

EurOccupations

A Toolkit for non-EurOccupations
EU member states

Deliverable D3

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EurOccupations.org

Developing a detailed 7-country occupations
database for comparative socio-economic
research in the European Union



In the project EurOccupations, 10 European universities and research institutes are developing an occupations database, including information on approximately 1,500 – 2,000 occupations in a variety of industries (from care & welfare to technology & manufacturing, from service occupations to agriculture & fishing). These occupations will be described within the context of 7 countries, namely: the UK, Germany, France, Spain, Poland, Belgium and the Netherlands. This project aims to build a publicly available database with the 1,500 - 2,000 most frequent occupations in the 7 large EU member states (United Kingdom, Germany, France, Spain, Poland, Belgium and the Netherlands).

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1. Introduction

This paper is part of the EurOccupations project, which is a project for building an international comparative occupations database. The project is funded from the 6th Framework Program of the European Union (EU-FP6-nr. 028987, 2006-2009). The database aims to become a tool that can be used for comparative, multi-country data-collection. This paper is EurOccupations deliverable D3a, which aims to deliver a toolkit for EU member states that are not involved in EurOccupations and who wish to extend the EurOccupations database for their country and language(s).

The occupations listed in the EurOccupations database, are departed from the 4-digit occupational groups from the updated version of the International Standard Classification of Occupations of 1988 (ISCO-08). Most, if not all, EU countries use a national occupational classification (NOC) to classify occupations in their national surveys. Detailed occupational classifications tend to differ cross-nationally with respect to the level of detail, with respect to specific occupational titles included in the classifications and, with respect to their logic (Ganzeboom & Treiman, 1996). Some countries (Greece and Portugal) have adopted ISCO-88 as their NOC, others use a NOC that is based on ISCO-88, like Italy or Denmark, and there are also countries (France and Germany for instance) that use a NOC that is not linked to ISCO-88 (Elias & Birch, 1994). The extension of the EurOccupations' list of occupations (the source list) will therefore be slightly different for those countries with a NOC that is directly linked to or based on ISCO-88 compared to countries with a NOC not directly linked to ISCO-88.

Besides the list of occupations, the EurOccupations database will also contain for a selection of 160 key occupations additional information on skill levels, occupational content and relevant social stratification measures¹. This information can also be extended for the EU countries not involved in the EurOccupations project, but this is not the scope of this paper and will therefore be discussed in another paper. In this paper we briefly discuss the principles of the source list, then we discuss how EU member states with a NOC linked to ISCO-88 can extend the source list, and finally the possibility of extension for EU member states with a NOC not directly linked to ISCO-88 shall be discussed.

¹ For more information on the selection of key occupations see De Ruijter, De Ruijter, and Jacobs (2007) - deliverable D1c.

2. Brief discussion² of the underlying principles of the source list

As said, the occupational titles are departed from the 4-digit unit groups of ISCO-08. Unit groups of ISCO-08 sometimes contain more than one occupational group. In the source list of EurOccupations, these occupational groups are split into separate groups. For example, ISCO-08 unit group 2150 Architects, planners, surveyors, and designers are separated in the source list as (1) Architects, (2) planners, (3) surveyors, (4) designers.

The source list of EurOccupations contains occupational titles that have been assigned an 11-digit code. The first 4-digits of this 11-digit code represent the 4-digit unit groups of ISCO-08. The 4-digit code is followed by a 2-digit code, which represents the more detailed occupation within the 4-digit ISCO-08 unit group. In the example above, this means that Architects, planners, surveyors, and designers all are set up with the same 4-digit code 2150 (like the corresponding ISCO-08 code). The following 2-digit code will be different for the four occupational titles. The sixth and seventh digits in the 11-digit code are zero. These digits can be used later, if necessary, for example to assign a version code to the occupation when the label of the occupation in the source list has been changed. The last three digits of the 11-digit code represent the ISO country code, but only when the occupation is a country-specific occupation. When the occupation is not country-specific, the last three digits are zero.

As mentioned above, the source list is based on ISCO-08. Most countries have yet only a mapping from their NOC to ISCO-88, and are in preparation for a mapping table to ISCO-08. Therefore a mapping table from ISCO-08 to ISCO-88 can be found in Appendix 1.

Using a list of around 1,500 occupations in a survey is not user friendly. It is very difficult to find the right occupation in such a list. Therefore, a search tree is often used to facilitate respondents to identify their occupation. A search tree is also used in the EurOccupations project to structure the occupations in the source list. For the search tree, the occupational titles are set at the third tier. Subsequently, the occupational titles have been clustered into broader occupational groups at the second tier. These broader groups have in turn been clustered into very broad groups at the first tier. See Tijdens (2007) for a more detailed discussion of the construction of the search tree used in EurOccupations. The search tree as used in EurOccupations can be found in Jacobs and Tijdens (2007). The latest version of the search tree can be found on the project website www.euroccupations.org.

² For more detailed information on the construction of the EurOccupations' source list see Tijdens (2007) - deliverable D1a.

3. EU member states with a NOC linked to ISCO-88

EU member states that have adopted ISCO-88 as their NOC or for which the NOC is based on ISCO-88, can use the mapping table from the Appendix to code their NOC according to the ISCO-08 4-digit codes. Almost all ISCO-08 unit groups will then be covered by a corresponding NOC label. The new unit groups from ISCO-08 that did not exist as a unit group in ISCO-88, must be translated. Unit groups in ISCO-08 can contain multiple occupational titles, like in the example in above section, and therefore have to be split the same way as has been done for the EurOccupations source list. All unit groups are specified with additional occupational titles as described in Tijdens (2007). These occupational titles have to be translated by the country themselves. There are already translations for these occupational titles available for the 8 countries involved in the project, which can be of great help understanding the meaning of the occupational titles from the source list. Because the database poses high demands towards readability of occupational titles, the wording of the translations should be simple, short and easy to understand and additionally the words should be unambiguous like the source list was aimed at (Tijdens, 2007).

4. EU member states with a NOC not linked to ISCO-88

For EU member states that have not adopted ISCO-88 as their NOC or for which the NOC is not based on ISCO-88, the extension of the source list is a bit more roundabout but not impossible. When a good quality mapping table from the lowest level of the NOC to the 4-digit level of the ISCO-88 is available, again the mapping table of Appendix 1 can be very helpful in a similar way as described in the above section. A difference with the above section will be that the labels from the NOC will not match one-to-one with the occupational group labels used in ISCO-08 and will probably also not match one-to-one with the occupations used in the source list. One must proceed with caution, and check all labels from the NOC with the occupations of the source list to see whether the same occupation is meant. Some occupations from the lowest level of the NOC shall be occurring in the source list; others shall not and must be classified within the 'other'-category corresponding to the same 4-digit group of ISCO-08, or when the occupation is frequently occurring, a country-specific occupation can be added to the list by assigning the ISO country code to the last 3-digits of the 11-digit code of the occupation in the source list that comes closest to this new occupation.

When a country has only a mapping table from their NOC to the 3-digit or even the 2-digit level of ISCO-88, mapping the NOC to the source list and using the occupations from the NOC to extend the source list is complicated. By using the mapping table to ISCO-88, the NOC can only be mapped to the source list at a higher level (3-digit or 2-digit ISCO-08). The occupations from the NOC must be check one-by-one manually to see whether there is a corresponding occupation with an 11-digit code in the source list. It is very likely that it will be easier and faster to just translate the source

list into the country's language with the drawback that comparison between data gathered by means of the NOC and gathered by means of the source list can only take place at an aggregated level.

5. References

De Ruijter, J., De Ruijter, E., & Jacobs, J. (2007). Key occupations and cluster division. Deliverable D1c. Available at www.eurooccupations.org

Elias, P., & Birch, M. (1994). ISCO-88(COM): A guide for users. Retrieved May 10, 2007 from <http://www.warwick.ac.uk/ier/isco/isco88.html>

Ganzeboom, H.B.G., & Treiman, D.J. (1996). Internationally Comparable Measures of Occupational Status for the 1988 International Standard Classification of Occupations. *Social Science Research*, 25, 201–239.

Jacobs, J., & Tijdens, K.G. (2007). Structure and translations. Deliverable D1b. Available at www.eurooccupations.org

Tijdens, K.G. (2007). The EurOccupations database and its underlying principles. Deliverable D1a. Available at www.eurooccupations.org

6. Appendix. Mapping table from ISCO-08 (Sept '08) to ISCO-88

ISCO-08 Code	ISCO-08 Label	ISCO-88 Code	Notes
0	Armed Forces occupations		Only occupations unique to the armed forces to be classified here. Options for further detail to be developed based on review of national practices.
01	Commissioned armed forces officers		
011	Commissioned armed forces officers		
0110	Commissioned armed forces officers	0110, part	
02	Non-commissioned armed forces officers		
021	Non-commissioned armed forces officers		
0210	Non-commissioned armed forces officers	0110, part	
03	Armed forces occupations, other ranks		
031	Armed forces occupations, other ranks		
0310	Armed forces occupations, other ranks	0110, part	
1	Managers, senior officials and legislators		
11	Chief executives, senior officials and legislators		Merged ISCO 88 11 with 121
111	Legislators and senior officials		
1111	Legislators	1110	
1112	Senior government officials	1120	
1113	Traditional chiefs and heads of village	1130	
1114	Senior officials of special-interest organisations	1141, 1142, 1143	
112	Managing directors and chief executives		
1120	Managing directors and chief executives	1210	
12	Administrative and commercial managers		New for ISCO-08
121	Business services and administration managers		New for ISCO-08
1211	Corporate services managers	1229, part - 1227, 1317 part, 1228 part	Includes purchasing managers.
1212	Finance managers	1231, 1317 part	
1213	Human resource managers	1232, 1317, part	
1214	Policy and administration managers	1239, part	Proposal based on Australian experience -deals with some civil service and some private sector jobs,
122	Sales, marketing and business development managers		New for ISCO-08
1221	Sales and marketing managers	1233, 1317 part	
1222	Advertising and public relations managers	1234, 1317 part	

ISCO-08 Code	ISCO-08 Label	ISCO-88 Code	Notes
1223	Research and development managers	1237, 1319 part	
13	Production and specialised services managers		New for ISCO-08. These managers manage the production of the good or service that the organisation is intended to produce. Farm managers category has been deleted and put in Sub-major Group 61
132	Manufacturing, mining, construction, and distribution managers		
1321	Manufacturing managers	1222, 1312	
1322	Mining managers	1229, part - 1319, part	
1323	Construction managers	1223, 1313	
1324	Supply and distribution managers	1226 part, 1235, 1316 part	Includes transport company managers
133	Information and communications technology service managers		New
1330	Information and communications technology service managers	1226 part, 1236, 1316 part	Includes Chief information officer
134	Education, health and welfare service managers	1229 and 1319	New -These managers require specialised qualifications and manage the specialised operations of the organisation they work in. They require a higher level of skill than occupations in the proposed group 14.
1341	Child care service managers	1229, 1319	
1342	Health service managers	1229, 1319	Excludes aged care
1343	Aged care service managers	1229, 1319	
1344	Social welfare managers	1229, 1319	Excludes aged care
1345	Education managers	1229, 1319	
135	Other professional services managers		Seek advice from TEG/ISCO members on the content of the group
1350	Other professional services managers		
14	Hospitality, shop and related services managers		New, but almost all from 13 in ISCO-88. This group is for managers of establishments that provide services directly to the public, usually in organisations that are too small to have hierarchies of managers
141	Hotel and restaurant managers	1315, part	
1411	Hotel managers	1315, part	
1412	Restaurant managers	1315, part	
142	Shop managers		
1420	Shop managers	1314	
143	Other services managers		
1431	Sports, recreation and cultural centre managers	1319 part	
1439	Services managers not elsewhere classified	1318 part, 1319 part	Includes contact centre managers, shopping centre managers, casino managers
2	Professionals		

ISCO-08 Code	ISCO-08 Label	ISCO-88 Code	Notes
21	Science and engineering professionals		
211	Physicists, chemists and related professionals		
2111	Physicists and astronomers	2111	Includes medical physicists
2112	Meteorologists	2112	
2113	Chemists	2113	
2114	Geologists and geophysicists	2114	
212	Mathematicians, actuaries and statisticians		
2120	Mathematicians, actuaries and statisticians	2121, 2122	
213	Life science professionals		
2131	Biologists, botanists, zoologists and related professionals	2211 part	
2132	Pharmacologists, pathologists and related professionals	2212	
2133	Agronomists and farming and forestry advisers	2213	Merged with 3147
2134	Environmental protection professionals	2211 part	Excludes environmental engineers
214	Engineering professionals		Architects and cartographers removed - name changed
2141	Industrial and production engineers	2149, part	new
2142	Civil engineers	2142	
2143	Electrical engineers	2143	
2144	Electronics engineers	2144, part	Telecommunications engineers moved to 2148, 2513 Telecommunications Engineering Professionals
2145	Mechanical engineers	2145	
2146	Chemical engineers	2146	
2147	Mining engineers, metallurgists and related professionals	2147	
2149	Engineering professionals not elsewhere classified	2149, part	Includes energy engineers and environmental engineers should
215	Architects, planners, surveyors and designers		
2151	Building architects	2141, part	
2152	Landscape architects	2141, part	
2153	Product and garment designers	3471, part	
2154	Town and traffic planners	2141, part	
2155	Cartographers and surveyors	2148	
2156	Graphic and multimedia designers	3471, part	moved from 2453
22	Health professionals		
221	Medical doctors		upgraded, proposed by WHO, 2221
2211	Generalist medical practitioners	2221, part	
2212	Specialist medical practitioners	2221, part	
222	Nursing and midwifery professionals		
2221	Nursing professionals	2230, part	split group, supported by WHO
2222	Midwifery professionals	2230, part	split group, supported by WHO
223	Paramedical professionals		
2231	Paramedical practitioners	3221, part	was part of 3210 includes Feldschers
2232	Emergency paramedics	5132, part	was part of 5136 ambulance officers
224	Other health professionals		This category is for all health professionals, except doctors, nurses and paramedical

ISCO-08 Code	ISCO-08 Label	ISCO-88 Code	Notes
			professionals.
2241	Dentists	2222	
2242	Pharmacists	2224	
2243	Environmental and occupational health and hygiene professionals	2229, part, 3152, part	Split group, proposed by WHO -Includes Occupational hygienist "Health and safety professional, Environmental health professional".
2244	Physiotherapists	3226	Chiropractor, Podiatrist, Prosthetist, Prosthetic technician to be moved to 2249 or 3239 as appropriate. Masseur to be moved to "Physiotherapy technician" or "beautician"
2245	Dieticians and nutritionists	3223	
2246	Audiologists and speech therapists	3229, part	
2247	Veterinarians	2223	Moved, no change in content
2249	Health professionals not elsewhere classified	2229, 3229	Includes occupational therapists, podiatrists
23	Teaching professionals		
231	University and higher education teachers		Name change
2310	University and higher education teachers	2310, part	Vocational education teachers excluded
232	Vocational education teachers		New group
2320	Vocational education teachers	2310, part, 2320, part	
233	Secondary education teachers		
2330	Secondary education teachers	2320, part	Vocational education teachers excluded
234	Primary school and early childhood teachers		
2341	Primary school teachers	2331, 3310	merged group 2331, 3310
2342	Early childhood educators	2332, 3320	Merged group 2332, 3320
235	Other teaching professionals		
2351	Education methods specialists	2351	Includes school inspectors
2352	Special needs teachers	2340, 3320	merged group 2340, 3330
2353	Extra-systemic language teachers	2359, part	
2354	Extra-systemic music teachers	2359, part	
2355	Information technology trainers	2359, part	
2359	Other teaching professionals not elsewhere classified	2359, part	
24	Business and administration professionals		
241	Finance professionals		
2411	Accountants	2411	
2412	Financial and investment advisers	2412, 3419 part	
2413	Financial analysts	2419 part, 3419 part	
242	Administration professionals		
2421	Management and organisation analysts	2419, part	
2422	Policy administration professionals	2419, part	
2423	Personnel and careers professionals	2412 part	
2424	Training and staff development professionals	2412 part	
243	Sales, marketing and public relations professionals		

ISCO-08 Code	ISCO-08 Label	ISCO-88 Code	Notes
2431	Advertising and marketing professionals	2419, part	
2432	Public relations professionals	2419, part	
2433	Technical and medical sales professionals (excluding ICT)	3415, part	
2434	Information and communications technology (ICT) sales professionals	3415, part	
25	Information and communications technology (ICT) professionals		Upgraded group - was 213
251	Software and applications developers and analysts		New group
2511	Systems analysts	2131, part	Split group - includes IT business analysts
2512	Software developers	2131, part	Split group, includes software programmers. Excludes applications programmers.
2513	Web and multimedia developers	2131, part - 2132, part - 2139, part	Split group. Web site designers are included in 2156, graphic and multimedia designers
2514	Applications programmers	2132, part	"Computer programmer" with no additional information to be coded here.
2519	Software and multimedia developers and analysts not elsewhere classified	2131, part - 2132, part - 2139, part	
252	Database specialists and systems administrators		New
2521	Database designers and administrators	2131, part	split group
2522	Systems administrators	2131, part	split group
253	ICT network and hardware professionals		new
2531	Computer network professionals	2131, part	
2532	Telecommunications engineering professionals	2144, part	
2539	ICT network and hardware professionals not elsewhere classified	2131, part - 2132, part - 2139, part	
26	Legal, social and cultural professionals		
261	Legal professionals		
2611	Lawyers	2421	
2612	Judges	2422	
2619	Legal professionals not elsewhere classified	2429	
262	Librarians, archivists and curators		
2621	Archivists and curators	2431	
2622	Librarians and similar information professionals	2432	
263	Social, religious and related professionals		New name, 244 and 246 merged
2631	Economists	2441	
2632	Sociologists, anthropologists and related professionals	2442	
2633	Philosophers, historians and political scientists	2443	
2634	Philologists, translators and interpreters	2444	
2635	Psychologists	2445	
2636	Social work and counselling professionals	2446	

ISCO-08 Code	ISCO-08 Label	ISCO-88 Code	Notes
2637	Religious professionals	2460	Moved from 2470. Monks and Nuns to be excluded. Add note to definition to make it clear that members of religious orders who perform tasks of other occupations should be classified elsewhere.
264	Creative or performing artists, and writers		TEG/ISCO agreed to move models here and to merge this group with 347. Sports & fitness workers remain in MG 3
2641	Authors and related writers	2451	Includes book editor, excludes newspaper editor
2642	Visual artists	2452	
2643	Musicians, singers and composers	2453, 3473, part	Includes street, night club and related musicians and singers from 3473 (part)
2644	Dancers and choreographers	2454 - 3473, part	Includes street and night club dancers from 3473 (part)
2645	Film, stage and related actors and directors	2455	
2646	Journalists	2451	Includes sub-editors, political editors, TV and Radio journalists and interviewers. Newspapers editors. Excludes, photo journalists, cameramen/women, public relations professionals
2647	Announcers on radio, television and other media	3472	moved from 3472
2649	Other creative or performing artists	3474	Includes clown, acrobat, hypnotist, magician moved from 3474
3	Technicians and associate professionals		
31	Science and engineering associate professionals		
311	Physical and engineering science technicians		
3111	Chemical and physical science technicians	3111	
3112	Civil engineering technicians	3112, 3151	
3113	Electrical engineering technicians	3113, 3152 part	
3114	Electronics engineering technicians	3114 part, 3152 part	Telecommunications and computing excluded
3115	Mechanical engineering technicians	3115, 3152 part	
3116	Chemical engineering technicians	3116, 3152 part	
3117	Mining and metallurgical technicians	3117, 3152 part	
3118	Draughtspersons	3118	
3119	Physical and engineering science technicians not elsewhere classified	3119	
312	Engineering production supervisors	New group	
3121	Mining supervisors	7111 part,	
		8111 part	
3122	Manufacturing supervisors	8211, part 8231, part 8232, part	
3123	Construction supervisors	7129 part	

ISCO-08 Code	ISCO-08 Label	ISCO-88 Code	Notes
313	Process control technicians		New group
3131	Power production plant operators	8161	
3132	Steam engine and boiler operators	8162	
3133	Incinerator and water treatment plant operators	8163	
3134	Chemical processing plant controllers	8152-81538154	
3135	Petroleum and natural gas refining plant operators	8155	
3136	Pulp and papermaking plant operators	8142, 8143	
3137	Metal production process controllers	8121, 8122, 8123, 8124 part	
3138	Automated assembly line controllers	8171, 8172, 3123	
314	Life science technicians and related associate professionals		
3141	Life science technicians (except medical)	3211 part	
3142	Medical laboratory technicians	3211 part	
3143	Veterinary assistants	3227	Moved from 3227
3144	Agricultural technicians	3212 part	Split group, proposed by FAO
3145	Fishery technicians	3212 part	Split group, proposed by FAO
3146	Forestry technicians	3212 part	Split group, proposed by FAO
315	Ship and aircraft controllers and technicians		
3151	Ships' engineers	3141	
3152	Ships' deck officers and pilots	3142	
3153	Aircraft pilots and related associate professionals	3143	Includes "Flying instructors"
3154	Air traffic controllers	3144	
3155	Air traffic safety technicians	3145	Industry specific – Could be merged with 3114, Electronics engineering technicians
32	Health associate professionals		
321	Medical, pharmaceutical and veterinary technicians		
3211	Doctor's assistants	3221 part	
3212	Medical and pathology laboratory technicians	3211	moved from 3142
3213	Pharmaceutical technicians and assistants	3228	moved from 3232
3214	Veterinary technicians and assistants	3227	moved from 3143
322	Nursing and midwifery associate professionals		
3221	Nursing associate professionals	3231- 2230, part	
3222	Midwifery associate professionals	3232	
323	Other health associate professionals		
3231	Dental assistants and therapists	3225	Dental technicians are excluded and are classified in a new unit group 7314, Medical and dental prosthetic and related technicians
3232	Medical records and health information technicians		
3233	Community health workers	3221, part	Split group, supported by WHO
3234	Optometrists and opticians	3224	

ISCO-08 Code	ISCO-08 Label	ISCO-88 Code	Notes
3235	Physiotherapy technicians and assistants	3226, part	Includes: massage therapist, electrotherapist.
3236	Medical equipment technicians	3133	Includes: radiographer, ultrasonographer
3237	Environmental and occupational health inspectors and associates	3152 part, 3222	Includes sanitary inspector
3238	Traditional and complementary medicine practitioners	3241, 3229 part	Includes: acupuncturist, village healer, naturopath, herbalist, homeopath
3239	Health associate professionals not elsewhere classified	3229 part, 3226 part	Includes: chiropractor, osteopath
33	Business and administration associate professionals		
331	Financial and mathematical associate professionals		
3311	Securities and finance dealers and brokers	3411	
3312	Credit and loans officers	1317, part 3419, part	Includes Financial institution branch manager
3313	Accounting associate professionals	3433	Name change
3314	Statistical, mathematical and actuarial associate professionals	3434	
3315	Valuers and loss assessors	3417, part	
332	Sales and purchasing agents and brokers		
3321	Insurance representatives	3412	
3322	Commercial sales representatives	3415, part	Technical and ICT sales representatives moved to Major group 2
3323	Buyers	3416	
3324	Trade brokers	3421	
333	Business services agents		
3331	Clearing and forwarding agents	3422	
3332	Conference and event planners	3439, part	
3333	Employment agents and contractors	3423	
3334	Real estate agents and property managers	3413	
3339	Business services agents not elsewhere classified	3429	Includes auctioneers
334	Administrative and specialised secretaries		Merged group and upgraded to Minor group level
3341	Office supervisors	4115 part	New group based on requests for supervisors in administrative occupations
3342	Legal secretaries	4115, part	New group
3343	Administrative and executive secretaries	3431, part	New group
3344	Medical secretaries	4115, part	New group relationship with medical receptionists to be classified.
3349	Administrative and specialised secretaries not elsewhere classified	4115, part	
335	Customs, tax and related government associate professionals		
3351	Customs and border inspectors	3441	
3352	Government tax and excise officials	3442	
3353	Government social benefits officials	3443	
3354	Government licensing officials	3444	
3359	Customs, tax and related government associate professionals not elsewhere	3449	

ISCO-08 Code	ISCO-08 Label	ISCO-88 Code	Notes
	classified		
34	Policing, legal, social, cultural and related associate professionals		Title is long but preferable to 'other' or 'miscellaneous'
341	Policing and legal associate professionals		Both need knowledge of the law and of judicial procedures.
3411	Police inspectors and detectives	3450	
3412	Legal and related associate professionals	3432	
342	Social and religious associate professionals		
3421	Social work associate professionals	3460	
3422	Religious associate professionals	3480	Was 3480 Includes all nuns and monks. Add comments to definitions to exclude those who perform tasks of other occupations.
343	Sports and fitness workers	3475, part	Expanded and upgraded based on suggestion from WTO and examination of practice in UK, USA, Australia, NZ and Canada.
3431	Athletes and sports players	3475 part	Was 3475 split
3432	Sports coaches, instructors and officials	3475, part	Was 3475 split - includes tennis coach, swimming coach, ski instructor
3433	Fitness and recreation instructors and program leaders	3475, part	Includes fitness instructors, outdoor adventure guides and horse riding instructors. Includes sailing instructors
344	Artistic and cultural associate professionals		
3441	Photographers	3131, part	Includes photo-journalist
3442	Interior designers and decorators	3471, part	
3443	Gallery, library and museum technicians		New group
3449	Artistic associate professionals not elsewhere classified		Includes script-girl/boy, prompter, stage manager
35	Information and communications technicians		Group upgraded
351	ICT operations and user support technicians		New group
3511	ICT operations technicians	3122	Changed title
3512	ICT user support technicians	3121, part	Split group
3513	Systems testing technicians	2139, part 3121, part	Systems testers appear to be an increasingly important group that is not generally separately identified.
352	Web technicians		Split group
3520	Web technicians	3121, part - 3122	Split group
353	Communications technicians		New
3531	Broadcasting and sound and vision recording technicians	3131, part 3132	
3532	Telecommunications engineering technicians	3114, part	
4	Clerks		
41	Office clerks		
411	General office clerks		New – There is a large number of clerical workers who perform a range of tasks, usually in small offices.
4110	General office clerks	4190 part	
412	Numerical clerks		

ISCO-08 Code	ISCO-08 Label	ISCO-88 Code	Notes
4121	Accounting and bookkeeping clerks	4121	
4122	Statistical, finance and insurance clerks	4122	
4123	Payroll clerks	4121	
413	Material-recording and transport clerks		
4131	Stock clerks	4131	
4132	Production clerks	4132	
4133	Transport clerks	4133	
414	Library, mail and related clerks		
4141	Library and filing clerks	4141	
4142	Mail carriers and sorting clerks	4142	
4143	Coding, proof-reading and related clerks	4143	
4144	Scribes and related workers	4144	Move to 422?
415	Keyboard operators		
4151	Typists and word processing operators	4111, 4112	
4152	Data entry clerks	4113, 4114	
416	Secretaries (general)		
4160	Secretaries (general)	4115, part	Administrative and specialised secretaries are excluded (see 334)
419	Other office clerks		
4191	Personnel clerks	4190, part	
4199	Other office clerks not elsewhere classified	4190, part	
42	Customer services clerks		
421	Cashiers, tellers and related clerks		
4211	Tellers and other counter clerks	4212	
4212	Bookmakers, croupiers and related gambling workers	4213	
4213	Pawnbrokers and money-lenders	4214	
4214	Debt-collectors and related workers	4215	
422	Client information workers		
4221	Travel agency and related clerks	4221	Merged from 3314
4222	Contact centre information clerks	4222, part	Split group
4223	Telephone switchboard operators	4223	
4224	Hotel front desk receptionists	4222, part	Split group - 4222
4225	Inquiry clerks	4222, part	Split group - 4222
4226	Receptionists (general)	4222, part	Split group - 4222
4227	Survey and market research interviewers	4222, part	
4229	Other client information workers	4222, part	Includes hospital admissions clerks
5	Service and sales workers		Changed title
51	Personal and protective services workers		
511	Travel attendants and related workers		
5111	Travel attendants and travel stewards	5111	
5112	Transport conductors	5112	
5113	Travel guides	5113	
512	Housekeepers and cleaning supervisors		Group split - see 517 and 518.
5121	Cleaning supervisors	9132, part	
5122	Domestic housekeepers	5121, part	
5123	Housekeepers in hotels, offices and other	5121 part	

ISCO-08 Code	ISCO-08 Label	ISCO-88 Code	Notes
	establishments		
513	Personal care and related workers		
5131	Child-carers	5131, part	Name change
5132	Teachers' Aides	5131, part	New group
5133	Health care assistants	5132, part	Provide personal care in support of health professionals in hospitals, clinics, related institutions. Includes nursing aid, hospital orderly, medical imaging assistants.
5134	Home-based personal care workers	5133	
5135	Ambulance officers	5132 part	New group
5139	Personal care and related workers not elsewhere classified	5139, part	
514	Hairdressers, beauticians and related workers		New minor group
5141	Hairdressers	5141 part	
5142	Beauticians and related workers	5141 part	
515	Other personal services workers		
5151	Astrologers, fortune-tellers and related workers	5151, 5152	
5152	Companions and valets	5142	
5153	Undertakers and embalmers	5143	
5154	Pet groomers and animal care workers	5139, part	
5159	Other personal services workers not elsewhere classified	5149	Includes commercial sex workers. Includes Faith healers
516	Protective services workers		
5161	Fire-fighters	5161	
5162	Police officers	5162	
5163	Prison guards	5163	
5164	Security guards	5169 part, 9152	
5169	Protective services workers not elsewhere classified	5169	
517	Chefs and cooks		Upgraded, fast food cooks moved to MG 9
5171	Chefs	5122, part	
5172	Cooks	5122, part	Includes short order cooks
518	Waiters, waitresses and bartenders		Upgraded - was 5123
5181	Waiters and waitresses	5123, part	
5182	Bartenders	5123, part	
52	Sales workers		Merged group, excludes technical and commercial sales representatives
521	Street and market sales persons		New minor group
5211	Stall and market salespersons	5230	
5212	Street food salespersons	9111	Group split and moved from MG9
522	Shop salespersons		
5221	Shop supervisors	5220, part	
5222	Shop sales assistants	5220, part	
523	Cashiers and ticket clerks		
5230	Cashiers and ticket clerks	4211	Should cash register operators be identified separately? Includes Checkout operators, Service station console operators. Excludes service

ISCO-08 Code	ISCO-08 Label	ISCO-88 Code	Notes
			station attendants
524	Other sales workers		New minor group
5241	Fashion and other models	5210	Was minor group 521
5242	Sales demonstrators	5220, part	
5243	Door to door salespersons	9113 part	Group split and moved from MG9
5244	Contact centre salespersons	9113 part	Group split and moved from MG9. Includes Internet salespersons
5245	Service station attendants		Excludes "Service station cashiers, and those who sell goods in shops at service stations but do not provide forecourt services such as assistance with fuel.
5246	Food service counter attendants	5220 part	
5249	Other sales workers not elsewhere classified		
6	Skilled agricultural, fishery, and forestry workers		
61	Market-oriented skilled agricultural and fishery, and forestry workers		Farm managers category has been deleted and put in Sub-major Group 61
611	Market gardeners and crop growers		
6111	Crop farm supervisors and managers	6111, 6112, 6114	New
6112	Field crop and vegetable growers	6111	
6113	Tree and shrub crop growers	6112	
6114	Gardeners, horticultural and nursery growers	6113	
6115	Mixed crop growers	6114	
612	Market oriented animal producers and related workers		
6121	Livestock and dairy farm supervisors and managers	6121, part - 6124, part	New
6122	Livestock and dairy producers	6121, part, 6124 part	
6123	Poultry producers	6122, 6124 part	Those who produce poultry and livestock or insects to be classified by the primary activity.
6124	Apiarists and sericulturists	6123, 6124 part	
6129	Market-oriented animal producers and related workers not elsewhere classified	6129	
613	Market-oriented mixed crop and animal farm workers		Name change
6131	Mixed crop and livestock farm supervisors and managers	6130, part	
6132	Mixed crop and animal farm producers	6130, part	
614	Forestry and related workers		
6141	Forestry workers and loggers	6141	merged with 6142 " Charcoal burners and related workers"
615	Fishery workers, hunters and trappers		
6151	Aquaculture workers	6151	Name change
6152	Inland and coastal waters fishery workers	6152	

ISCO-08 Code	ISCO-08 Label	ISCO-88 Code	Notes
6153	Deep-sea fishery workers	6153	
6154	Hunters and trappers	6154, 9213	Merged with 9213
62	Subsistence farmers, fishers, hunters and gatherers		
621	Subsistence farmers, fishers, hunters and gatherers		Changed title
6210	Subsistence farmers, fishers, hunters and gatherers	6210	Restricted to those whose main aim is to produce food for consumption by one household
7	Craft and related trades workers		
71	Extraction and building trades workers		
711	Building frame and related trades workers		
7111	House builders	7121, 7129 (part)	
7112	Bricklayers		
7113	Stonemasons, stone cutters and carvers	7113, 7122, part	
7114	Concrete placers, concrete finishers and related workers	7123	
7115	Carpenters and joiners	7124	
7119	Building frame and related trades workers not elsewhere classified	7129	
712	Building finishers and related trades workers		
7121	Roofers	7131	
7122	Floor layers and tile setters	7132	
7123	Plasterers	7133	
7124	Insulation workers	7134	
7125	Glaziers	7135	
7126	Plumbers and pipe fitters	7136	
7127	Air conditioning and refrigeration mechanics	7136, part	
713	Painters, building structure cleaners and related trades workers		
7131	Painters and related workers	7141	
7132	Spray painters and varnishers	7142	
7133	Building structure cleaners	7143	
7134	Fumigators and other pests or weed controllers		Excludes aerial sprayers, new group
72	Metal, machinery and related trades workers		
721	Metal moulders, welders, sheet-metal workers, structural-metal preparers, and related trades workers		
7211	Metal moulders and coremakers	7211	
7212	Welders and flamecutters	7212	
7213	Sheet-metal workers	7213	
7214	Structural-metal preparers and erectors	7214	
7215	Riggers and cable splicers	7215	
722	Blacksmiths, toolmakers and related trades workers		
7221	Blacksmiths, hammersmiths and forging press workers	7221	
7222	Toolmakers and related workers	7222	

ISCO-08 Code	ISCO-08 Label	ISCO-88 Code	Notes
7223	Metal working machine tool setters and operators	7223	Merged from 8130
7224	Metal wheel grinders, polishers and tool sharpeners	7224	
723	Machinery mechanics and repairers		
7231	Motor vehicle mechanics and repairers	7231, part	Includes motor vehicle mechatronic technician. Excludes bicycle repairers
7232	Aircraft engine repairer and mechanics	7232	
7233	Agricultural or industrial machinery mechanics and repairers	7233	
7234	Bicycle and related repairers	7231, part	New group
73	Precision, handicraft, printing and related trades workers		
731	Precision workers in metal and related materials		
7311	Precision-instrument makers and repairers	7311 part	Medical and dental prosthetic and orthotic technicians moved to 7314
7312	Musical instrument makers and tuners	7312	
7313	Jewellery and precious-metal workers	7313	
7314	Medical and dental prosthetic and related technicians	7311 part, 3226 part	Could be classified in 31 or 32. Skill level may be 3. Skills are mainly associated with engineering although medical, dental and anatomical knowledge is also important.
732	Potters, glass-makers and related trades workers		
7321	Abrasive wheel formers, potters and related workers	7321	
7322	Glass makers, cutters, grinders and finishers	7322	
7323	Glass and ceramics engravers, etchers and decorators	7323, 7324	
733	Handicraft workers in wood, textile, leather and related materials		
7331	Handicraft workers in wood and related materials	7331, 7431, 7432	merged from 7524
7332	Handicraft workers in textile, leather and related materials	7332	
734	Printing and related trades workers		
7341	Pre-press technicians	7341, 7342, 7343	
7342	Printers	7346, 8161	
7343	Print finishing and binding workers	7345, 8162	
74	Electrotechnology trades workers		
741	Electrical equipment installers and repairers		
7411	Building and related electricians	7137	
7412	Electrical mechanics and fitters	7241	
7413	Electrical line installers and repairers	7245 part	Telecoms and data cable jointers moved to 7423, ICT installers and servicers
742	Electronics and telecommunications installers and repairers		

ISCO-08 Code	ISCO-08 Label	ISCO-88 Code	Notes
7421	Electronics mechanics and servicers	7243 part, 7242	
7422	Information and communications technology installers and servicers	7242 part, 7243 part, 7244, 7245	Computer installers are classified in Major Group 3 as ICT support technicians as installation and set up is usually done by same person
75	Food processing, wood working, textile and other craft and related trades workers		
751	Food processing and related trades workers		
7511	Butchers, fishmongers and related food preparers	7411	
7512	Bakers, pastry-cooks and confectionery makers	7412	
7513	Dairy-products makers	7413	
7514	Fruit, vegetable and related preservers	7414	
7515	Food and beverage tasters and graders	7415	
7516	Tobacco preparers and tobacco products makers	7416	
752	Wood treaters, cabinet-makers and related trades workers		
7521	Wood treaters	7421	
7522	Cabinet-makers and related workers	7422	
7523	Woodworking-machine tool setters and operators	7423, 8194	merged from 8194
753	Textile, garment and related trades workers		
7531	Tailors, dressmakers, furriers and hatters	7433, 7434	
7532	Textile, leather and related pattern-makers and cutters	7435	
7533	Sewers, embroiderers and related workers	7436	
7534	Upholsterers and related workers	7437	
7535	Pelt dressers, tanners and fellmongers	7441	
7536	Shoemakers and related workers	7442	
754	Other craft and related workers		
7541	Underwater divers	7216	Name change from underwater workers
7542	Shoffirers and blasters	7112	
7543	Product graders and testers		
7549	Craft and related workers not elsewhere classified		
8	Plant and machine operators and assemblers		
81	Stationary plant and machine operators		
811	Mining and mineral processing plant operators		
8111	Miners and Quarriers	8111, 7111, 7113, part	Includes stone splitters; mining workers who use hand tools only are classified in Unit group 9311, Mining and quarrying labourers.
8112	Mineral ore and stone processing plant operators	8112	
8113	Well drillers and borers and related workers	8113	
8114	Cement, stone and other mineral products machine operators	8212	
812	Metal processing and finishing plant operators		

ISCO-08 Code	ISCO-08 Label	ISCO-88 Code	Notes
8121	Metal processing plant operators	8121, 8122, 8123, 8124	
8122	Metal finishing, plating and coating machine operators	8223	
813	Chemical and photographic products plant and machine operators		
8131	Chemical products plant and machine operators	8151, 8152, 8153, 8154, 8155, 8159, 8221, 8222, 8229	
8132	Photographic products machine operators	7344, 8224	Merged from 7344
814	Rubber, plastic and paper products machine operators		
8141	Rubber products machine operators	8231, part	
8142	Plastic products machine operators	8232, part	
8143	Paper products machine operators	8253	
815	Textile, fur and leather products machine operators		
8151	Fibre preparing, spinning and winding machine operators	8261	
8152	Weaving and knitting machine operators	8262	
8153	Sewing machine operators	8263	
8154	Bleaching, dyeing and fabric cleaning machine operators	8264, part	Excludes laundry machine operators
8155	Fur and leather preparing machine operators	8265	
8156	Shoemaking and related machine operators	8266	
8157	Laundry machine operators	8264 part	
8159	Textile, fur and leather-products machine operators not elsewhere classified	8269	
816	Food and related products machine operators		
8160	Food and related products machine operators	8271, 8272, 8273, 8274, 8275, 8276, 8277, 8278, 8279	
817	Other stationary plant and machine operators		Minor groups 813 and 814 have been moved here
8171	Glass, ceramics and related plant operators	8131, 8139	
8172	Wood processing plant operators	8141	
8173	Packing, bottling and labelling machine operators	8290, part	
8179	Stationary plant and machine operators not elsewhere classified	8290, part	
82	Assemblers		
821	Assemblers		Group upgraded
8211	Mechanical machinery assemblers	8281	
8212	Electrical equipment assemblers	8282	
8213	Electronic equipment assemblers	8283	
8214	Metal, rubber and plastic products assemblers	8284	

ISCO-08 Code	ISCO-08 Label	ISCO-88 Code	Notes
8215	Wood and related products assemblers	8285	
8216	Paperboard, textile and related products assemblers	8286	
8219	Assemblers not elsewhere classified	8290 part	Includes composite products assemblers
83	Drivers and mobile-plant operators		
831	Locomotive-engine drivers and related workers		
8311	Locomotive-engine drivers	8311	
8312	Railway brakemen, signallers and shunters	8312	
832	Car, van and motor-cycle drivers		Split ISCO-88 Minor Group 832
8321	Motor-cycle drivers	8321	
8322	Car, taxi and van drivers	8322	
833	Heavy truck and bus drivers		
8331	Bus and tram drivers	8323	
8332	Heavy truck and lorry drivers	8324	
834	Mobile-plant operators		Name change
8341	Motorised farm and forestry plant operators	8331	
8342	Earth-moving- and related plant operators	8332	
8343	Crane, hoist and related plant operators	8333	
8344	Lifting truck operators	8334	
835	Ships' deck crews and related workers		
8350	Ships' deck crews and related workers	8340	
9	Elementary occupations		
91	Cleaners and helpers		Group upgraded
911	Domestic, hotel and office cleaners and helpers		
9111	Domestic cleaners and helpers	9131	
9112	Cleaners and helpers in offices, hotels and other establishments	9132, part	Kitchen assistants moved to 9412. Includes lavatory attendant
912	Vehicle, window, laundry and other hand cleaning workers		New group pulling together cleaning occupations from several places in MG 9 and 8.
9121	Hand launderers and pressers	9133	
9122	Vehicle cleaners	9142, part	
9123	Window cleaners	9142, part	
9129	Other cleaning workers	9142, part	Includes carpet cleaners
92	Agricultural, fishery and forestry labourers		
921	Agricultural, fishery and forestry labourers		
9211	Crop farm labourers	9211 part	
9212	Livestock farm labourers	9211 part	
9213	Mixed crop and livestock farm labourers	9211 part	
9214	Garden and horticultural labourers	6113 part	
9215	Forestry labourers	9212	
9216	Fishery and aquaculture labourers	9213	
9217	Water and firewood collectors	9162 part	
93	Labourers in mining, construction, manufacturing and transport		
931	Mining and construction labourers		
9311	Mining and quarrying labourers	9311	

ISCO-08 Code	ISCO-08 Label	ISCO-88 Code	Notes
9312	Construction and maintenance labourers: roads, dams and similar constructions	9312	
9313	Building construction labourers	9313	
932	Manufacturing labourers		
9321	Hand packers	9321	
9329	Manufacturing labourers not elsewhere classified	9321	Includes assembling labourers
933	Transport and storage labourers		
9331	Hand or pedal vehicle drivers	9331	
9332	Drivers of animal-drawn vehicles and machinery	9332	
9333	Freight handlers	9333 part	
9334	Shelf fillers	9333 part	New group
94	Food preparation assistants	911	
941	Food preparation assistants		
9411	Fast-food preparers	5122 part	
9412	Kitchen helpers	9132 part	
95	Street and related sales and service workers	9112 part	
951	Street and related service workers		Changed title
9510	Street and related service workers	9120	Changed title. Includes shoe cleaners, car guards, windscreen washers
952	Street vendors	911 and 9112 part	
9520	Street vendors	9112 part	Excludes food vendors and stall and market sales persons.
96	Refuse workers and other elementary service workers		
961	Refuse workers	916	
9611	Garbage collectors	9161, part	
9612	Refuse sorters	9161, part	
9613	Sweepers and related labourers	9162, part	
962	Other elementary service workers		
9621	Messengers, package and luggage porters and deliverers	9151	Name change
9622	Odd job persons	9162, part	Was part of 9162 - Do not seem to fit with sweepers and are a distinct and reasonably numerous group.
9623	Vending-machine money collectors, meter readers and related workers	9153	
	Other elementary service workers not elsewhere classified		Ushers, ticket collectors, cloak room attendants, fair ground attendants, parking attendants (except security)

Source: ILO (2006). Draft classification structure – ISCO-08. Including Annex 2 for updating ISCO-88 into ISCO-08. Geneva, International Labour Office