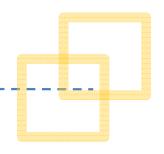


Occupational Classification (SSOC)



Overview



- > Introduction
 - Introduction to SSOC
 - Structure of Classification
 - Principles and Concepts of Classification
 - Features of the SSOC 2015 Publication
- Description of Major Groups
- ➤ Application of Principles



Introduction to SSOC

What is SSOC?

SSOC is a classification of occupations according to type of work performed.

- Classify the occupations of the civilian working population
- Not applicable to economically inactive population (e.g. housewives, retired persons)
- Adapted from ISCO-08*, developed by the International Labour Organisation (ILO)
- Latest version: <u>SSOC 2015</u>, released in April 2015

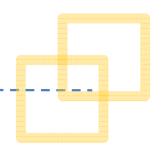


*International Standard Classification of Occupations 2008



OCCUPATIONAL CLASSIFICATION

Introduction to SSOC



Why use SSOC?

- Provide a common and consistent framework for classification of occupations
- Facilitate data sharing
- Ensure consistency and comparability of data at the national and international level



Introduction to SSOC

- Department of Statistics
 - Census of Population
 - General Household Survey
 - Household Expenditure Survey
- Ministry of Manpower
 - Labour Force Survey
 - Occupational Wages Survey
 - Job Vacancies Survey
 - Occupation data from administrative sources
- Government Agencies
 - Capture occupational data in surveys and administrative data

Who uses SSOC??





Structure of Classification

10 Major Groups (1-digit)

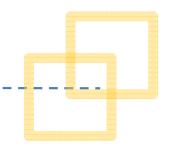
43 Sub-Major Groups (2-digit)

143 Minor Groups (3-digit)

415 Unit Groups (4-digit)

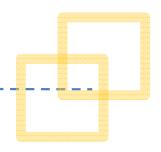
1,163 Occupations (5-digit)





- Significance of Digit '0' and '9'
 - Where a given level of classification is not divided into groups or occupations at the next more detailed level of classification
 - → '0' is used to code the position of the next detailed level e.g. 5120 'Cooks'

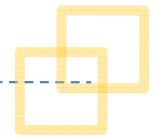




- Significance of Digit '0' and '9'
 - Digit '9' denotes residual occupational groups
 - Usually comprise a range of the less common types of occupational groups which are not significant enough to justify a separate code
 - ➤ e.g. 42119 'Other tellers and counter clerks', 5199 'Personal Service Workers Not Flsewhere Classified'

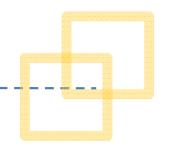


10 Major Groups in SSOC



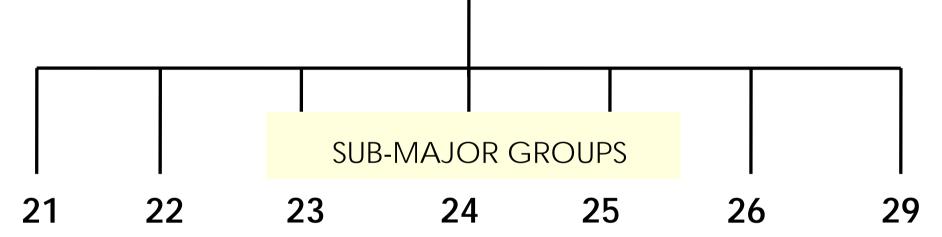
1 st digit	Occupational Group
1	Legislators, Senior Officials and Managers
2	Professionals
3	Associate Professionals and Technicians
4	Clerical Support Workers
5	Service and Sales Workers
6	Agricultural and Fishery Workers
7	Craftsmen and Related Trades Workers
8	Plant and Machine Operators and Assemblers
9	Cleaners, Labourers and Related Workers
X	Workers Not Elsewhere Classified





Major Group 2

Professionals



SCIENCE AND ENGRG PROF

HEALTH PROF TEACHING AND TRAINING PROF BUSINESS AND ADMIN PROF INFO AND COMM TECH PROF

LEGAL, SOCIAL AND CULTURAL PROF OTHER PROF NOT ELSEWHERE CLASSIFIED

Sub-Major Group 22

Health Professionals



MINOR GROUP

221

MINOR GROUP

222

MINOR GROUP

223

MINOR GROUP

225

MINOR GROUP

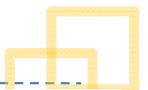
226

Medical Doctors Nursing Professionals Traditional and
Complementary
Medicine
Professionals

Veterinarians

Other Health Professionals





Minor Group 221

Medical Doctors



UNIT GROUP

2211

Generalist Medical Practitioners **UNIT GROUP**

2212

Specialist Medical Practitioners (Medical) **UNIT GROUP**

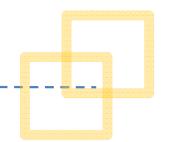
2213

Specialist Medical Practitioners (Surgical) **UNIT GROUP**

2214/2215

Specialist Medical Practitioners (Other Specialisations)





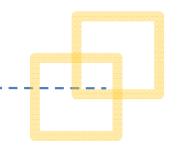
SSOC <u>22121</u> - Cardiologist

Groups	Title	Code
Major	Professionals	2
Sub-major	Health Professionals	22
Minor	Medical Doctors	221
Unit	Specialist Medical Practitioners (Medical)	2212
Occupation	Cardiologist	22121



Principles and Concepts of Classification

Principles of Classification



Basic Principle:

Main type of work performed

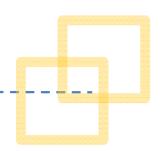
• This refers to the principal type of work regardless of (the person's) work experience, skills and qualifications.

Example

- Senior Civil Engineer is classified as Civil Engineer
- Senior Clerical Officer is classified as Clerical Officer



Principles of Classification



Caution

There are some exceptions.

Example

Asst Accountant is not in the same group as

<u>Accountant</u>

Asst Accountant = SSOC 33130 (asst accountants)

Accountant = SSOC 24111 (accountants)

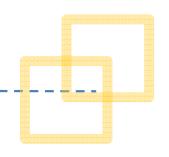
Asst Engineer is not in the same group as Engineer

Asst Engineer = SSOC group 3100 (asst engineer)

Engineer = SSOC group 214 and 215



Concepts of Classification

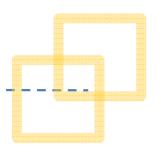


In defining the broad types of work, basic concept of skill is adopted. Skill refers to the ability to carry out the tasks and duties of an occupation and has the following two dimensions:





Concepts of Classification



Skill Level -

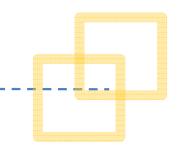
Complexity and range of tasks and duties

Skill Specialisation -

- Field of knowledge used
- Tools and machinery used
- Materials worked on or with
- Kinds of goods and services produced



Concepts of Classification



4 Broad Skill Levels:

Skill level	Tasks requiring			
4 th	University/postgraduate university degree or equivalent			
3 rd	Tertiary education leading to an award not equivalent to a first university degree			
2 nd	Sec or post sec education			
1st	Primary or no education			



Concept of Classification

Major Group	Skill level	Tasks requiring		
1	NA	Not applicable		
2	4 th	University/postgraduate university degree or equivalent		
3	3 rd	Tertiary education leading to an award not equivalent to a first university degree		
4	2 nd	Sec or post sec education		
5	2 nd	Sec or post sec education		
6	2 nd	Sec or post sec education		
7	2 nd	Sec or post sec education		
8	2 nd	Sec or post sec education		
9	1 st	Primary or no education		
Х	NA	Not applicable		



Features of the SSOC 2015 Publication

Description of Unit Groups (4-digit write-up)

2423 Human Resource Professionals

Human resource professionals provide professional business services related to human resource policies such as employee (senior level) recruitment or development, occupational analyses and compensation policies.

Tasks include:

- provide consultancy services on personnel functions relating to employee recruitment, placement, training, promotion, compensation, and employeemanagement relations or other areas of personnel policy
- studying and analysing jobs performed in an establishment by various means, including interviews with workers, supervisors and management, and writing detailed position, job or occupation descriptions from information obtained
- preparing occupational information or working on occupational classification systems

Description of Unit Groups (4-digit write-up)

advising and working on the foregoing and other aspects of job and occupation analyses in such fields as personnel administration, workforce research and planning, training, or occupational information and vocational guidance

This unit group includes:

- Human resource consultant
- Executive search consultant

This unit group excludes:

- Personnel/Human resource officer (3345)
- Training officer (3345)



Alphabetical index

Alphabetical Index SSOC 2015

	Α	11140	Administrator of political party organisation
29011 83502 73149 73149 81819 73120 73120 24111 33130 24112 24111 24111 24111 24111 24111	Abbot Able seaman Abrasive wheel moulder Abrasive-coated cloth and paper maker Abrasives mixer Accordion maker Accordion tuner Accountant (general) Accountant, assistant Accountant, audit Accountant, casino Accountant, chartered Accountant, company Accountant, cost Accountant, cost and works Accountant, public Accountant, tax	11150 11150 11150 11150 14330 25220 25220 25211 11121 25220 34229 71323 33222 26413	Administrator of professional association Administrator of trade association Administrator of trade union Administrator of workers' organisation Administrator, arts Administrator, computer systems Administrator, database Administrator, government



Structure of Classification

SSOC 2015	OCCUPATION	SSOC 2010	
343	ARTISTIC AND CULTURAL ASSOCIATE PROFESSIONALS		
3431 34310	Photographers Photographer	34310	
3432 34321 34322 34323 34324	Interior Designers and Decorators Interior designer Landscape designer Display artist Decorator and related worker (eg window dresser and set designer)	34321 34322 34323 34324	
3433 34331 34332	Gallery, Museum and Library Technicians Library officer Gallery, museum and related technician	34331 34332	
3434 34340	<u>Chefs</u> Chef	51201	



Correspondence Between SSOC 2015 & SSOC 2010 (in MS Excel)

SSOC 2015 Description	SSOC 2015	SSOC 2010	SSOC 2010 part	SSOC 2010 Description
Graphic designer	21661	34361		Graphic designer
Multimedia (including	21662	34362		Multimedia (including
computer games) designer				computer games) designer
Multimedia artist	21663	34363		Multimedia artist
Animator	21664	34364		Animator
Interaction/User experience	21665	34369	р	Other graphic and multimedia
designer				designers and artists
Commercial artist	21666	34391		Commercial artist
Other graphic and multimedia	21669	34369	р	Other graphic and multimedia
designers and artists				designers and artists
Chief engineer (ship)	21711	31511		Chief engineer officer (ship)

Major Group 1 -Legislators, Senior Officials & Managers

Major Group 1 - Legislator, Senior Officials & Managers

Sub-major groups in Group 1

4 sub-major groups

11 LEGISLATORS, SENIOR OFFICIALS & CHIEF EXECUTIVES **12** ADMINISTRATIVE & COMMERCIAL MANAGERS

13 PRODUCTION
AND SPECIALISED
SERVICES
MANAGERS

14 HOSPITALITY, RETAIL AND RELATED SERVICES MANAGERS

 Reflects different types of tasks associated with different areas of authority in different types of enterprises and organisations (both public and private sector)



Major Group 1 - Legislator, Senior Officials & Managers

Occupations in Public Sector/ Organisation

Occupations in Private Sector

Main tasks:

- Plan, direct, coordinate and evaluate overall activities of enterprises, government agencies or organisational units within them
- Formulate and review policies, laws, rules and regulations
- Oversee implementation of policies and/or running the affairs of the organisation
- **Enact laws & regulations**
- Authorise allocation of resources

Examples:

- Cabinet ministers, full-time MPs
- Senior government officials (PS, DS)
- Senior statutory board officials (CE, Dy CE)

Examples:

- Company managing director
- Department and specialised manager
- Working proprietor



Note - CEs, MDs and GMs

Chief Executives, Managing Directors and General Managers

- To classify those who manage organisations with at least 3 managers reporting to them
- To classify in more appropriate occupation if criteria not met

Note – Self-employed Persons

Excludes

Self-employed professionals, insurance agents, real estate agents, money changers, hawkers, hair-dressers, electricians, motor car mechanics etc who run their own business but perform the principal task of their occupation.



Examples of Occupations in Group 1

- Company Director
- Legislator
- General Manager
- School Principal
- Restaurant Manager
- Sales and Marketing Manager
- Business Development Manager
- Working Proprietors





Major Group 2 - Professionals

Brief description and main tasks:

- Increase existing stock of knowledge
- Required to apply scientific & artistic concepts & theories to the solution of problems at work
- Requires high level of specialised knowledge & ability in fields of:
 - (a) physical & life science
 - (b) social sciences & humanities
- Also include teaching at primary level and higher



Major Group 2 - Professionals

Sub-major groups in Group 2

TEACHING SCIENCE & HEALTH ENGINEERING PROFESSIONALS PROFESSIONALS PROFESSIONALS OTHER BUSINESS AND LEGAL, SOCIAL ICT **PROFFSSIONALS PROFESSIONALS** AND CULTURAL ADMIN **NOT ELSEWHERE PROFESSIONALS PROFESSIONALS CLASSIFIED**

- 7 sub-major groups
- Reflects specialised knowledge in different fields

Skill Level

Usually requires skill at the 4th skill level (requiring tertiary education leading to a university or postgrad degree)



Examples of Occupations in Group 2



- Chemist
- Statistician
- Civil Engineer
- Cardiologist
- Dentist
- Registered Nurse
- University Lecturer
- Primary School Teacher
- Auditor
- Lawyer
- Journalist

Major Group 3 -Associate Professionals and Technicians

Major Group 3 – Associate Professionals and Technicians

Brief description and main tasks:

- Carrying out technical work connected with the application of concepts & operational methods
- Requires technical knowledge & ability in fields of :
 - (a) physical & life science
 - (b) social sciences & humanities
- Also includes teaching at extra-curriculum and below primary level

Major Group 3 - Associate Professionals and Technicians

Sub-major groups in Group 3

PHYSICAL & ENGINEERING SCIENCE ASSOCIATE PROFESSIONALS

HEALTH ASSOCIATE PROFESSIONALS

BUSINESS AND ADMIN ASSOCIATE PROFESSIONALS

LEGAL, SOCIAL, CULTURAL AND RELATED ASSOCIATE PROFESSIONALS INFORMATION AND COMMUNICATIONS TECHNICIANS

TEACHING ASSOCIATE PROFESSIONALS OTHER
ASSOCIATE
PROFESSIONALS
NOT ELSEWHERE
CLASSIFIED

- 7 sub-major groups
- Reflects technical knowledge and ability in different fields

Skill Level

 Usually requires skill at the 3rd skill level (requiring tertiary education leading to an award not equivalent to a first university degree)



Difference Between Major Group 2 and 3

	Group 2 - Professionals	Group 3 – Assoc Professionals
Tasks Performed	High level of specialised knowledge	Technical knowledge and ability
	 Apply scientific & artistic concepts & theories to the solution of problems in work 	• Technical work connected with the application of concepts & operational methods
Skill Level	4 ^{t h} skill level	3 rd skill level
	(requiring tertiary education leading to a university or postgrad degree)	(requiring tertiary education leading to an award not equivalent to a first university degree)



Difference Between Major Group 2 and 3

Examples:

	Group 2 - Professionals	Group 3 – Assoc Professionals
0	Curator	Museum Technician
	Executive Search Consultant	Employment Agent
	Pharmacist	Pharmaceutical Technician



Examples of Occupations in Group 3

- Chemistry Technician
- Mechanical Draughtsman
- Air Traffic Controller
- Landscape Operations Officer
- Fire and Safety Inspector
- Paramedic
- Broadcasting Operations Technician





Major Group 4 -Clerical Support Workers

Major Group 4 - Clerical Support Workers

Brief description and main tasks:

- Stenography and operating word processors and other office machines
- Entering data into computers; carrying out secretarial duties; recording and computing numerical data
- Keeping records; filing documents
- Supplying information requested by clients and making appointments



Major Group 4 - Clerical Support Workers



• Performance of different types of clerical function (e.g. general, numerical or service based)

Skill Level

Usually requires skills at the 2nd skill level (requiring secondary or post secondary education

Examples of Occupations in Group 4





- Office Clerk
- Secretary
- Bank Teller
- Receptionist



- Bookkeeper
- Production Planning Clerk
- Legal Clerk



Major Group 5 -Service and Sales Workers

Major Group 5 - Service and Sales Workers

Brief description and main tasks:

- Provision of personal and protective services related to:
 - Travel
 - Housekeeping
 - Catering
 - Personal care
- Demonstrate and sell good in wholesale or retail shops and similar establishments



Major Group 5 - Service and Sales Workers

- 5 sub-major groups
- Performance of different types of services (e.g. personal service, care, sales, protective)

51 PERSONAL SERVICE WORKERS	52 SALES WORKERS	53 PERSONAL CARE WORKERS	54 PROTECTIVE SERVICE WORKERS	59 SERVICE WORKERS N.E.C.
Travel AttendantsChefs and cooksWaiters and Bartenders	Stall sales workersCashiers and ticket clerks	Childcare workersHealthcare assistants	FirefighterPrison officerPark rangers	

Skill Level

 Usually requires skill at the 2nd skill level (requiring secondary or post secondary education)



Examples of Occupations in Group 5

- Cabin Attendant
- Tour Guide
- Waiter
- Postman
- Beautician
- Shop Sales Assistant
- Babysitter
- Lifeguards
- Police Officer



Major Group 6 -Agricultural and Fishery Workers

Major Group 6 - Agricultural and Fishery Workers

Brief description and main tasks:

Grow and harvest field or tree and shrub crops



Cultivate, conserve and exploit forests



Breed or tend animals



Breed or catch fish



Produce a variety of animal husbandry products



Cultivate or gather other forms of aquatic life



> as a source of food or income for themselves and their households



Major Group 6 - Agricultural and Fishery Workers

2 Sub-Major Groups

61 AGRICULTURAL WORKERS

62 FISHERY WORKERS





Performance of tasks in different agricultural settings and fisheries

Skill Level:

Usually require skill at the 2nd skill level (requiring secondary or post secondary education.



Difference Between Group 6 and Minor Group 921

Minor Group 921 -Group 6 -**Agricultural and Fishery** Agricultural, Fishery and Workers **Related Labourers** Plan & carry out operations | Do simple and routine to grow/harvest crops for task, require physical sale. effort. E.g. watering E.g. determine kind of crops plants, cleaning animal quarters to grow and fertiliser

Examples of Occupations in Group 6



- Hydroponic Farm Worker
- Nursery Worker
- Livestock Worker
- Aquarium Fish Farm Worker
- Crocodile Farm Worker







Brief description and main tasks:

- Apply specific knowledge and skills in the fields to:
 - Construct and maintain buildings
 - Erect metal structures
 - Set, maintain or repair machinery
 - Carrying out printing work
 - Process foodstuffs, textiles, or wooden, metal and other articles, including handicraft goods

- Work is carried out by hand and by handpowered and other tools to:
 - Reduce the amount of physical effort and time required for specific tasks
 - Improve the quality of the products
- Requires understanding of:
 - Stages of the production process
 - Materials and tools used
 - Nature and purpose of the final product





This group of workers tends to:

Require knowledge & ability to carry out a skilled trade or craftwork.

Skill Level

 Usually requires skill at the 2nd skill level (requiring secondary or post secondary education)



Sub-major groups in Group 7

- 5 sub-major groups
- Specific crafts in different trades (e.g. building, metalwork, handicraft, printing, electronics, garment)

71 BUILDING
AND RELATED
TRADES
WORKERS,
EXCLUDING
ELECTRICIANS



72 METAL, MACHINERY AND RELATED TRADES WORKERS



73 PRECISION, HANDICRAFT, PRINTING & RELATED TRADES WORKERS



74 ELECTRICAL AND ELECTRONIC TRADES WORKERS



75 FOOD
PROCESSING,
WOODWORKING,
GARMENT, LEATHER
AND OTHER CRAFT
AND RELATED
TRADES WORKERS



Examples of Occupations in Group 7

- Carpenter
- **Building Painter**
- Goldsmith
- Pottery Worker
- Glass engraver
- Electrician
- Baker
- Tailor
- Shoemaker





Major Group 8 – Plant and Machine Operators and Assemblers

Major Group 8 - Plant and Machine Operators and Assemblers

Brief description and main tasks:

 Operate and monitor industrial and agricultural machinery and equipment on the spot or by remote control



 Drive and operate trains, motor vehicles and mobile machinery and equipment, or

 Assemble products from component parts according to strict specifications and procedures



Major Group 8 - Plant and Machine Operators and Assemblers

Brief description and main tasks:

- Requires an understanding of industrial and agricultural machinery /equipment
- Ability to handle machine-paced operations

Skill Level

Usually requires skill at the 2nd skill level (requiring secondary or post secondary education)

Major Group 8 - Plant and Machine Operators and Assemblers

Sub-major groups in Group 8

- 3 sub-major groups
- Operating of different types of machinery (e.g. stationary, mobile etc)







81 STATIONARY PLANT & MACHINE OPERATORS 82
ASSEMBLERS
& QUALITY
CHECKERS

DRIVERS AND MOBILE MACHINERY OPERATORS

83

Difference Between Minor Groups 831/832 and 315

	831/832 – MRT Train Operators/Car & Light Goods Vehicles Drivers	315 – Ship and Aircraft Controllers and Technicians
Tasks Performed	• Hands on operation of machinery	 Mainly command/navigate/ supervise transport service operations
Skill Level	2 nd skill level (requiring secondary and post secondary education)	3 rd skill level (requiring tertiary education leading to an award not equivalent to a first university degree)

Difference Between Major Groups 7 and 8

Group 7 – Craftsmen and Related Trades Workers	Group 8 – Plant and Machine Operators and Assemblers
Requires knowledge of the <u>production</u> <u>process</u> and <u>procedures</u> and <u>materials used</u>	Mainly need to know how to operate machinery and equipment
Usually produce <u>non-standard</u> products or services	Usually involves the mass production of <u>standardised</u> items
Assembler of precision equipment (7311) – non-standardised product	Assembler of electrical equipment (8212) – standardised product
Worker who cut textile/make tailored clothing (753)	Worker operates machine to manufacture standardised clothing (8153)

Examples of Occupations in Group 8

- Concrete Pump Operator
- Metal Rolling Mill Worker
- Printing Machine Operator
- Electronic Component Assembler
- MRT Train Operator
- Taxi Driver
- Crane Operator
- Packing/Bottling/Labelling
 Machine Operator





Major Group 9 -Cleaners, Labourers and Related Workers



Major Group 9 - Cleaners, Labourers and Related Workers

Brief description and main tasks:

Perform simple and routine tasks



May require the use of hand-held tools



Major Group 9 - Cleaners, Labourers and Related Workers

Sub-major groups in Group 9

- 5 sub-major groups
- Performance of different types of manual and routine tasks e.g.
 - Cleaning
 - Washing
 - Food preparation,
 - Delivering goods, carrying luggage

Skill Level

 Usually requires skill at the 1st skill level (requiring primary or no education)



Major Group 9 - Cleaners, Labourers and Related Workers



91 CLEANERS AND RELATED WORKERS



92 AGRICULTURAL, FISHERY AND RELATED LABOURERS



93 LABOURERS AND RELATED WORKERS



94 FOOD PREPARATION AND KITCHEN ASSISTANTS



96 WASTE AND RECYCLABLES COLLECTION WORKERS AND OTHER ELEMENTARY WORKERS

Examples of Occupations in Group 9

- Office Cleaner
- Grass Cutter
- Mover
- Dish Washer
- Building Construction Labourer
- Bellboy
- Watchman
- Leaflet and Newspaper Distributor







Major Group X - Workers Not Elsewhere Classified

- Information on job duties are difficult to obtain
 - X1000 Workers reporting inadequately described occupations
 - X2000 Workers not reporting any occupation
 - X3000 Singapore Armed Forces personnel
 - X4000 Foreign armed forces personnel stationed in Singapore
 - X5000 Foreign diplomatic personnel stationed in Singapore



Application of Principles

Assigning a Code

Information Collected

Info Collected

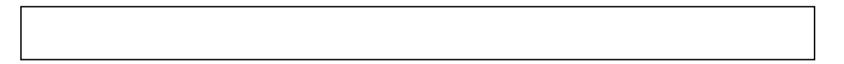
- (1) Occupation/Kind of Work
- (2) Main Tasks/Duties

Assign an occupational code from SSOC (Occupation Coding)



Information Collected

(1) What is the person's occupation?



(2) What are the person's main tasks/duties?



Example

Occupation	HR Executive
Tasks	Develop and implement programmes to enhance employee satisfaction and morale, formulate training plans, organise training courses

Assigned SSOC = 33451 (Personnel/Human resource officer)



Information Collected

However, in practice, more information is required for proper coding of a person's occupation.



Information Needed for Proper Coding

- Job title
- Description of main tasks and duties
- Qualification/ Field of Study
- Income
- Industry
- Occupational Status
- Age (for verification)



Example

Job Title	Technician
Main Duties	Repair and install air- conditioners
Industry	Retail sale of air-conditioners
Qualification	Primary 6
Salary	\$1,800 per month

Assigned SSOC = 71272 (Air-conditioning/Refrigeration plant installer)



Occupations with Multiple Tasks and Duties

Application

i. Multiple Tasks and Duties

Two priority rules if the respondent reported multiple tasks:

Rule 1 - Rule of "Highest Skill Level"

Rule 2 - Rule of "Production Taking Precedence"

Rule 1 – Highest Skill Level

Rule 1

Where a job has multiple tasks requiring different skill levels, the job is classified according to the tasks which require the

highest skill level



Rule 1 – Highest Skill Level

Example

Occupation = Delivery Driver

Tasks = Drive van to deliver goods

SSOC = 83223 (Van driver)

Instead of 93339 (Other material and freight handling workers)



Rule 2 - Production Taking Precedence

Rule 2

Where a job has multiple tasks associated with different stages of production and distribution, the job is classified according to the tasks related to <u>production</u> which take precedence over those related to sales or transportation



Rule 2 - Production Taking Precedence

Example

Occupation = Bakery assistant

Tasks = Bakes & sells breads

SSOC = 75122 (Bread baker)

Instead of 52202 (Shop sales assistant)

