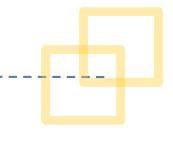


## Singapore Standard Occupational Classification (SSOC) Based on SSOC 2015 (Version 2018)



## Overview



- Introduction
  - Introduction to SSOC •
  - Structure of Classification •
  - Principles and Concepts of Classification •
  - Features of the SSOC 2015 (Version 2018) Publication •
- Description of Major Groups
- Application of Principles & Case Studies







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(Version 2018)</u>, released in January 2018
   \*International Standard Classification of Occupations 2008





Introduction

Major Groups

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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



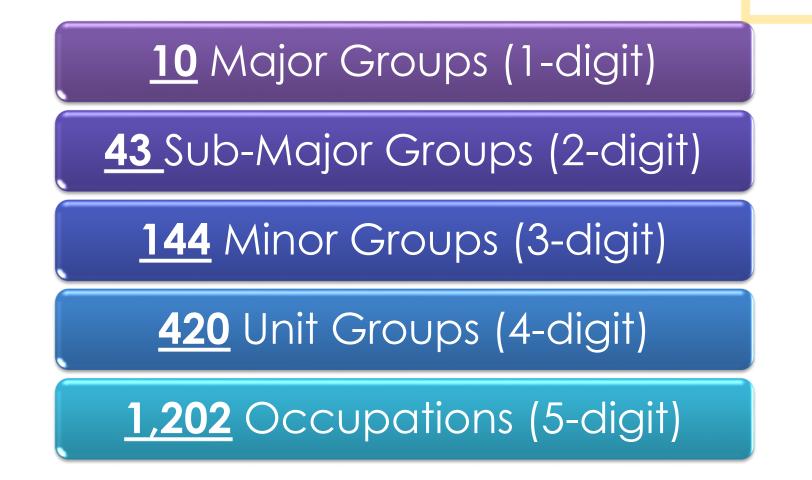


Who uses









Major Groups

Application of Principles



## Structure

Significance of digit '0' and '9'

Digit '0'

- Where a given level of classification is not divided into categories at the next more detailed level of classification
  - => '0' is used in code position of next more detailed level e.g. '5120' (Cooks)



<u>Significance of digit 'O' and '9'</u> Digit '9'

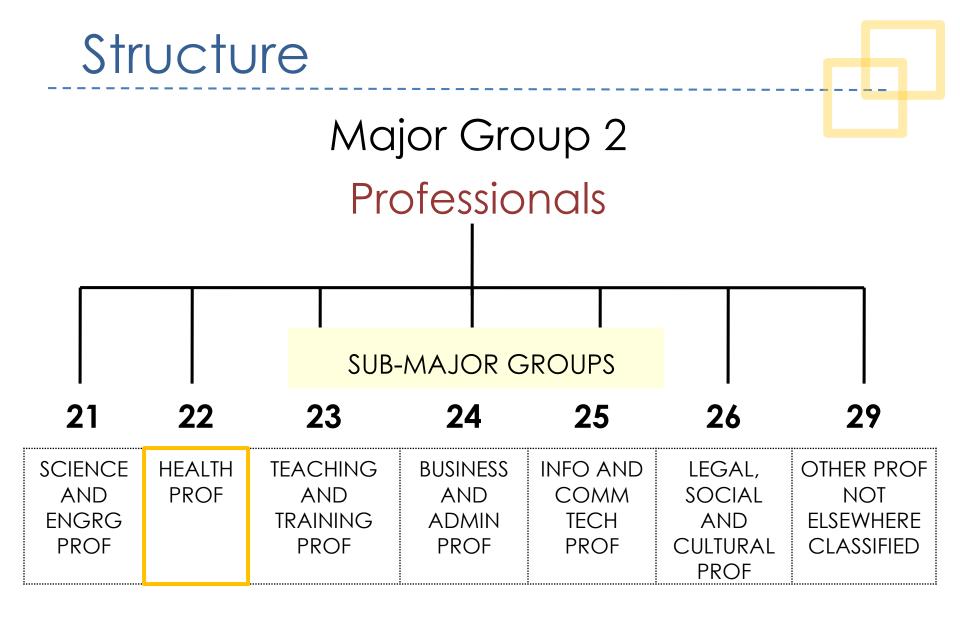
Digit '9' in the lower levels (e.g. 3rd, 4th or 5th digit position) designates miscellaneous groups / classes / items 'not elsewhere classified' (n.e.c)



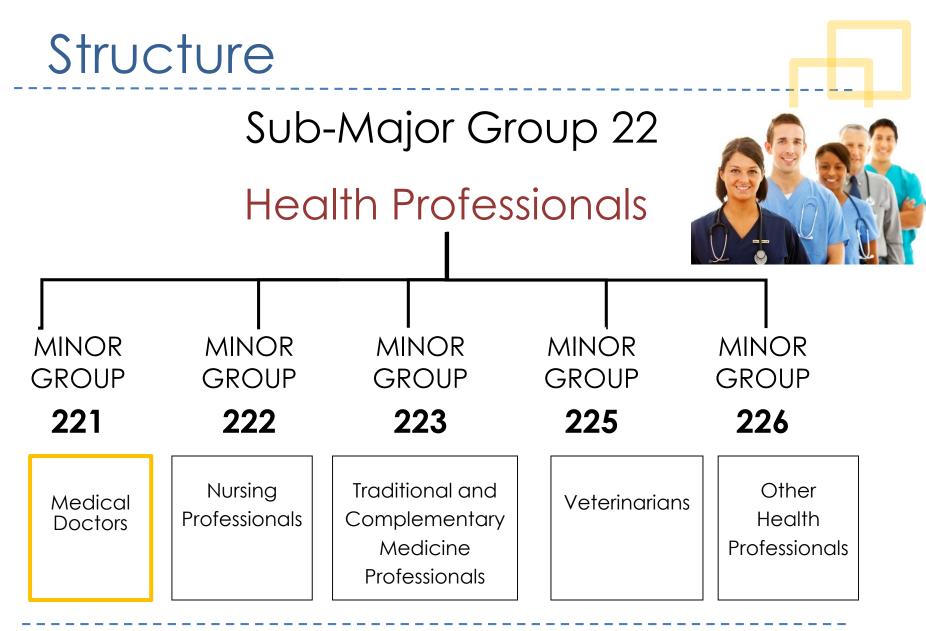
# 10 Major Groups in SSOC

<u>1<sup>st</sup> digit</u>	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
Х	Workers Not Elsewhere Classified

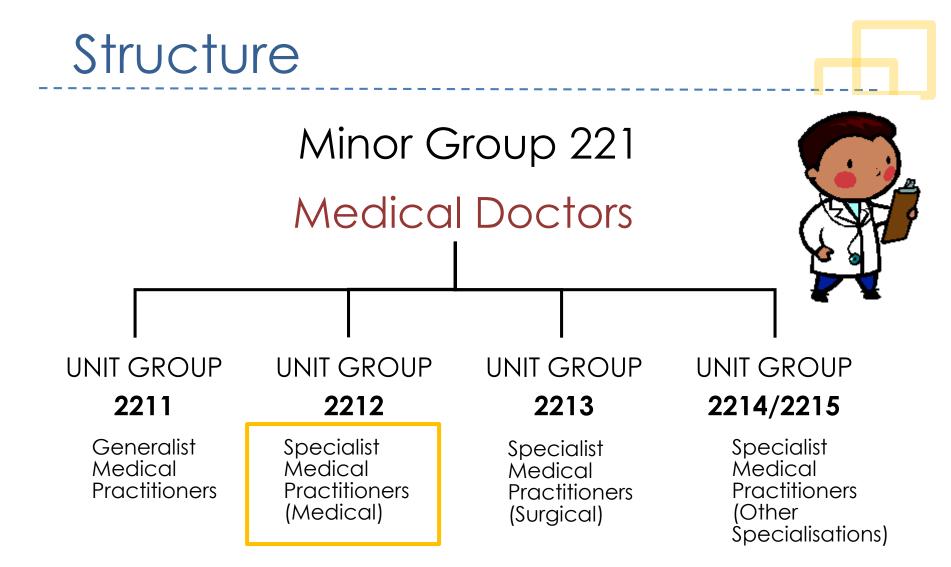














Major Groups

Application of Principles

#### SSOC 22121 - Cardiologist

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







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

There are some exceptions

Example Asst Accountant is not in the same group as Accountant Asst Accountant = SSOC 33130 (asst accountants) = SSOC 24111 (accountants) Accountant

Asst Engineer is not in the same group as Engineer = SSOC group 3100 (asst engineer) Asst Engineer = SSOC group 214 and 215 Engineer



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:



Introduction

Major Groups

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# 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

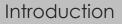
### 4 Broad Skill Levels:

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



# Concept of Classification

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









### 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

•			
		11150	
	A	11150	Administrator of trade association
00044	ALL 1	11150	Administrator of trade union
29011	Abbot	11150	Administrator of workers'
83502	Able seaman		organisation
73149	Abrasive wheel moulder	14330	Administrator, arts
73149	Abrasive-coated cloth and	25220	Administrator, computer
04040	paper maker		systems
81819	Abrasives mixer	25211	Administrator, database
73120	Accordion maker	11121	Administrator, government
73120	Accordion tuner	25220	Administrator, network
24111	Accountant (general)	34229	Adventure training instructor
33130	Accountant, assistant	71323	Advertisement painter (sign
24112	Accountant, audit		writing)
24111	Accountant, casino	33222	Advertising accounts executive
24111	Accountant, chartered	26413	Advertising copywriter
24111	Accountant, company	21666	Advertising illustrator
24111	Accountant, cost	12220	Advertising manager
24111	Accountant, cost and works	34310	Advertising photographer
24111	Accountant, public	33392	Advertising representative
24113	Accountant, tax	33392	Advertising salesman
72333	Accounting and calculating	23611	Adviser, education methods
44400	machine mechanic	23611	Adviser, teaching methods
44199	Accounting machine operator	24212	Advisory services, consultant,
12111	Accounting manager (finance		business
22420	department)	26111	Advocate & Solicitor (practising)
33130	Accounting officer	26111	Advocate (practising)
43119	Accounts analysis clerk	74221	Aerial erector (radio and
43112	Accounts assistant		television)

SSOC 2015 (Version 2018)

Introduction



# Structure of Classification

Major Group 3: Assoc	ate Professionals and Technicians	
SSOC 2015 (Version 2018)	OCCUPATION	SSOC 2015
3422	Sports Coaches, Instructors, Officials and Other Related Associate Professionals	
34221	Sports coach	34221
34222	Martial arts instructor	34222
34223	Physical fitness instructor (including yoga instructor and aerobics instructor)	34223
34224	Sports official	34224
34229	Other related instructors and associate professionals (e.g. adventure training instructor and scuba diving instructor)	34229
343	ARTISTIC AND CULTURAL ASSOCIATE PROFESSIONALS	
3431	Photographers	
34310	Photographer	34310
3432	Interior Designers and Decorators	
34321	Interior designer	34321
34322	Landscape designer	34322
34323	Visual merchandiser	34323
34324	Decorator and related worker (e.g. window dresser and set designer)	34324



#### Correspondence Between SSOC 2015 (Version 2018) & SSOC 2015 (in MS Excel)

SSOC 2015 (Version 2018) Description	SSOC 2015 Version (2018)	SSOC 2015	SSOC 2015 part	SSOC 2015 Description
Policy manager	12131	12130	р	Policy and planning manager
Strategic planning manager	12132	12130	р	Policy and planning manager
Premises and facilities maintenance manager (excluding building security manager)	12191	12191	р	Premises and facilities maintenance manager (including building security manager)
Landscape operations manager	12192	12192		Landscape operations manager
Working proprietor (business services and administrative services)	12193	12193		Working proprietor (business services and administrative services)
Building security manager	12194	12191	р	Premises and facilities maintenance manager (including building security manager)
Other business services and administration managers n.e.c.	12199	12199		Other business services and administration managers n.e.c.

Application of Principles Introduction Major Groups



# 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,	12 ADMINISTRATIVE	13 PRODUCTION	14 HOSPITALITY,
SENIOR OFFICIALS &	& COMMERCIAL	AND SPECIALISED	RETAIL AND
CHIEF EXECUTIVES	MANAGERS	SERVICES	RELATED SERVICES
		MANAGERS	MANAGERS

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



Application of Principles

### 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



Chief Executives, Managing Directors and General Managers

- To classify those who manage organisations with at least 2 managers reporting to them and operate within guidelines from their boards or councils
- 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



## 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

SCIENCE & ENGINEERING PROFESSIONALS		HEALT PROFESSIC	IONALS TRAINI		CHING & AINING ESSIONALS
BUSINESS AND ADMIN PROFESSIONALS	ICT PROFESSIONALS		LEGAL, S AND CU PROFESS	LTURAL	OTHER PROFESSIONALS NOT ELSEWHERE CLASSIFIED

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

#### Skill Level

 Usually requires skill at the 4<sup>th</sup> 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		PROFESSIONALS ASSOC		AND ADMIN OCIATE ESSIONALS	
LEGAL, SOCIAL, CULTURAL AND RELATED ASSOCIATE PROFESSIONALS	INFORMATION AND COMMUNICATIONS TECHNICIANS		ASS	ACHING SOCIATE ESSIONALS	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 3<sup>rd</sup> skill level (requiring tertiary education leading to an award not equivalent to a first university degree)

Introduction Application of Principles Major Groups



#### Difference Between Major Group 2 and 3

	Group 2 - Professionals	Group 3 – Assoc Professionals		
Tasks Performed	<ul> <li>High level of specialised knowledge</li> <li>Apply scientific &amp; artistic concepts &amp; theories to the solution of problems in work</li> </ul>	<ul> <li>Technical knowledge and ability</li> <li>Technical work connected with the application of concepts &amp; operational methods</li> </ul>		
Skill Level	4 <sup>t h</sup> skill level (requiring tertiary education leading to a university or postgrad degree)	3 <sup>rd</sup> skill level (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 2<sup>nd</sup> skill level (requiring secondary or post secondary education

## Examples of Occupations in Group 4



- Office Clerk
- Secretary
- Bank Teller
- Receptionist
- Telephone Operator
  - Bookkeeper
- Production Planning Clerk
- Legal Clerk





# 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.
<ul> <li>Travel Attendants</li> <li>Chefs and cooks</li> <li>Waiters and Bartenders</li> </ul>	<ul> <li>Stall sales workers</li> <li>Cashiers and ticket clerks</li> </ul>	<ul> <li>Childcare workers</li> <li>Healthcare assistants</li> </ul>	<ul> <li>Firefighter</li> <li>Prison officer</li> <li>Park rangers</li> </ul>	

#### Skill Level

• Usually requires skill at the 2<sup>nd</sup> skill level (requiring secondary or post secondary education)

Introduction Major Groups Application of Principles



## 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

Introduction

Major Groups





Performance of tasks in different agricultural settings and fisheries

#### Skill Level:

Usually require skill at the 2<sup>nd</sup> skill level (requiring secondary or post secondary education.



#### Difference Between Group 6 and Minor Group 921

Group 6 - Agricultural and Fishery Workers	Minor Group 921 - Agricultural, Fishery and Related Labourers		
Plan & carry out operations to grow/harvest crops for sale.	•		
E.g. determine kind of crops to grow and fertiliser	E.g. watering plants, cleaning animal quarters		





## 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

Application of Principles

trade or craftwork.

#### Skill Level

 Usually requires skill at the 2<sup>nd</sup> 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)





## Examples of Occupations in Group 7

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







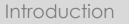
# Major Group 8 – Plant and Machine Operators and Assemblers



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 vehicle: 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 2<sup>nd</sup> 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)





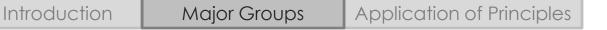
#### Difference Between Minor Groups 831/832 and 315

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



#### Difference Between Major Groups 7 and 8

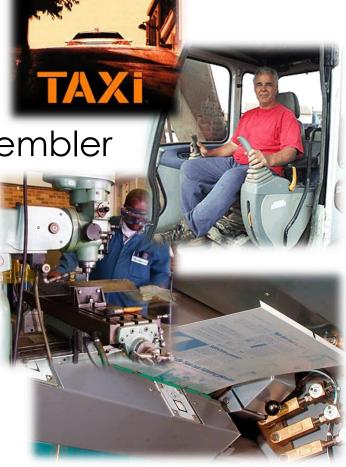
Group 7 – Craftsmen and Related Trades Workers	Group 8 – Plant and Machine Operators and Assemblers
Requires knowledge of the production process and procedures and materials used	Mainly need to know how to operate <u>machinery and</u>
Usually produce <u>non-standard</u> products or services	Usually involves 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
- (Usually) physical effort is required with minimal judgment
- 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 1<sup>st</sup> skill level (requiring primary or no education)



### Major Group 9 – Cleaners, Labourers and Related Workers



CLEANERS AND 91 **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



Major Groups

## 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

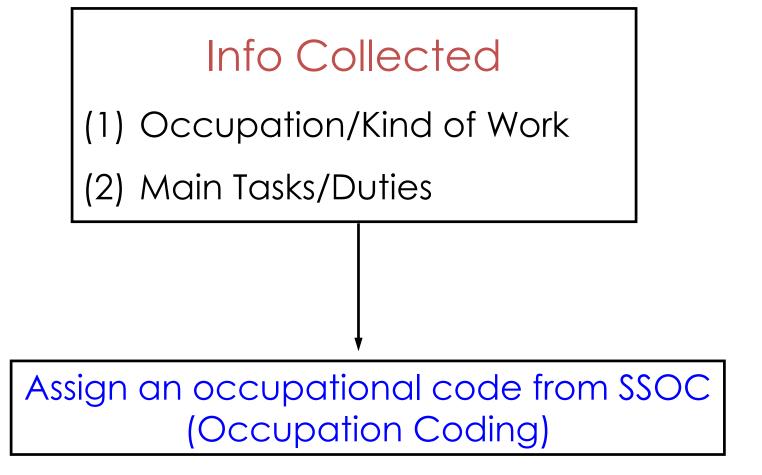


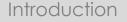


# Assigning a Code



# Information Collected







# Information Collected

(1) What is the person's occupation?

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

Describes the occupation





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)



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)

Introduction

Major Groups



# Occupations with Multiple Tasks and Duties



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

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)

Introduction

Major Groups



# 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 production 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)

