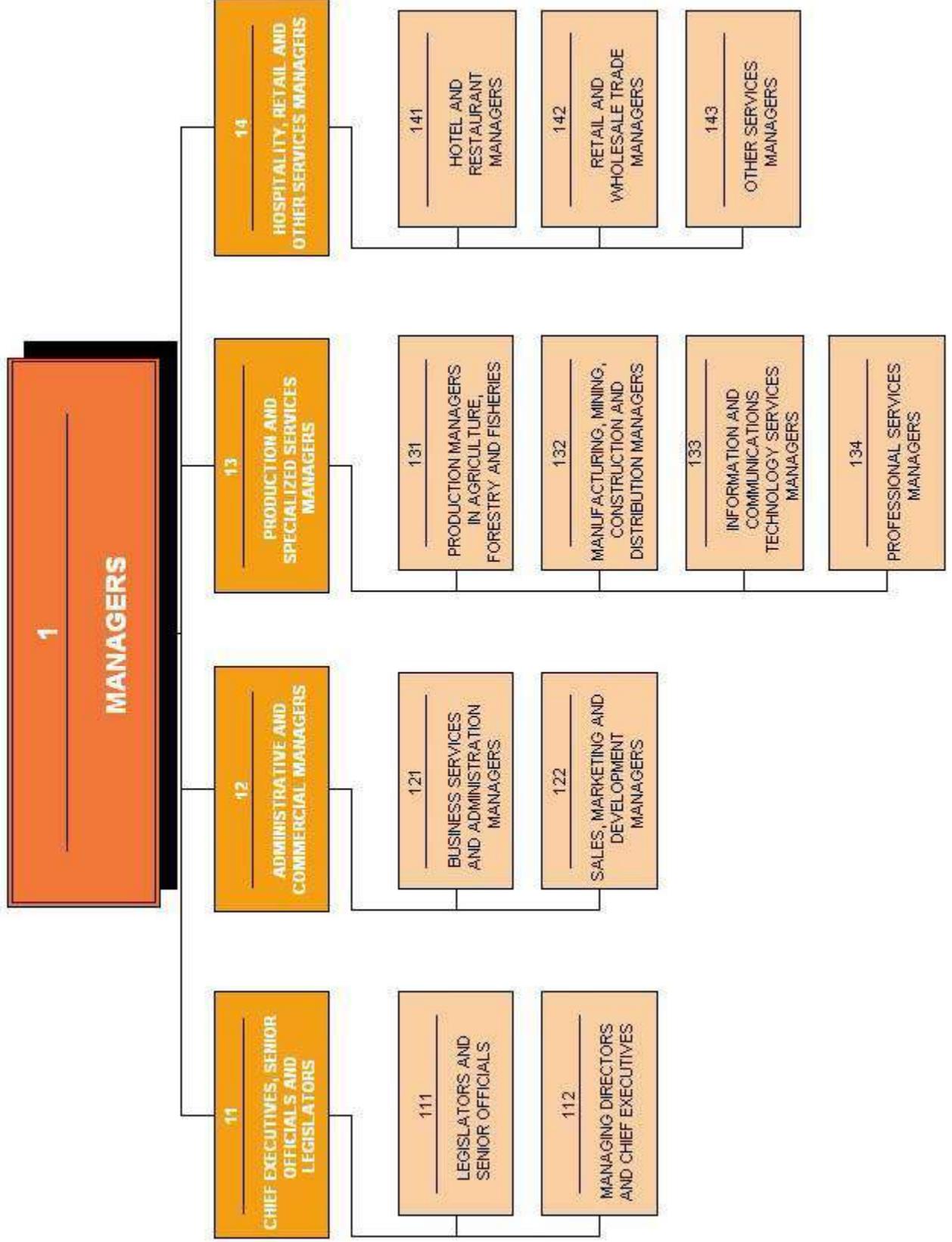
<http://www.google.com.my/>

<http://www.yahoo.com/>

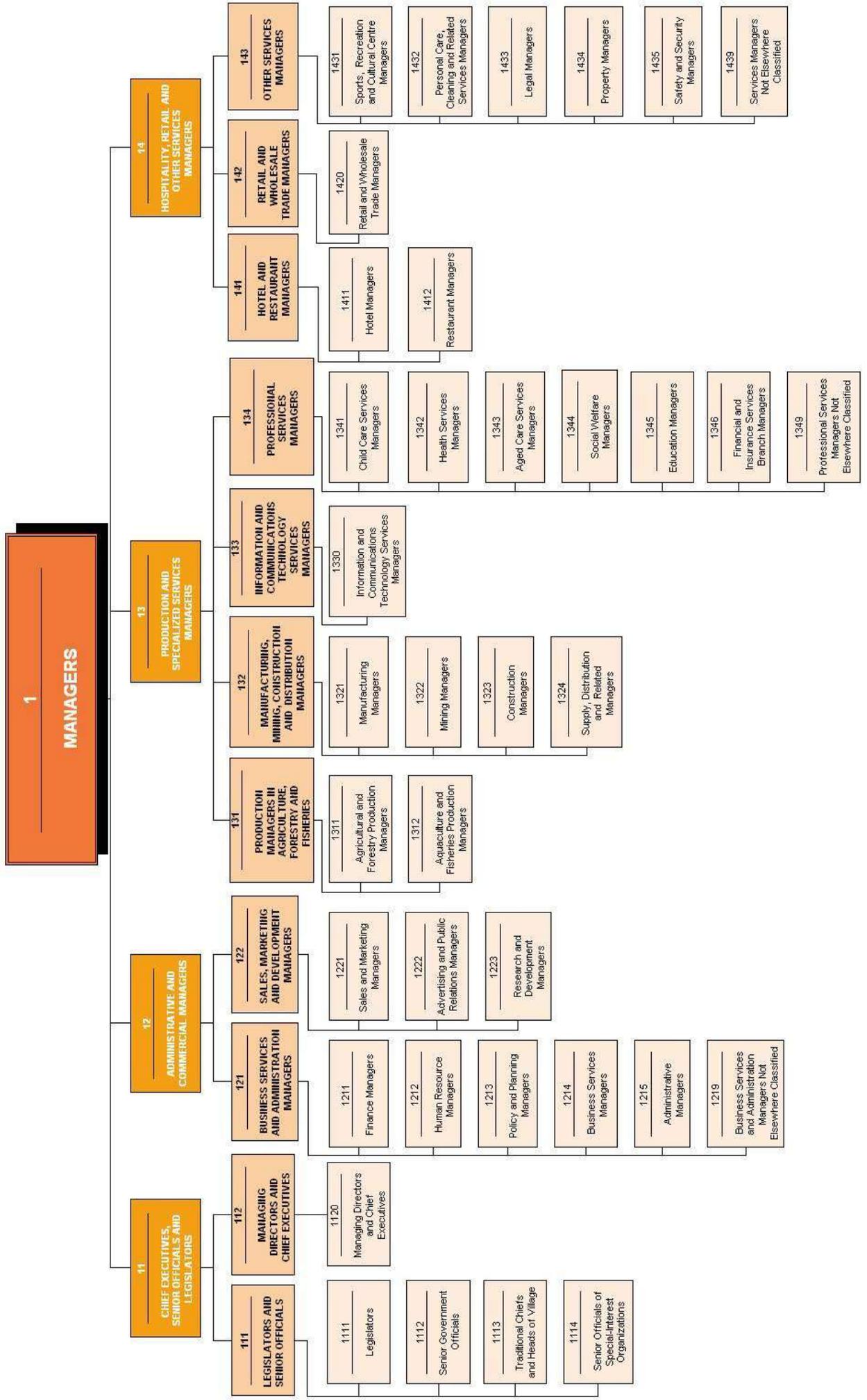
<http://prpm.dbp.gov.my/>

<http://www.encyclopedia.com>

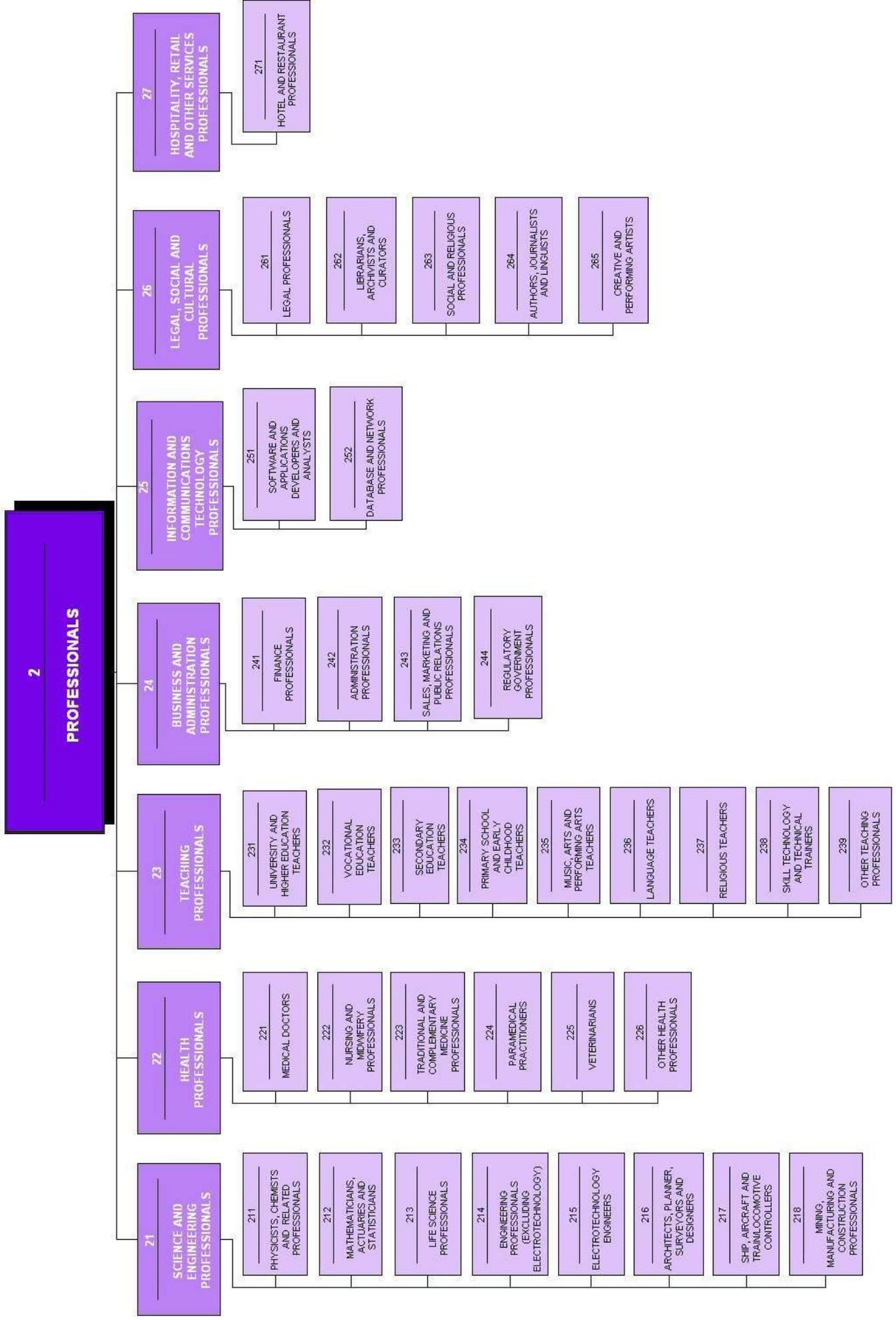
MAJOR GROUP 1 MANAGERS



MAJOR GROUP 1 MANAGERS

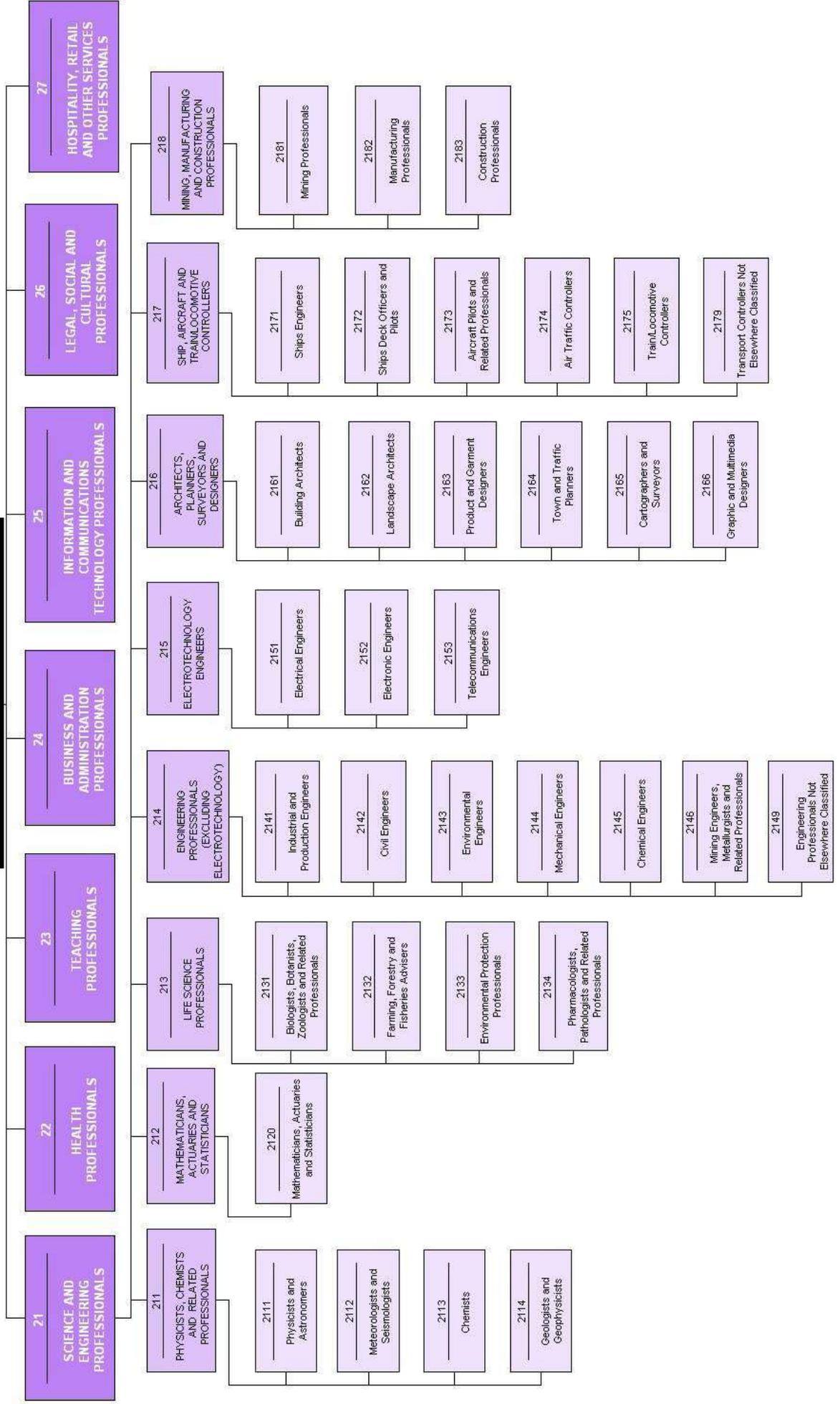


MAJOR GROUP 2 PROFESSIONALS



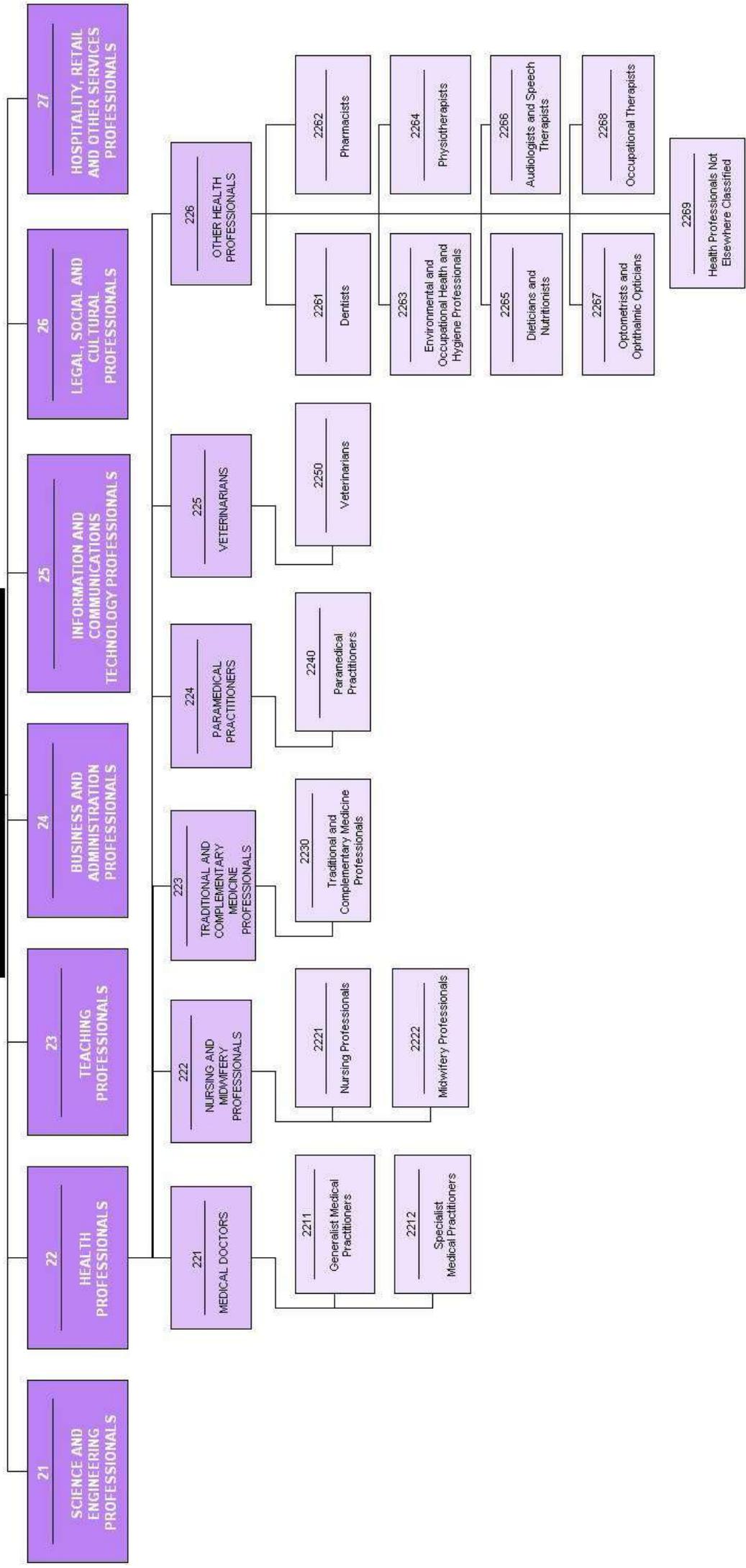
MAJOR GROUP 2 PROFESSIONALS

2 PROFESSIONALS



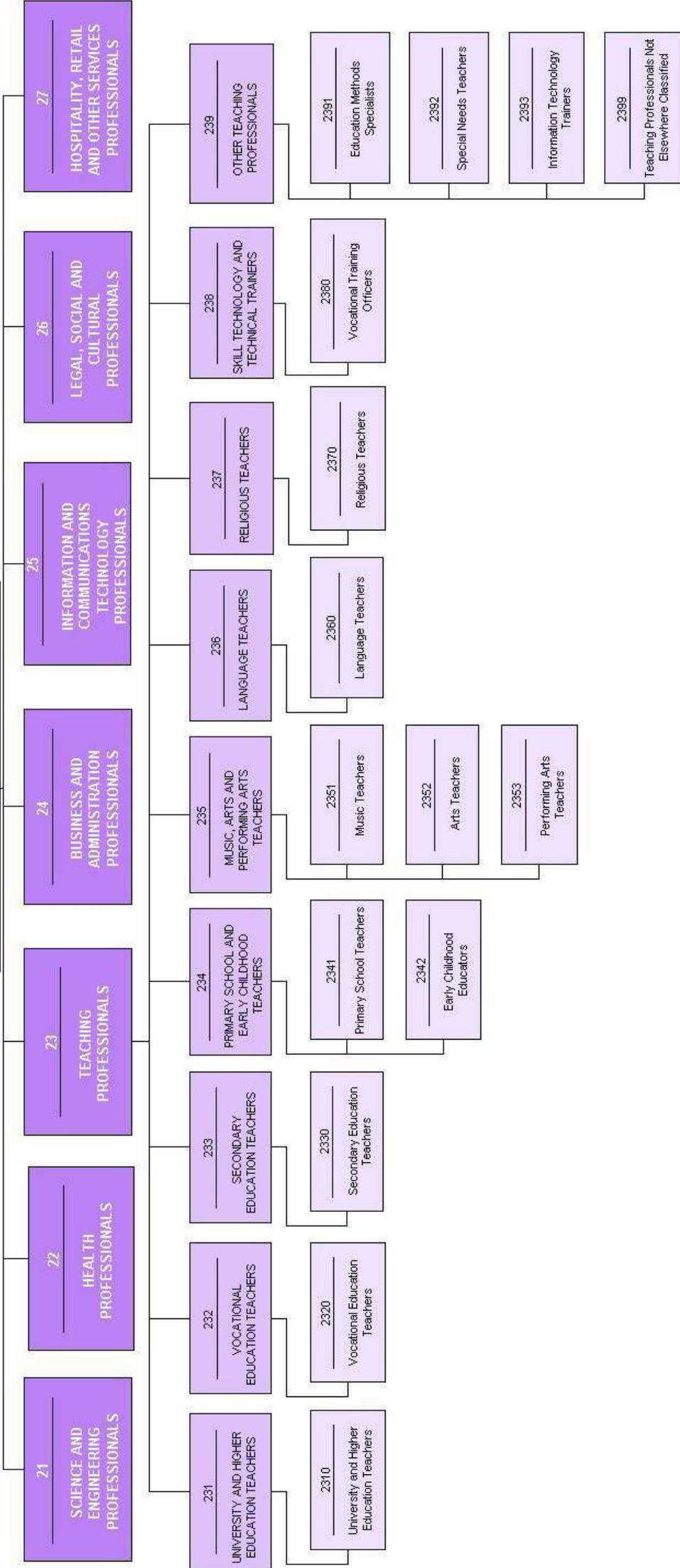
MAJOR GROUP 2 PROFESSIONALS

2 PROFESSIONALS



MAJOR GROUP 2 PROFESSIONALS

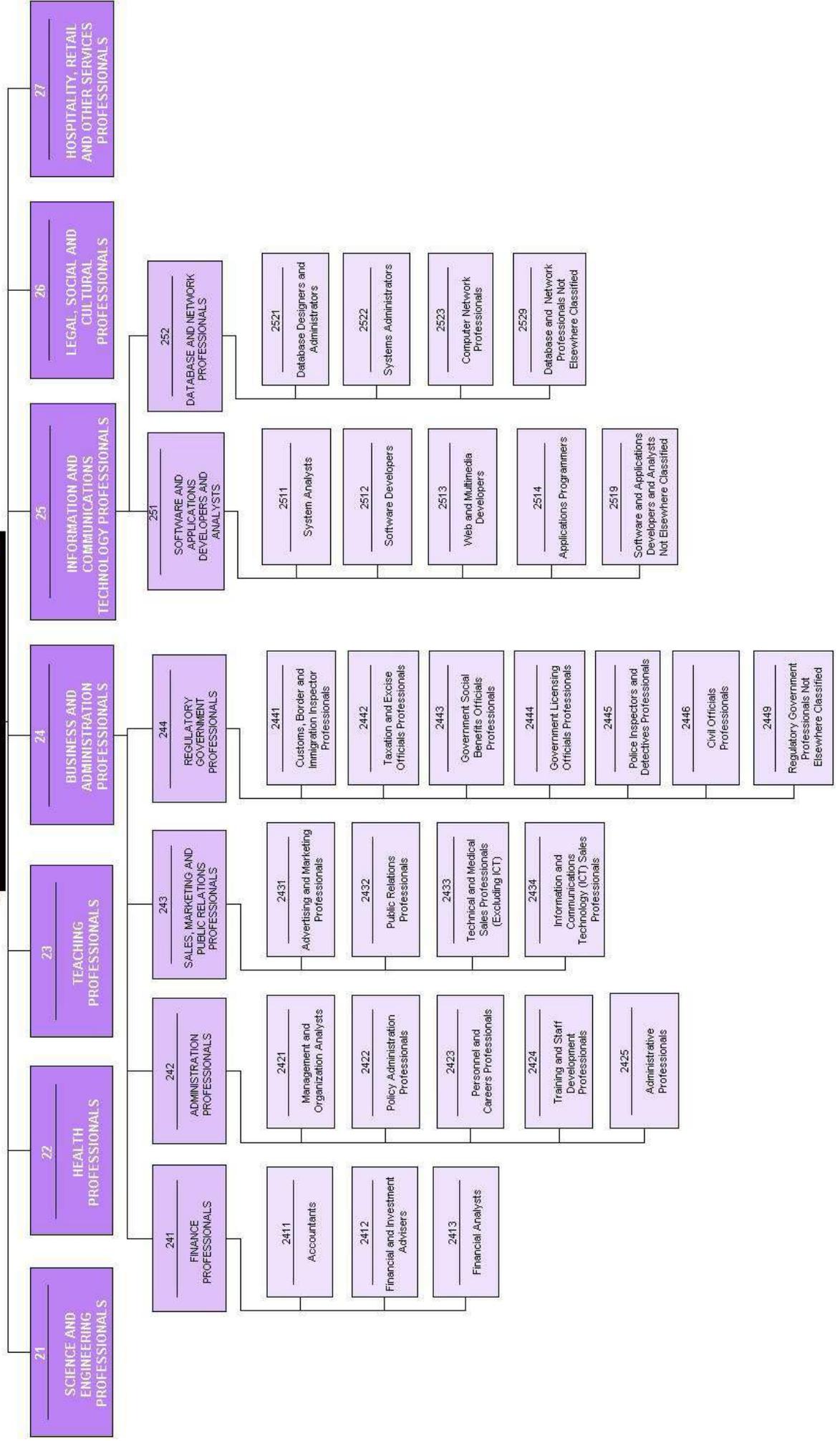
2 PROFESSIONALS



MAJOR GROUP 2 PROFESSIONALS

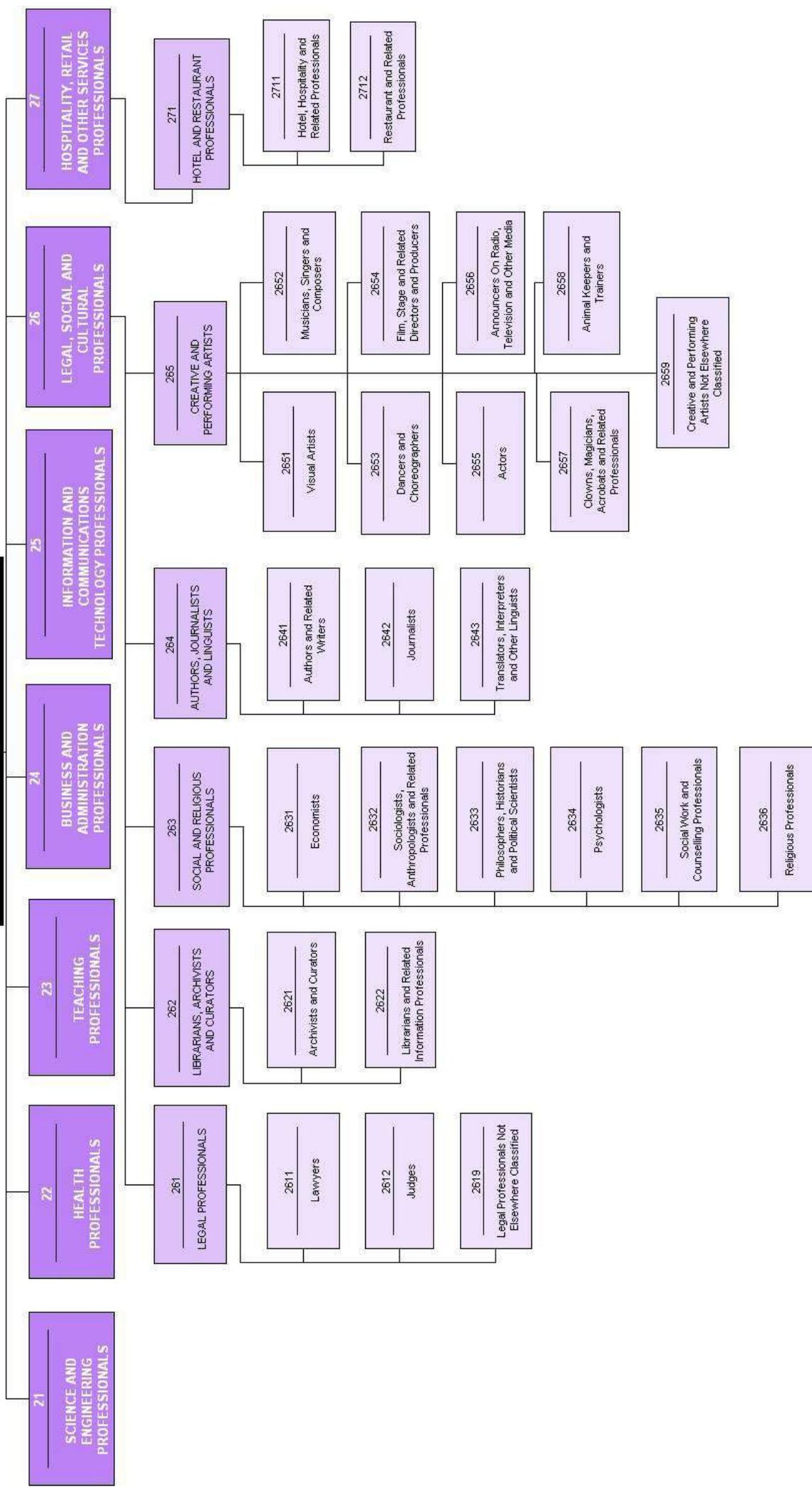
2

PROFESSIONALS

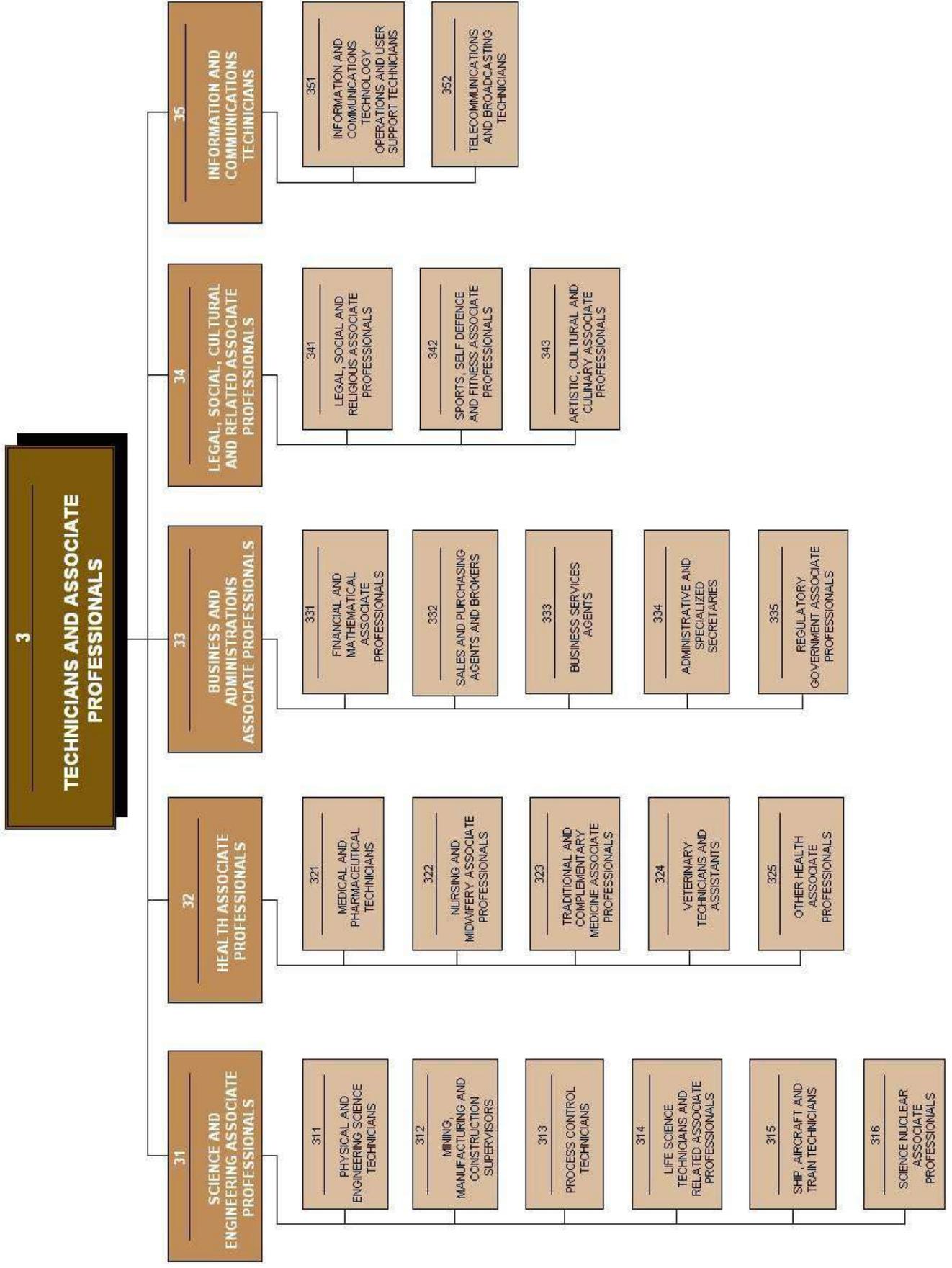


MAJOR GROUP 2 PROFESSIONALS

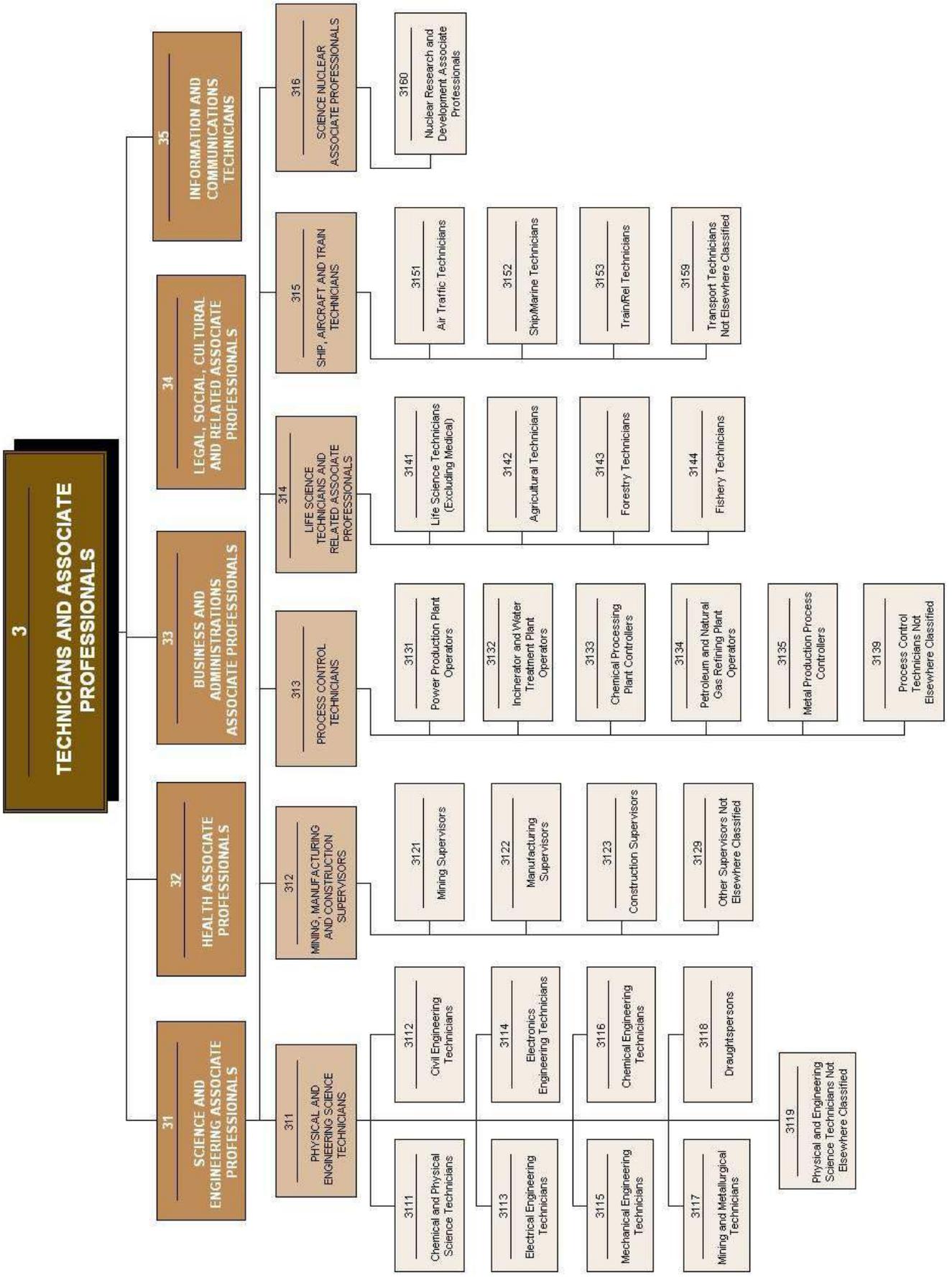
2 PROFESSIONALS



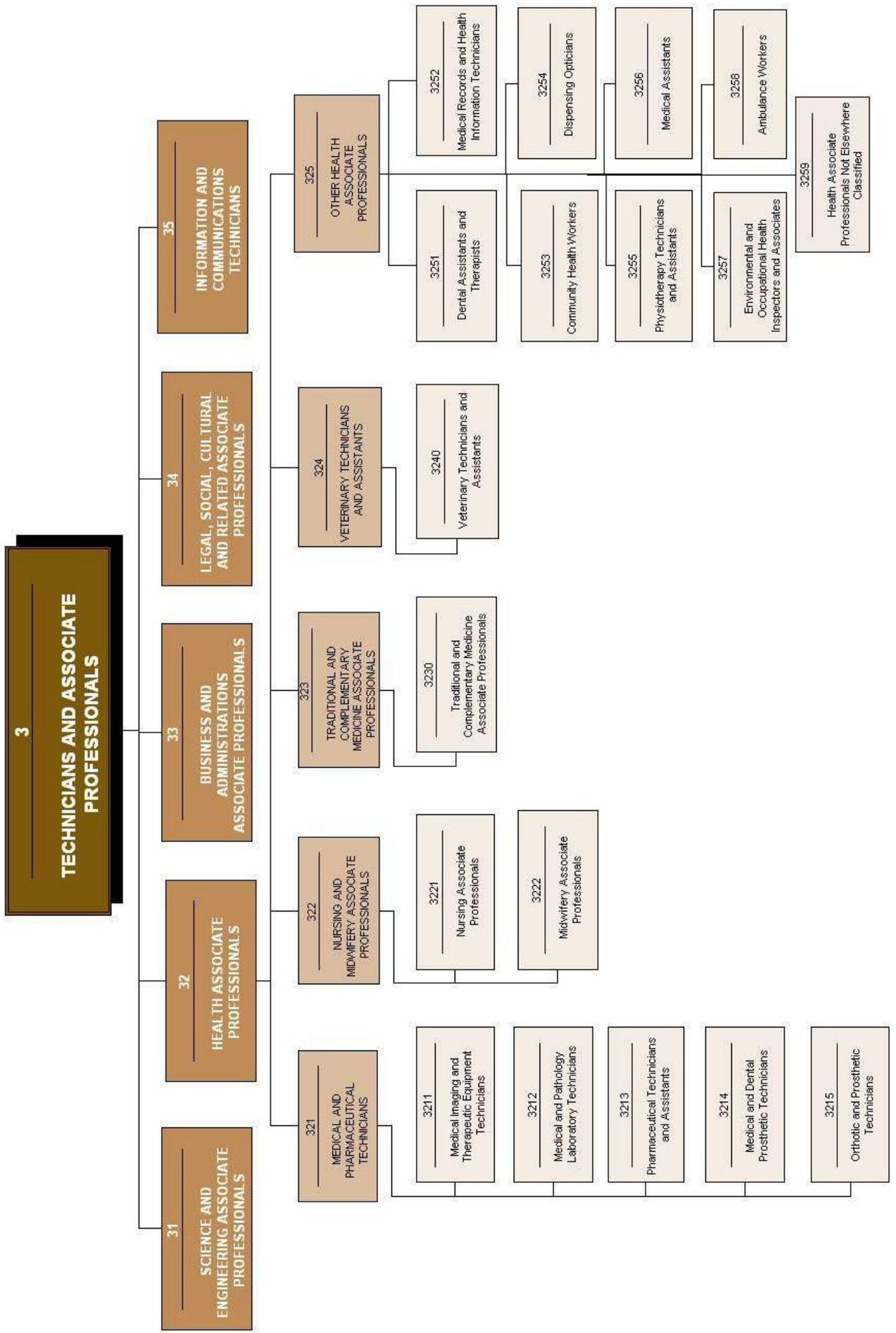
**MAJOR GROUP 3
TECHNICIANS AND ASSOCIATE PROFESSIONALS**



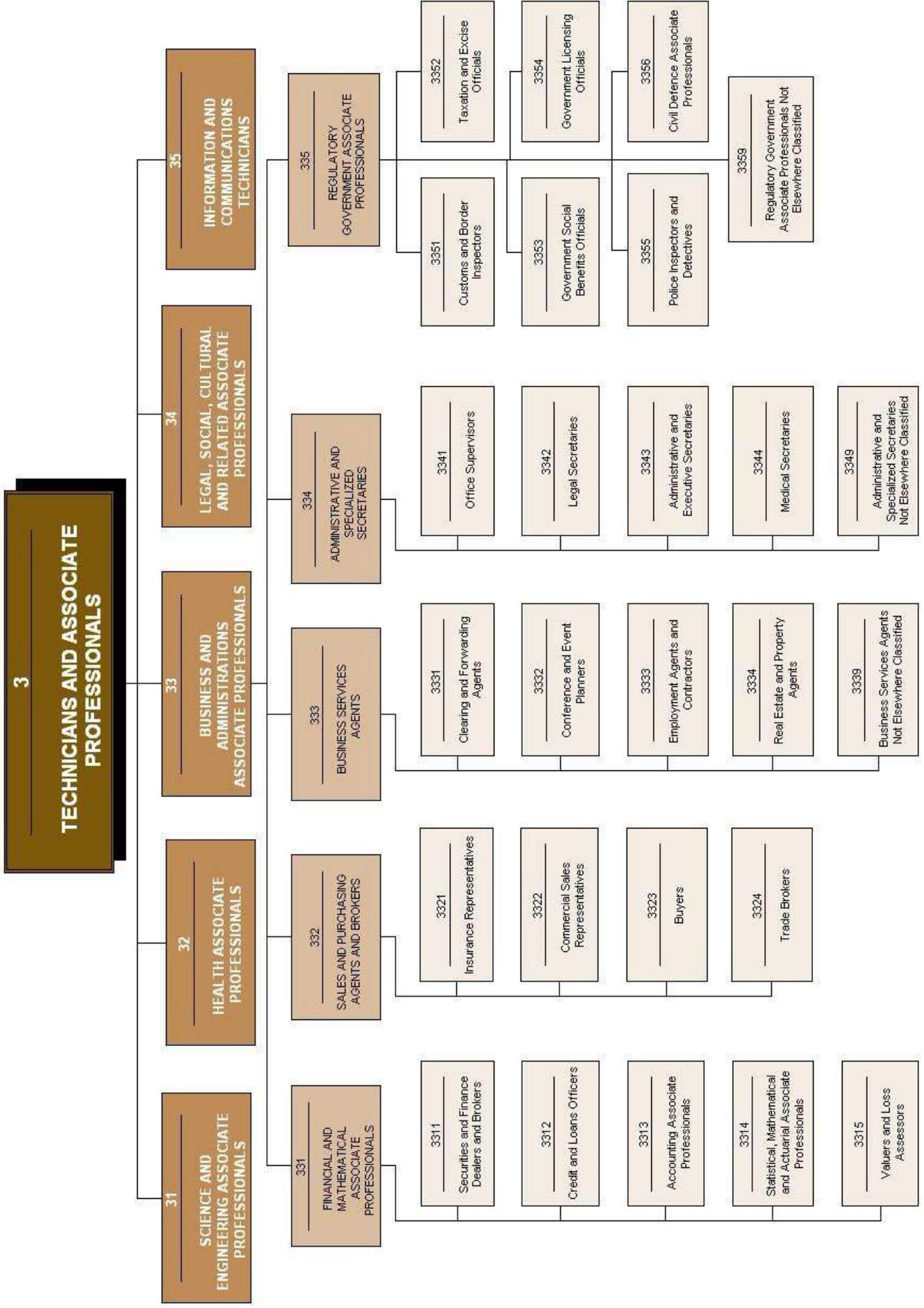
MAJOR GROUP 3 TECHNICIANS AND ASSOCIATE PROFESSIONALS



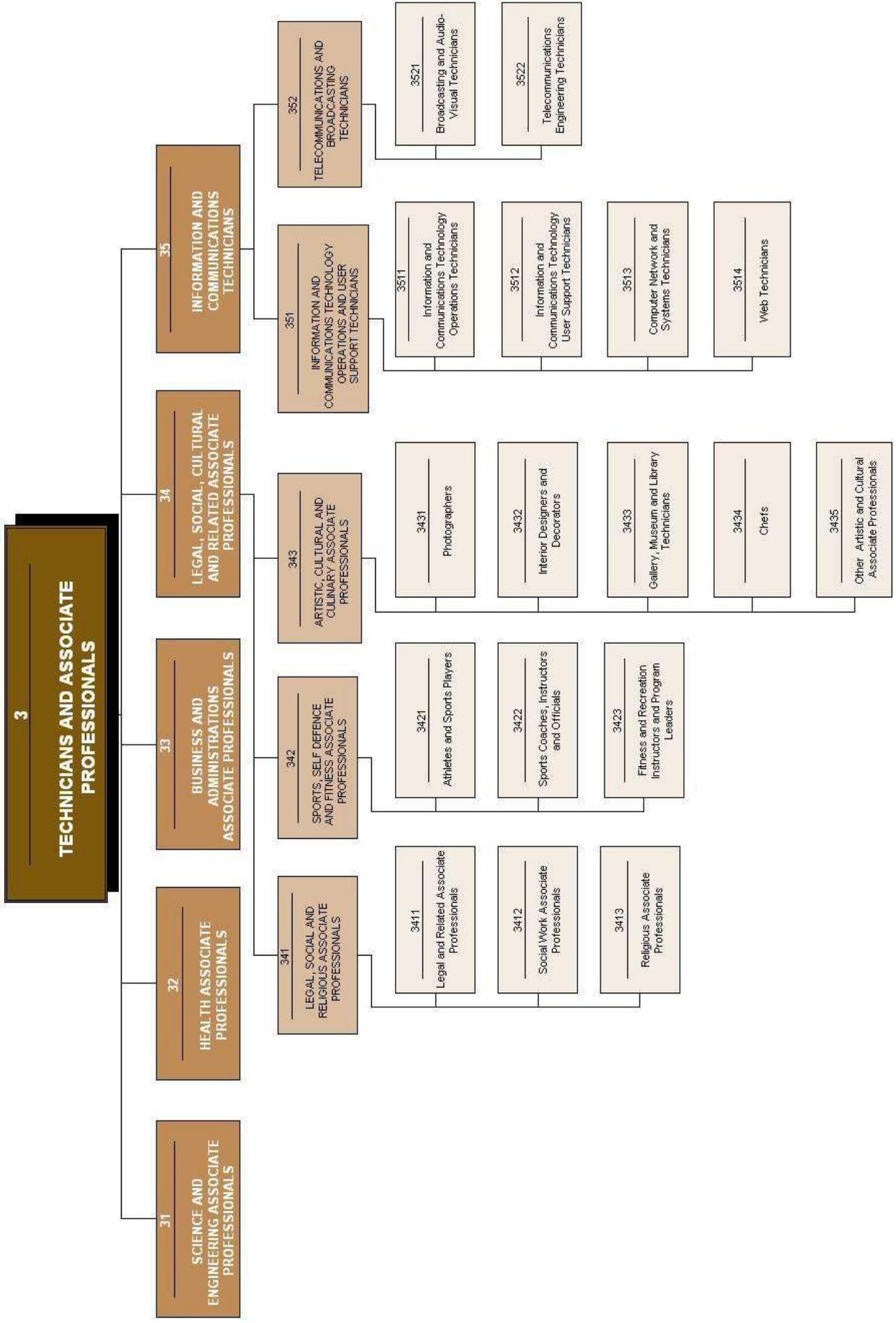
MAJOR GROUP 3 TECHNICIANS AND ASSOCIATE PROFESSIONALS



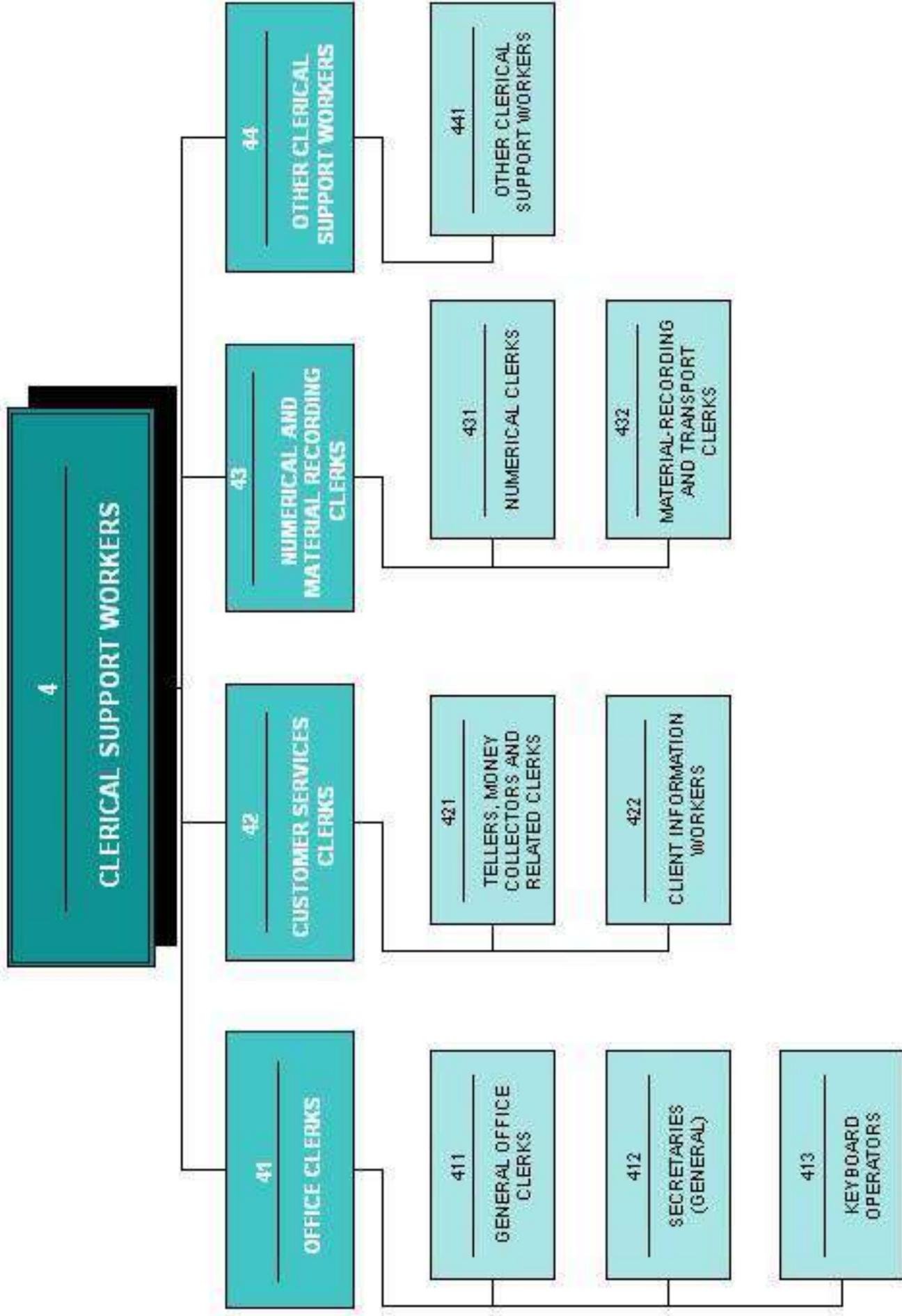
MAJOR GROUP 3 TECHNICIANS AND ASSOCIATE PROFESSIONALS



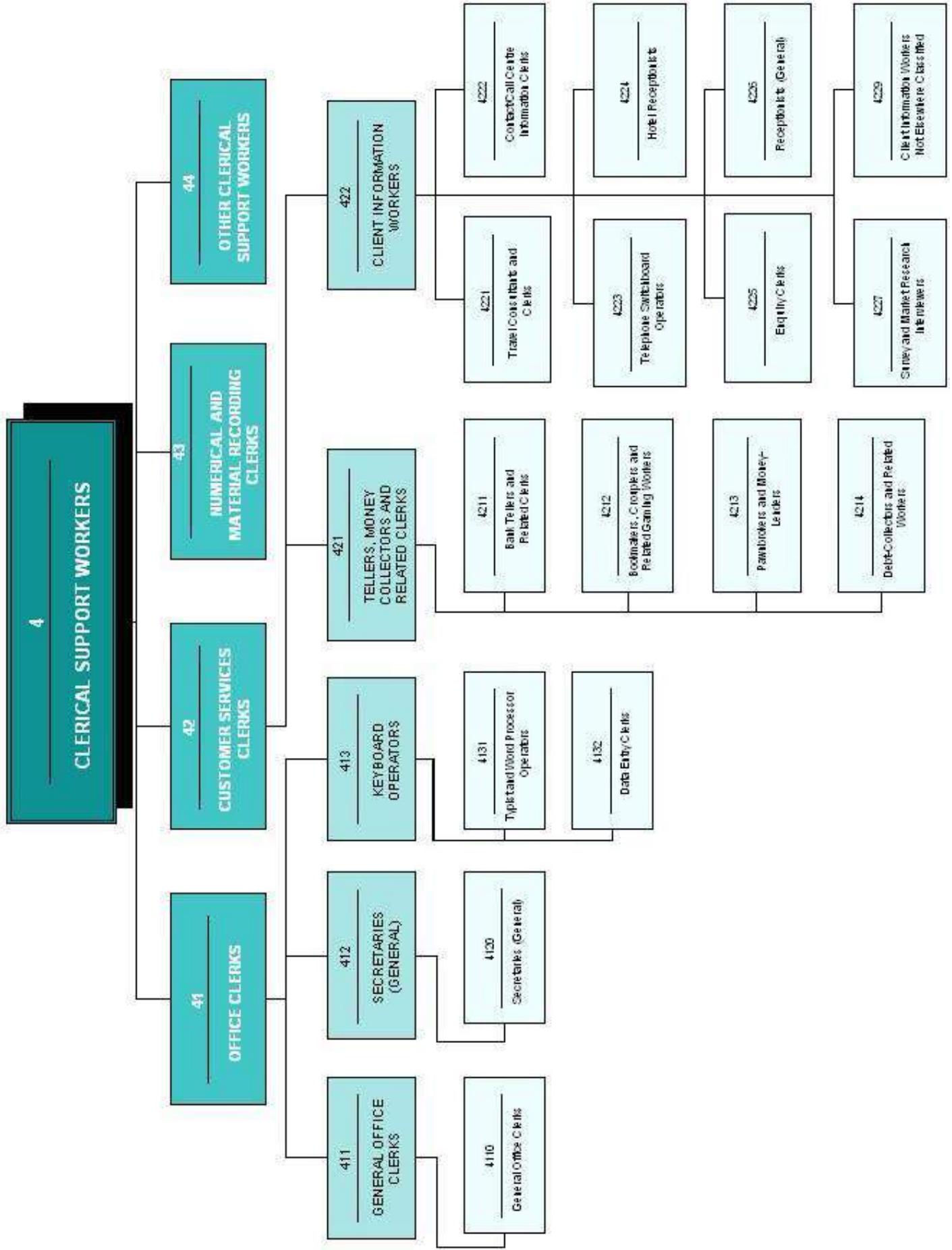
MAJOR GROUP 3 TECHNICIANS AND ASSOCIATE PROFESSIONALS



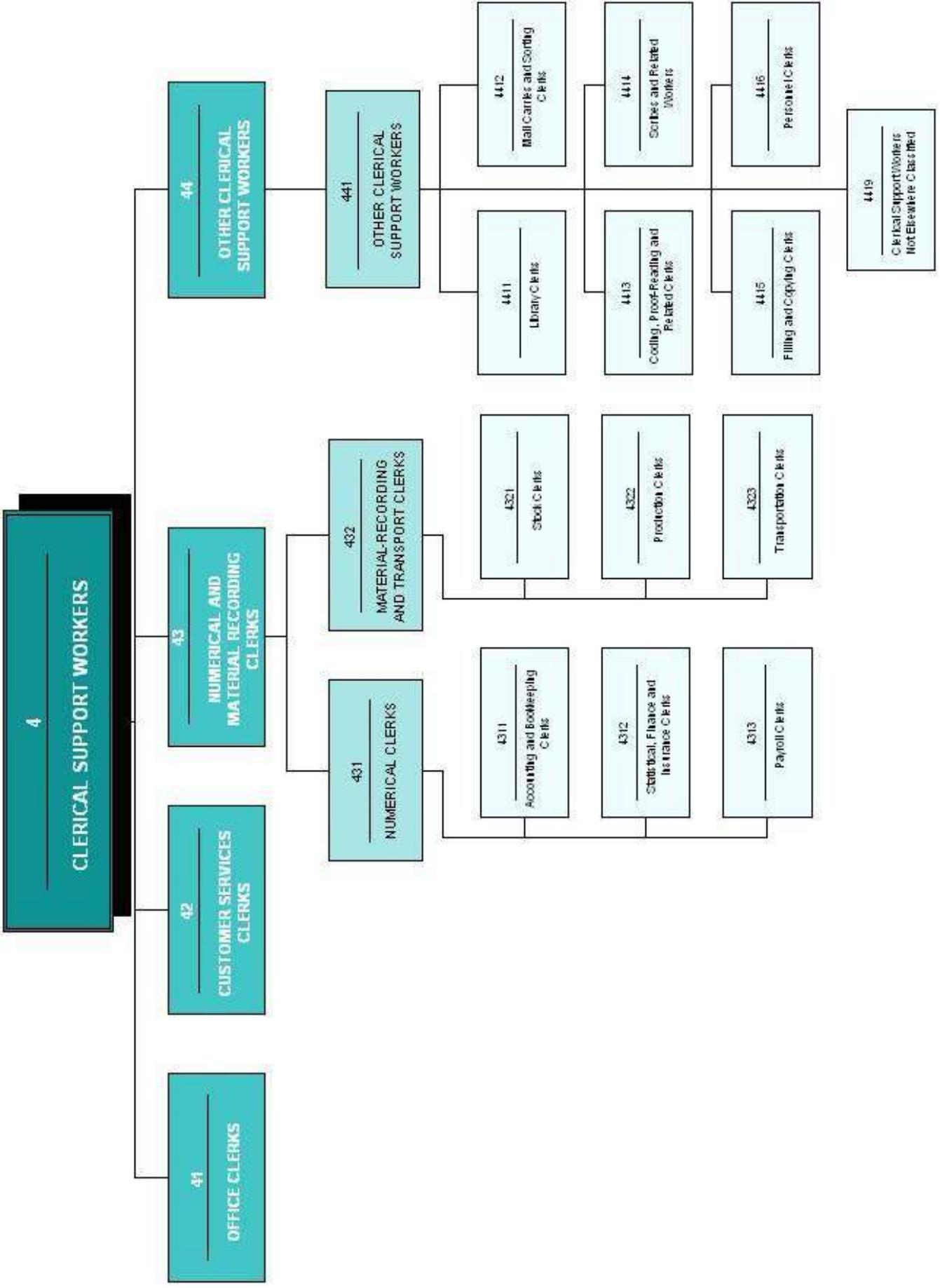
MAJOR GROUP 4 CLERICAL SUPPORT WORKERS



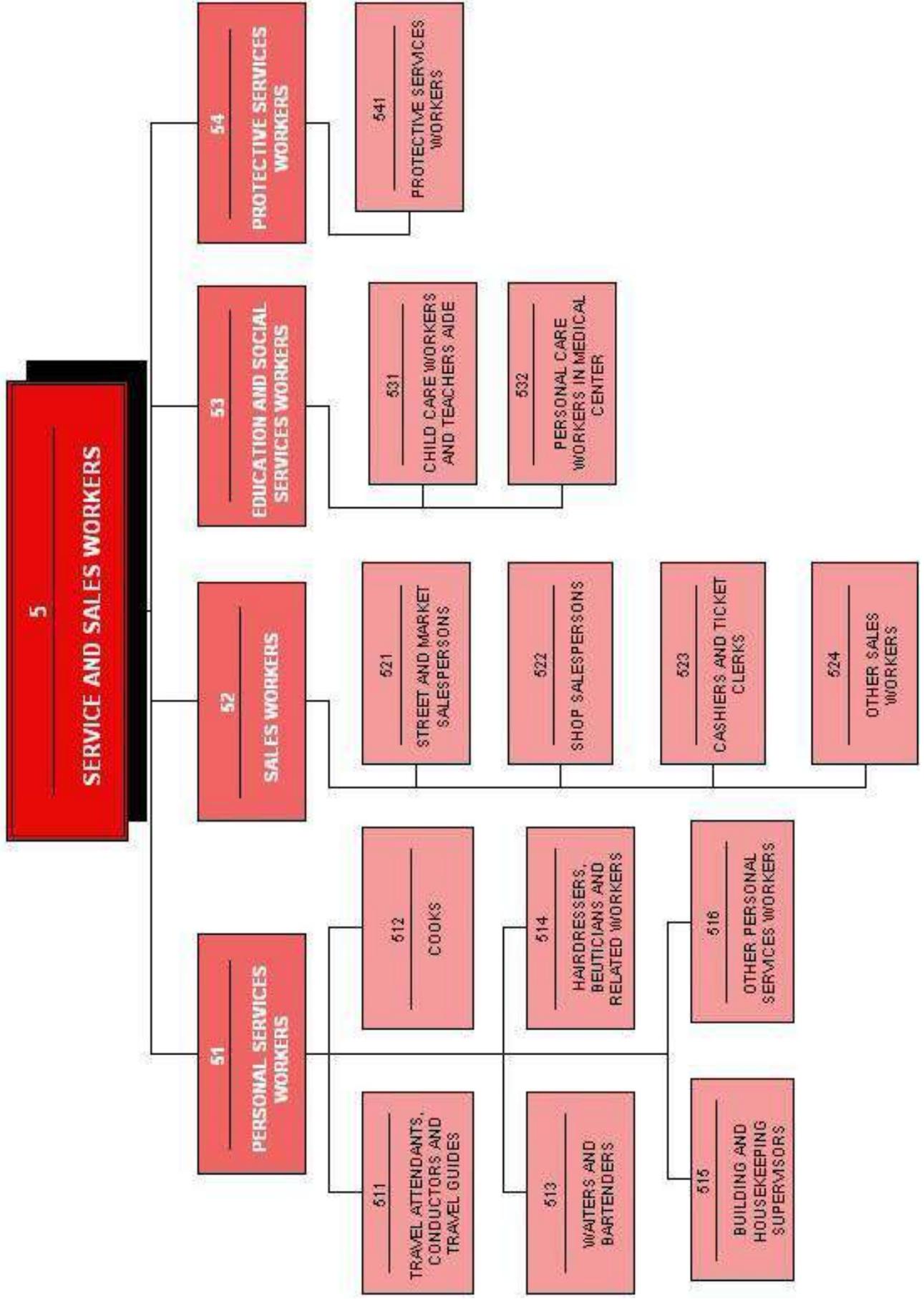
MAJOR GROUP 4 CLERICAL SUPPORT WORKERS



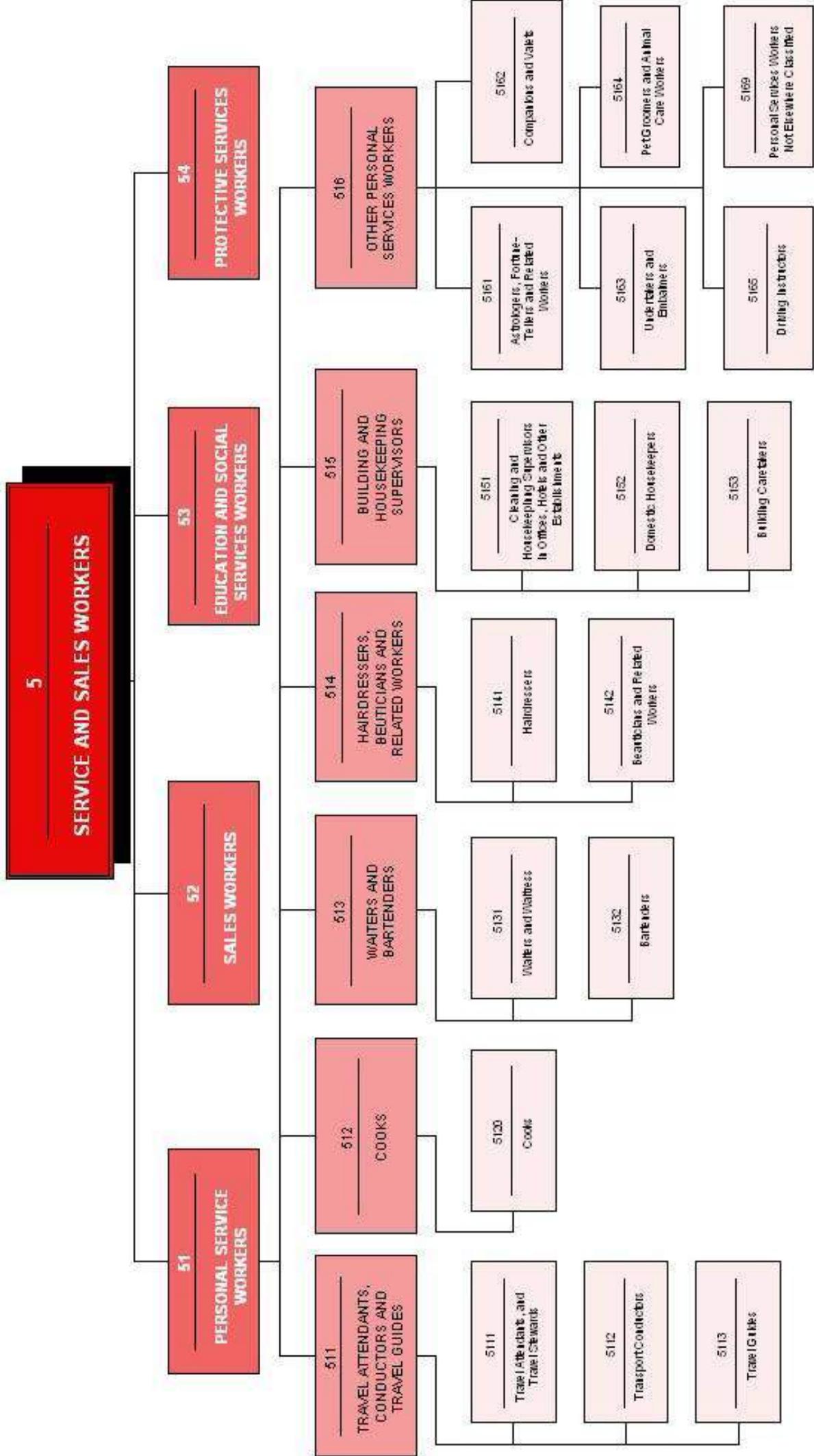
MAJOR GROUP 4 CLERICAL SUPPORT WORKERS



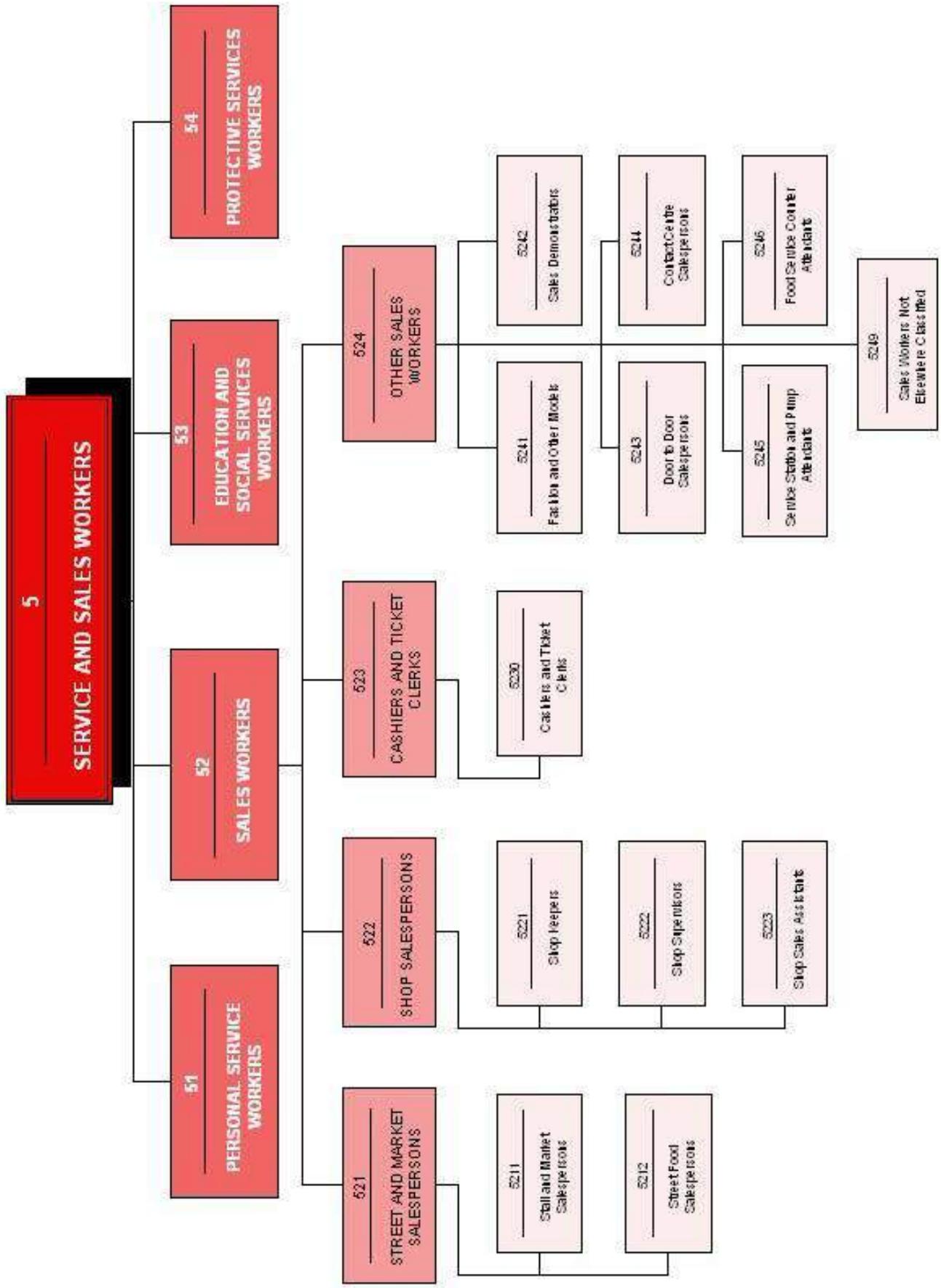
**MAJOR GROUP 5
SERVICE AND SALES WORKERS**



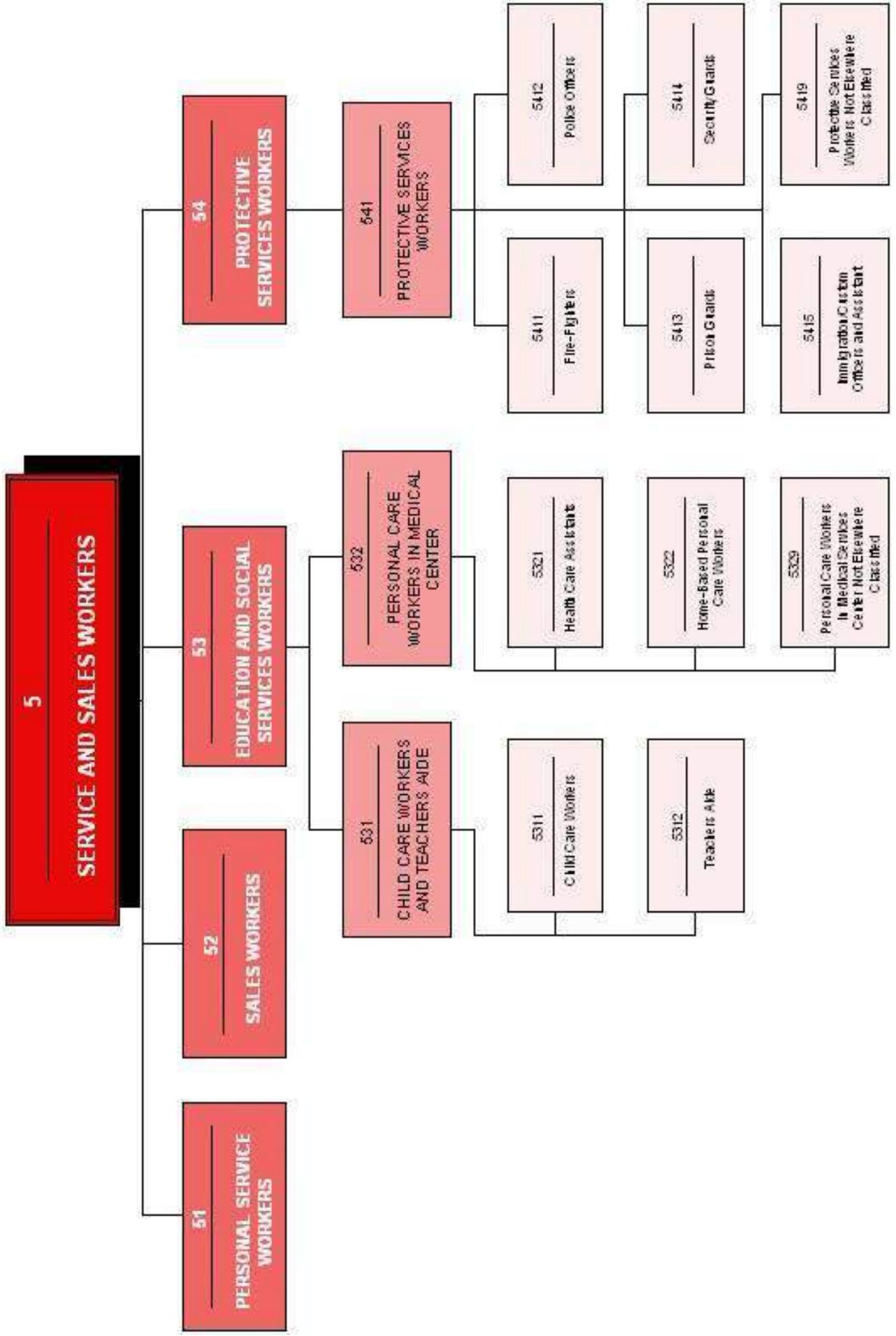
MAJOR GROUP 5 SERVICE AND SALES WORKERS



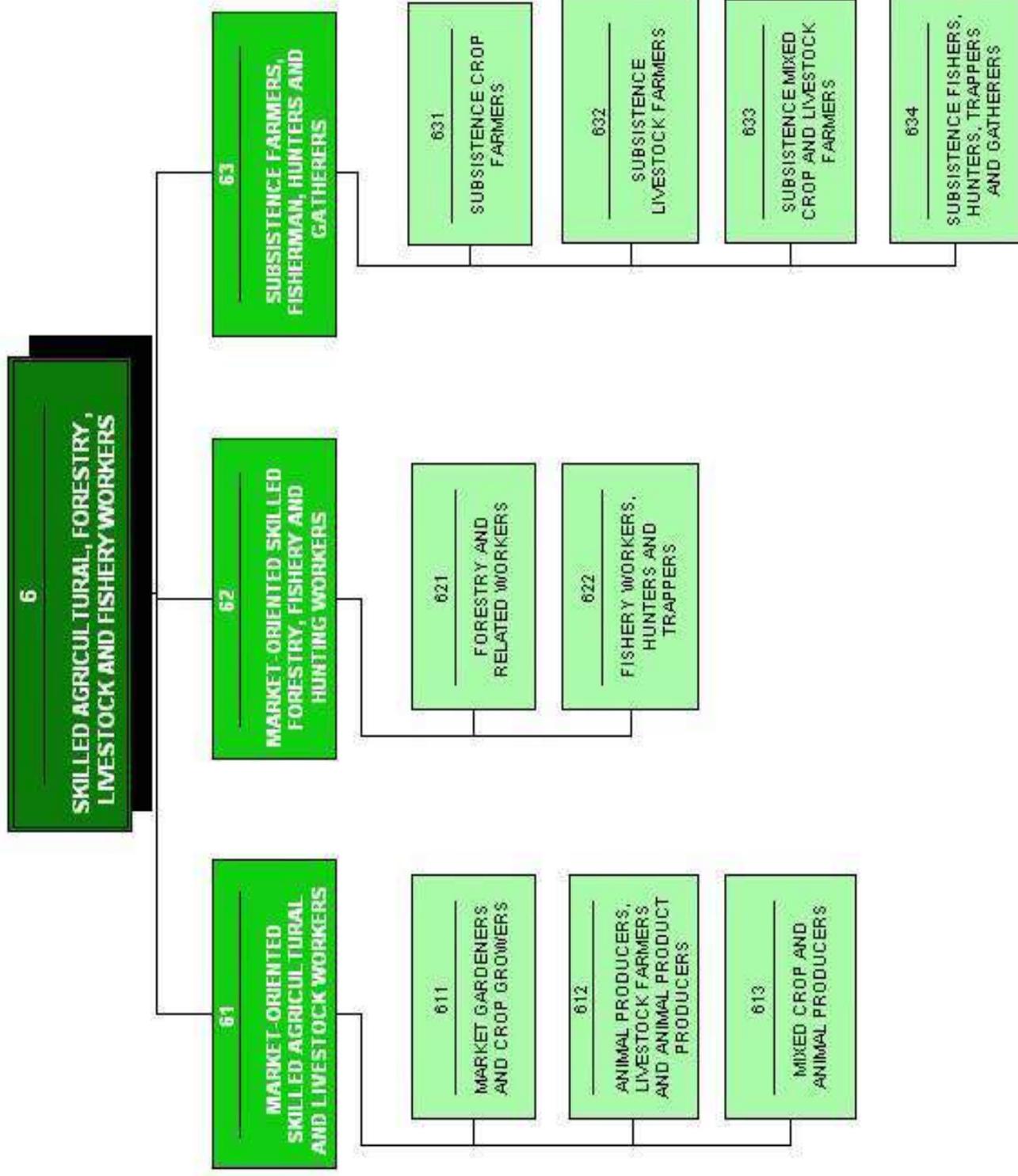
MAJOR GROUP 5 SERVICE AND SALES WORKERS



**MAJOR GROUP 5
SERVICE AND SALES WORKERS**

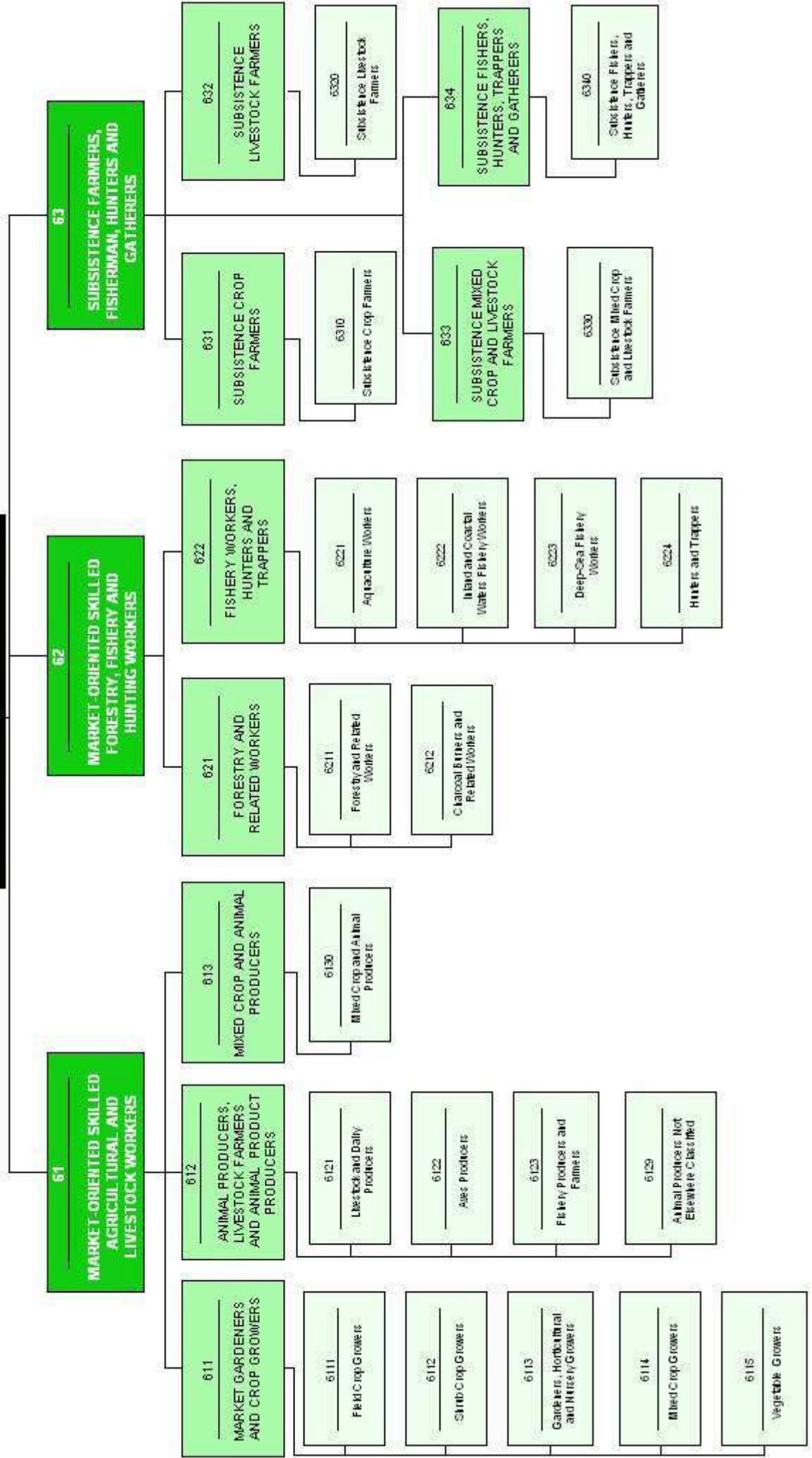


MAJOR GROUP 6
SKILLED AGRICULTURAL, FORESTRY, LIVESTOCK AND FISHERY WORKERS

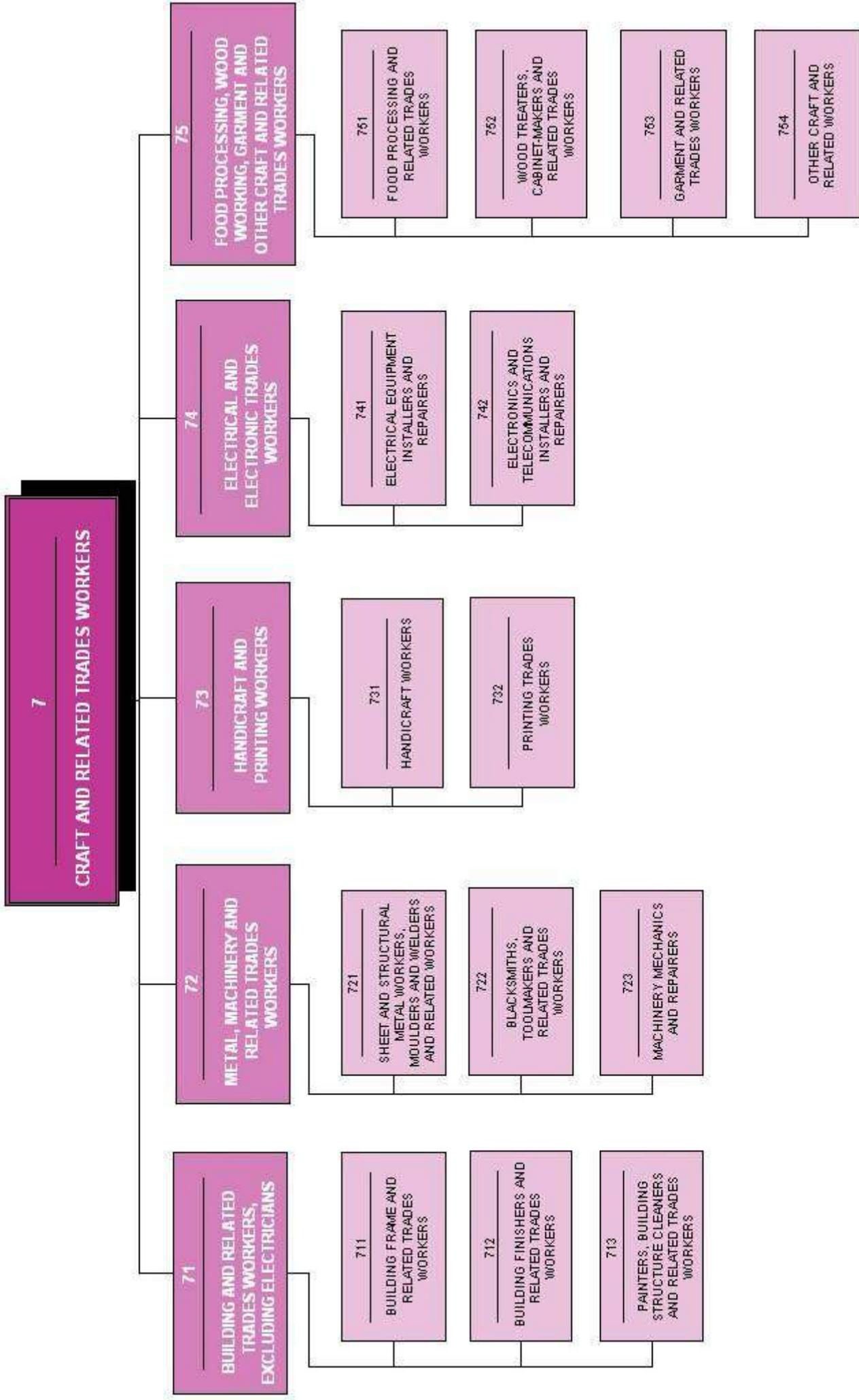


MAJOR GROUP 6
SKILLED AGRICULTURAL, FORESTRY, LIVESTOCK AND FISHERY WORKERS

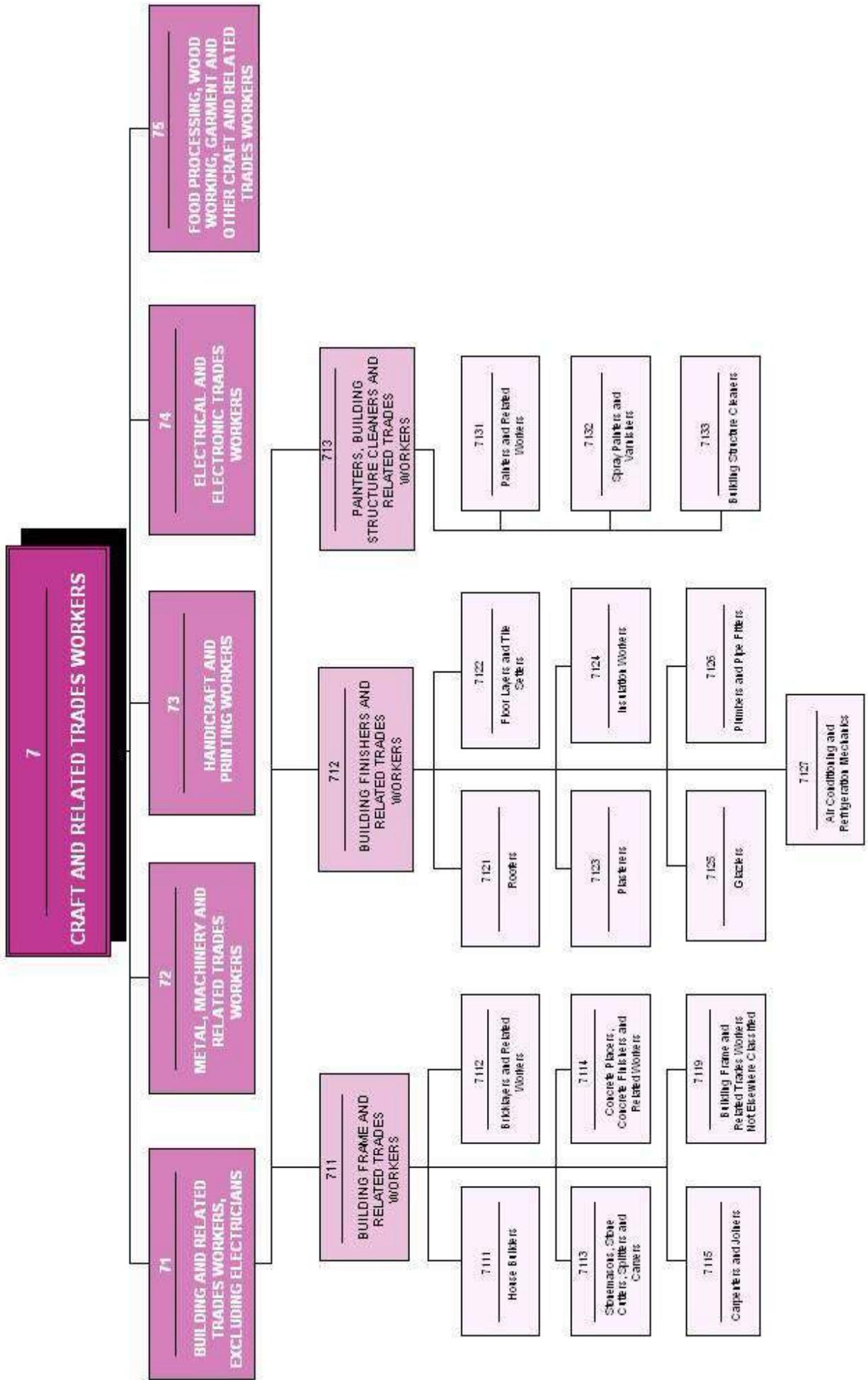
6
SKILLED AGRICULTURAL, FORESTRY, LIVESTOCK AND FISHERY WORKERS



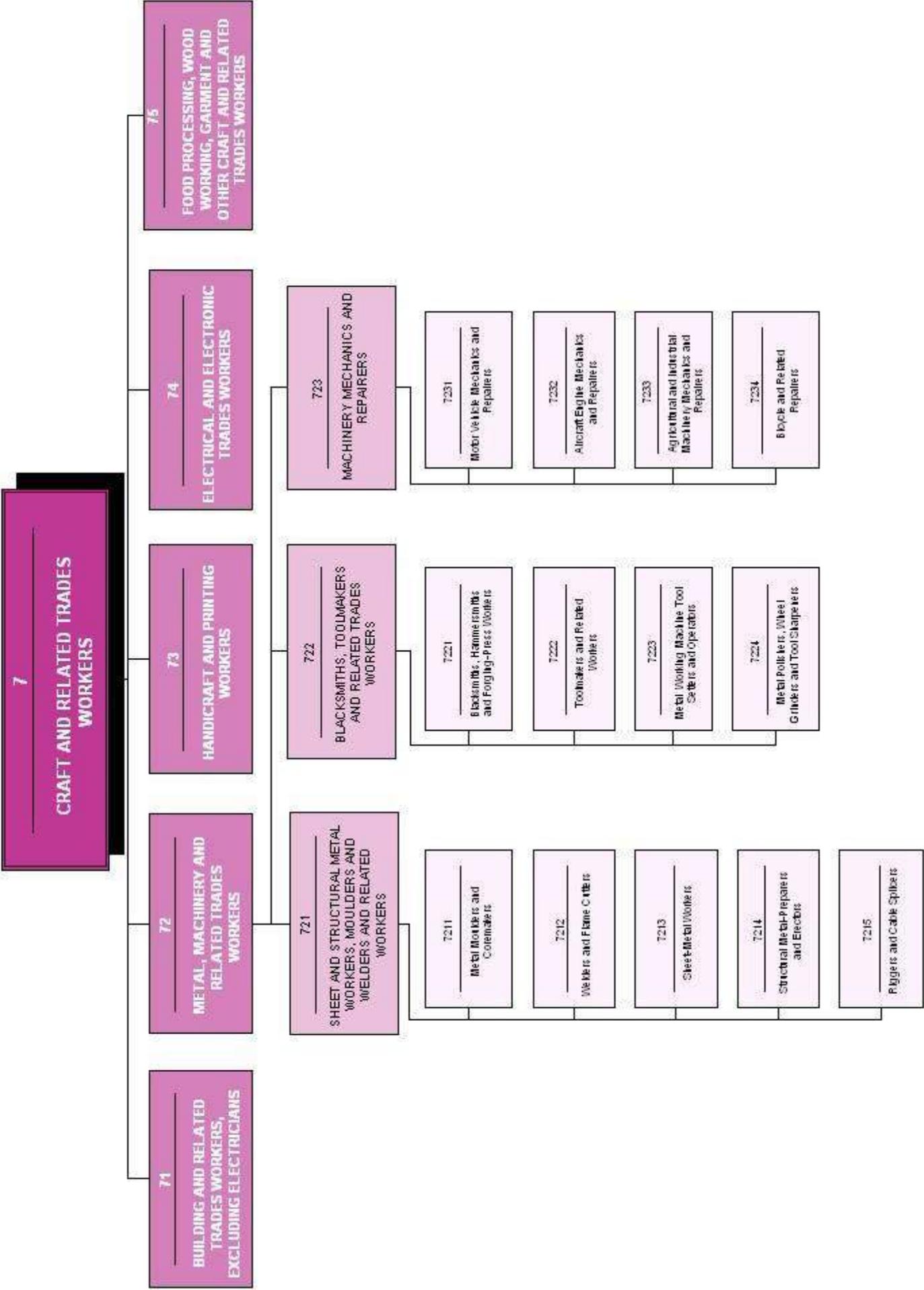
MAJOR GROUP 7 CRAFT AND RELATED TRADES WORKERS



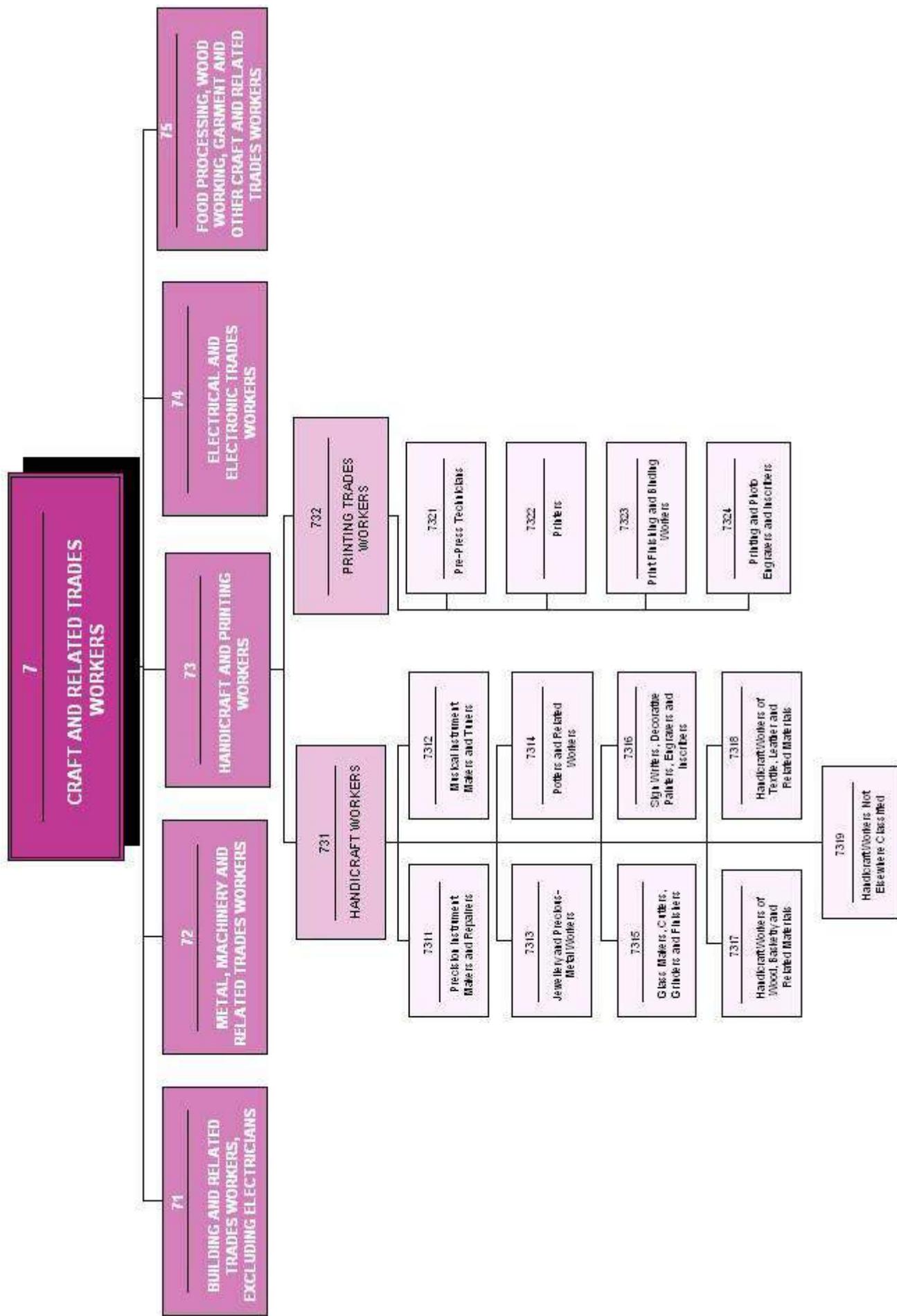
MAJOR GROUP 7 CRAFT AND RELATED TRADES WORKERS



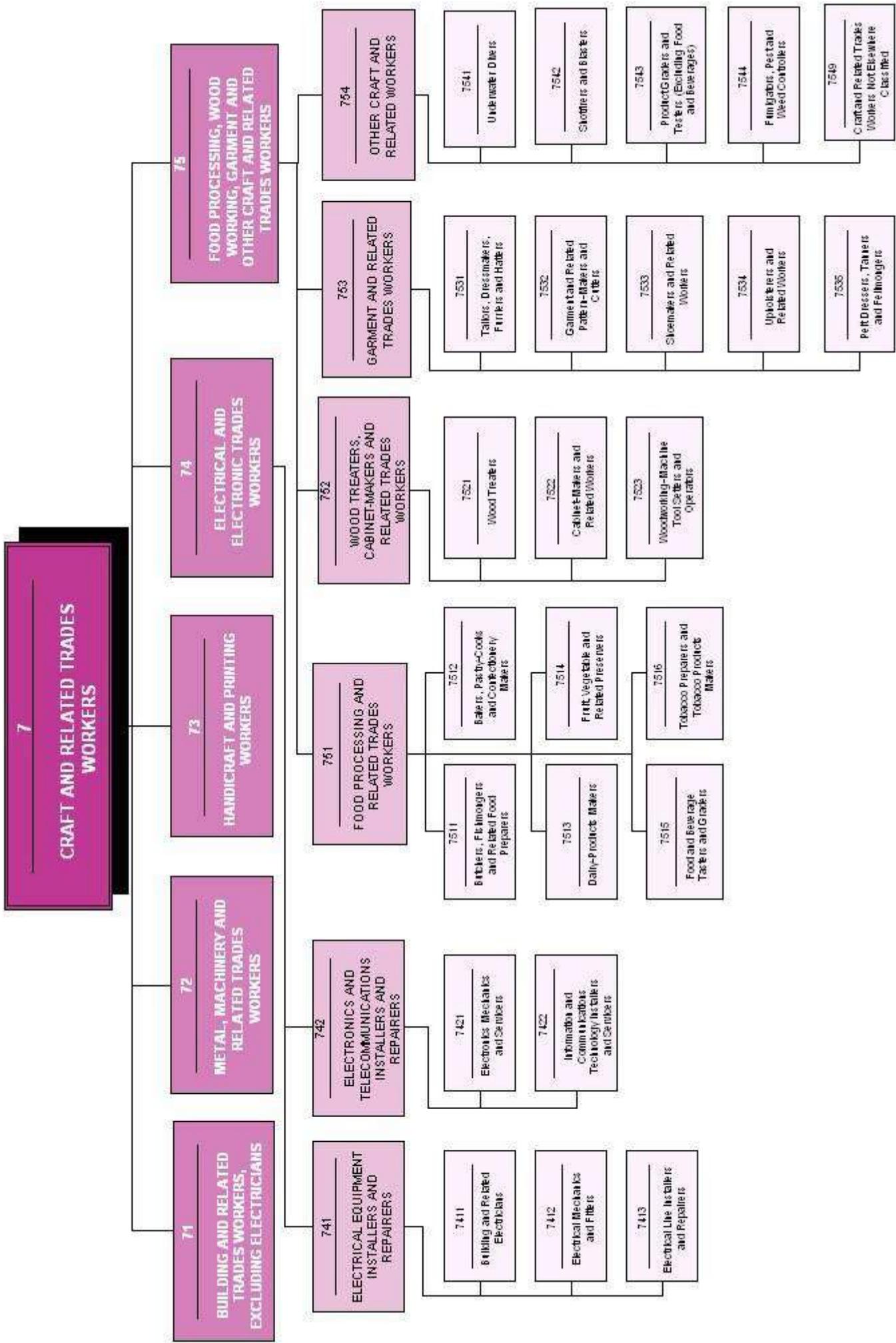
**MAJOR GROUP 7
CRAFT AND RELATED TRADES WORKERS**



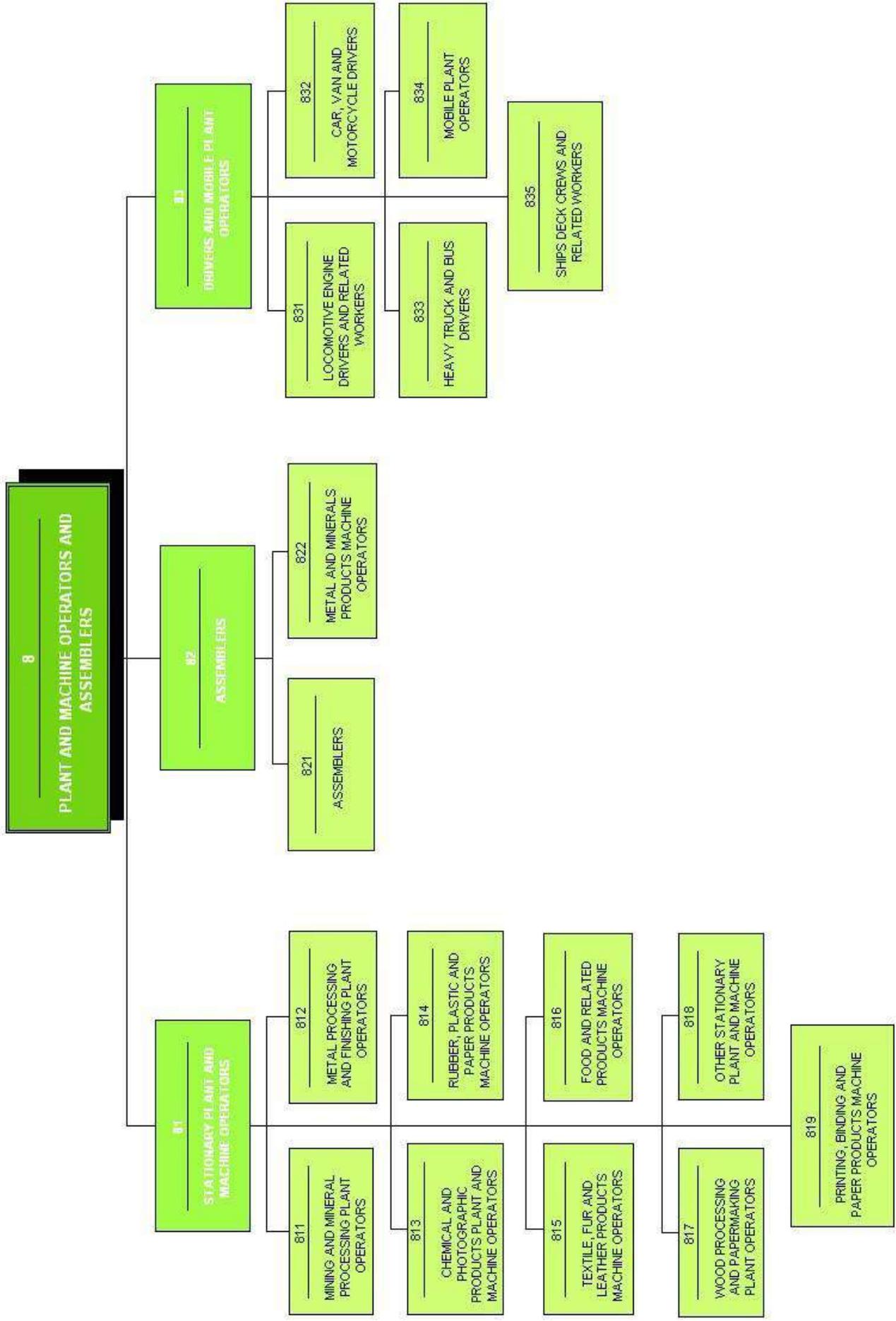
**MAJOR GROUP 7
CRAFT AND RELATED TRADES WORKERS**



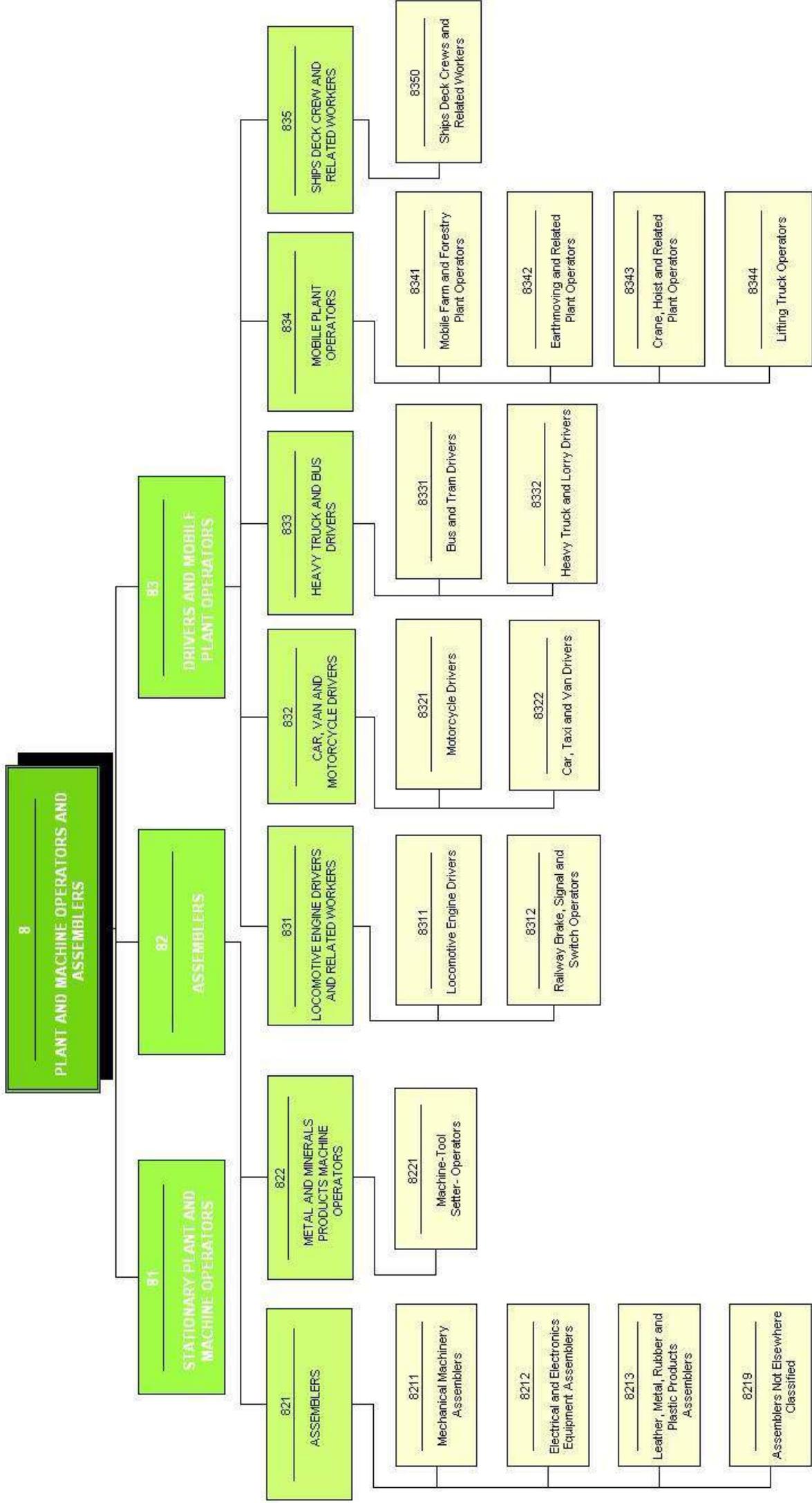
**MAJOR GROUP 7
CRAFT AND RELATED TRADES WORKERS**



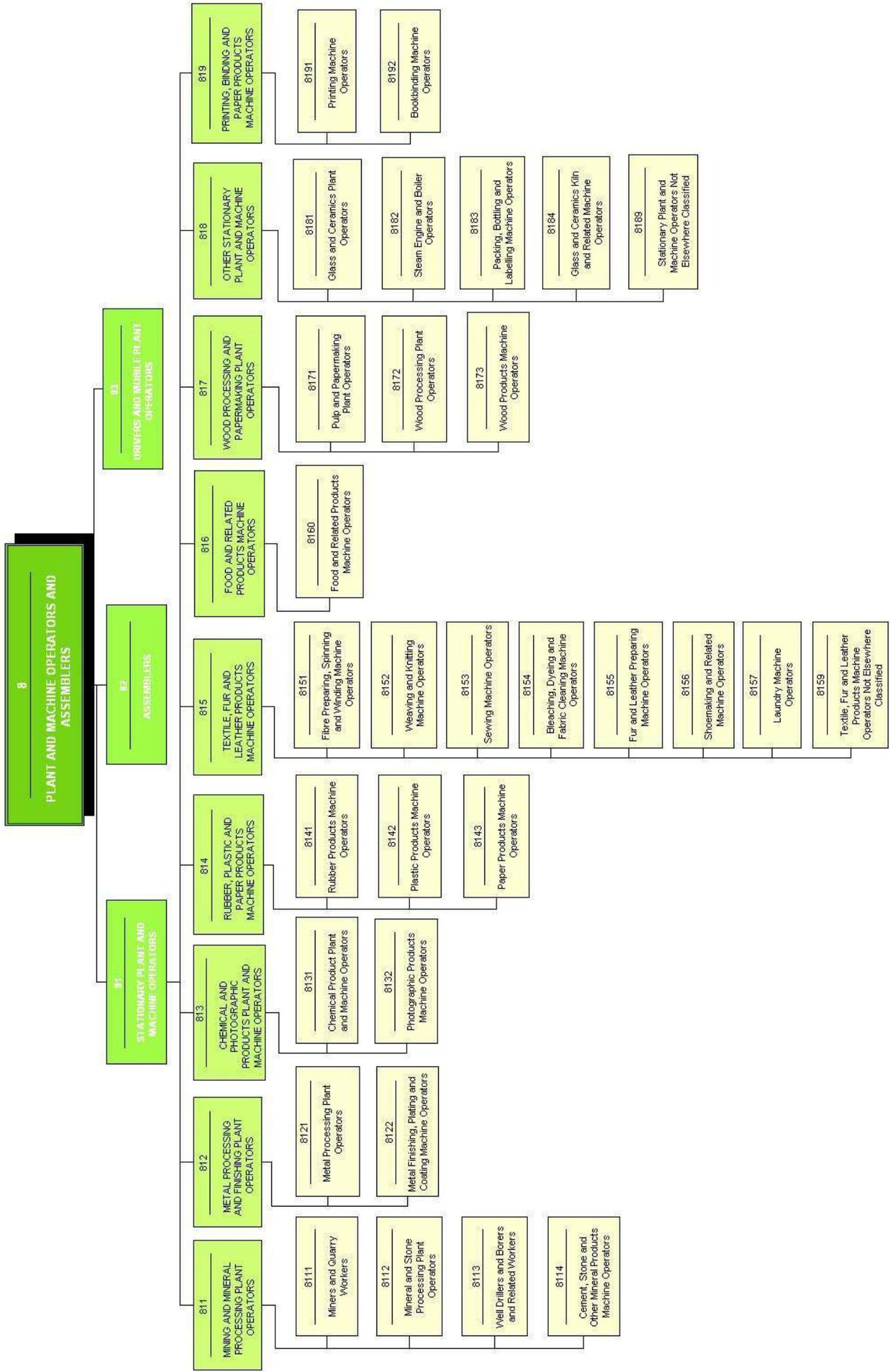
MAJOR GROUP 8 PLANT AND MACHINE OPERATORS AND ASSEMBLERS



MAJOR GROUP 8 PLANT AND MACHINE OPERATORS AND ASSEMBLERS

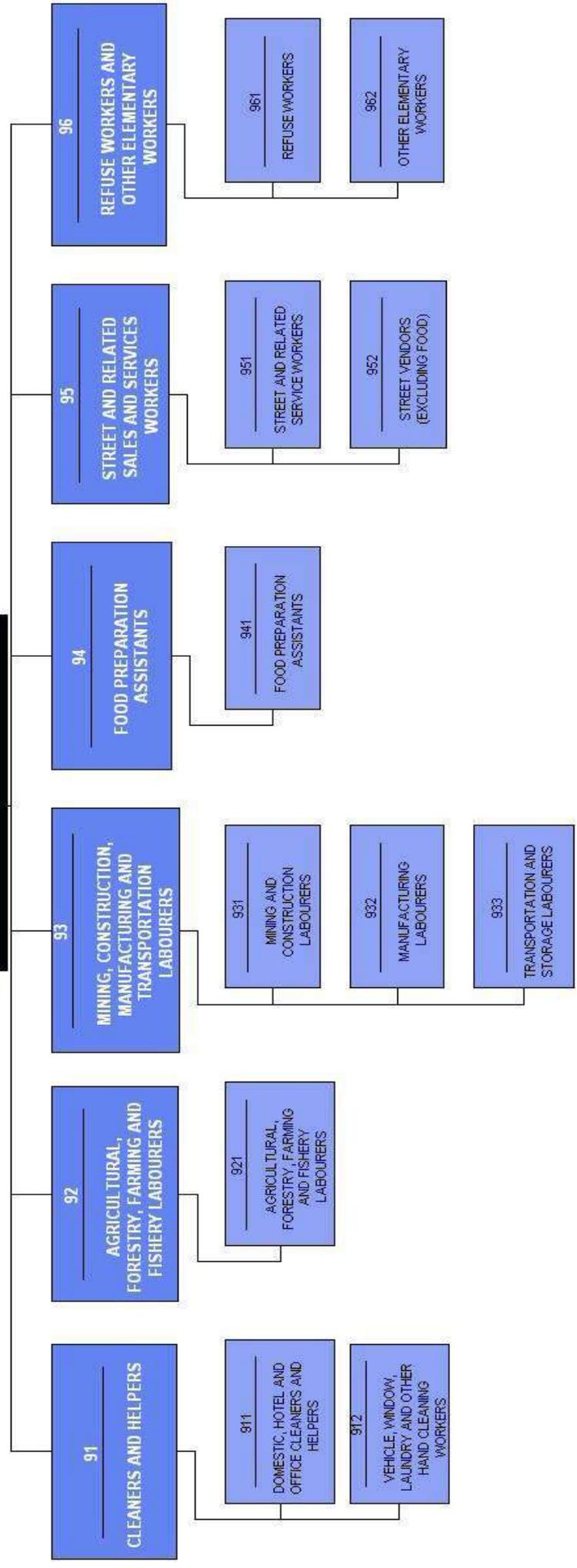


MAJOR GROUP 8 PLANT AND MACHINE OPERATORS AND ASSEMBLERS

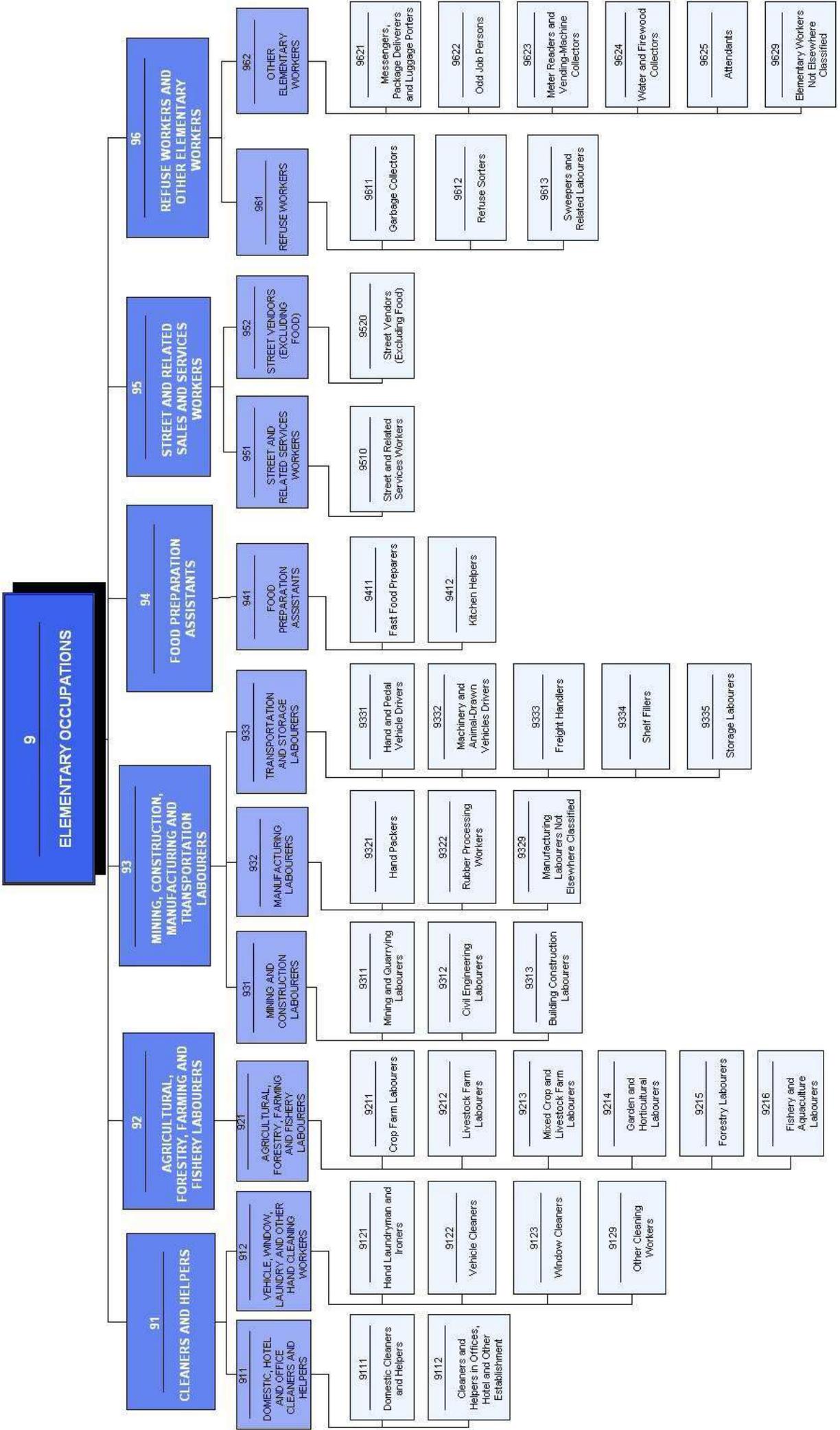


MAJOR GROUP 9 ELEMENTARY OCCUPATIONS

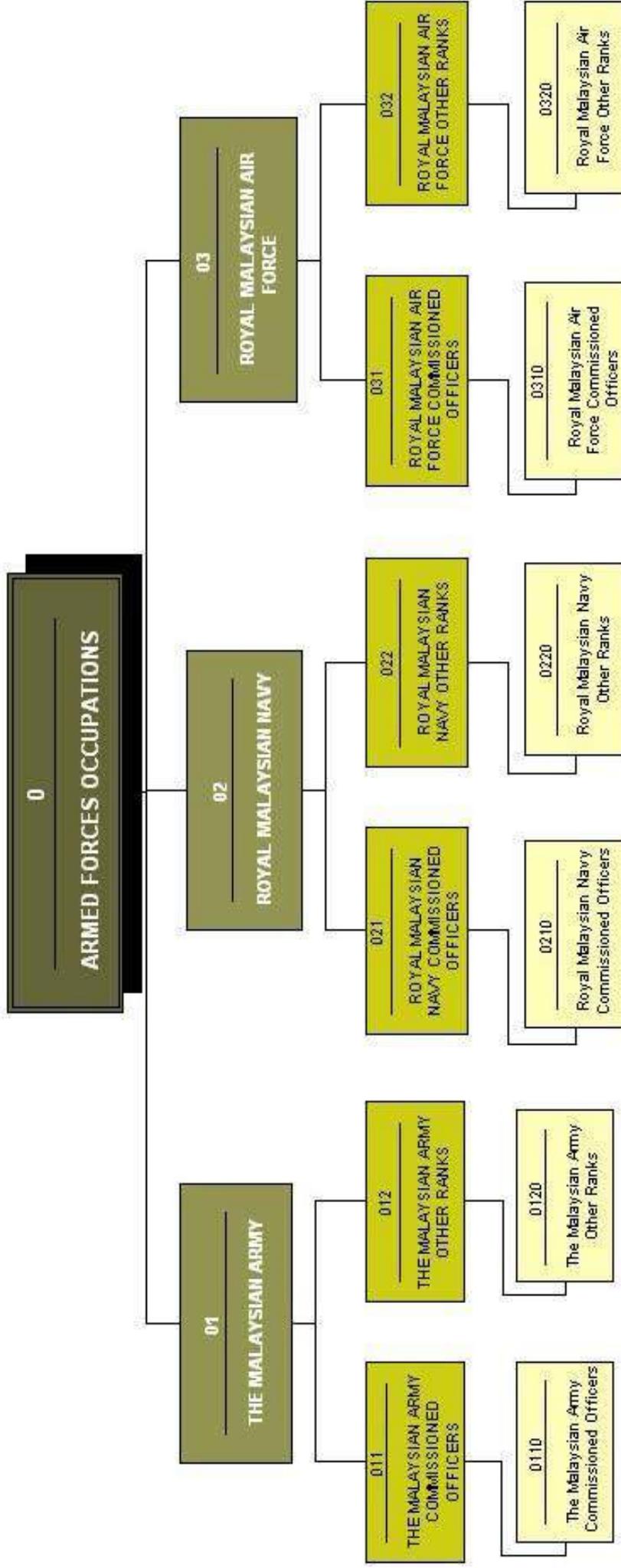
9 ELEMENTARY OCCUPATIONS



MAJOR GROUP 9 ELEMENTARY OCCUPATIONS



MAJOR GROUP 0 ARMED FORCES OCCUPATIONS



Price : RM 60.00
Obtainable from :
Human Resources Policy Division
Ministry of Human Resources
Block D3, Complex D,
Federal Government Administrative Centre,
62530 Putrajaya,
Malaysia

Tel : 03-8886 5000
Fax : 03-8889 2377
Home Page : www.mohr.gov.my

ISBN 978-983-44175-0-5



9 789834 417505