

# Hungarian Standard Classification of Occupations HSCO-08/FEOR-08



Hungarian Central Statistical Office

**HUNGARIAN CENTRAL STATISTICAL OFFICE**

**HUNGARIAN STANDARD  
CLASSIFICATION OF  
OCCUPATIONS  
(HCSO-08/FEOR-08)**

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Prepared by the  
Living Condition, Labour Market and Education Statistics Department of the Hungarian  
Central Statistical Office

Head of Department:  
Katalin Janák

Head of Section:  
Ágnes Grábics

Compiled:  
Miklós Lakatos  
Éva Kasza

English version:  
Judít Lakatos  
Erzsébet Lindner  
Márta Záhonyi

# Content

Content.....	3
Methodology guide to the classification of HSCO-08 occupations.....	5
I. Introduction.....	5
II. A revision of the Hungarian Standard Classification of Occupations (HSCO-93), the design and construction of HSCO-08.....	5
III. Structure and major characteristics of HSCO-08, major criteria for occupational classification.....	9
IV. A summary description of the content of the major occupational groups of HSCO-08; management of cases of special classification.....	14
V. Structure and fundamental principles of the description of the content of occupations .	22
Hungarian standard classification of occupations, HCSO-08/FEOR-08 .....	25
1 Managers .....	25
2 Professionals.....	26
3 Technicians and associate professionals .....	29
4 Office and management (customer services) occupations .....	33
5 Commercial and services occupations .....	33
6 Agricultural and forestry occupations .....	35
7 Industry and construction industry occupations.....	35
8 Machine operators, assembly workers, drivers of vehicles.....	37
9 (Elementary) occupations not requiring qualifications .....	39
0 Armed forces occupations .....	40



# **Methodology guide to the classification of HSCO-08<sup>1</sup> occupations**

## **I. Introduction**

In order that social and economic processes and trends can be monitored, general, multi-purpose and mutually recognised classifications and concepts which objectively cover social and economic phenomena and function as a common language for the collection, processing, publication, use and comparison, in both space and time, of data at a national and international level must be available. One such system of classification is the Hungarian Standard Classification of Occupations (HSCO), which is used for various purposes including statistics, personnel records kept by HR departments, job placement, career counselling, vocational training and social security.

The international standard classification of occupations, which has also been adopted by EUROSTAT, the central organisation of statistical offices in Europe, was approved by the general management of the International Labour Office (ILO); a revision of ISCO was performed in 1958, 1968, 1988 and 2008. The last revision of ISCO-88 was particularly justified by major social, economic and technological changes in some countries since its introduction. A further argument for the revision was that new activities had emerged, some of the old ones had disappeared, the structure of occupations and content of some occupations had changed, and there had been shifts of focus in the system. Obviously, the same changes necessitated a revision of the national systems of occupational classification, among them the Hungarian system.

The Hungarian Standard Classification of Occupations (hereinafter: HSCO-08) follows, in terms of its basic principles and structure, the effective International Standard Classification of Occupations (ISCO-08), one of the main goals of which is to serve as a model for the development of national classification of occupations. This, however, does not mean that ISCO-08 and the individual national classification systems are interchangeable, because the occupational classification systems of the individual countries only reflect the structure of the national labour market.

## **II. A revision of the Hungarian Standard Classification of Occupations (HSCO-93), the design and construction of HSCO-08**

The issue that a standard, multi-purpose list of occupations needed to be drawn up was seriously raised in Hungary in the early 1970's. After a long period of preparation, the Hungarian Standard Classification of Occupations (or HSCO for short as was commonly referred to) was introduced in 1975. Except for a few partial modifications and amendments, of which those made in 1984 were the most significant, the fundamental principles of the occupational classification system set up at the time remained unchanged until 1993. A great benefit of the introduction of HSCO was that it helped those who needed it for work and even the wider public familiarise themselves with concepts related to employment; furthermore, from the perspective of occupational classification, it standardised records (registries) and data reporting serving labour-related, statistical and administrative purposes. Accordingly, measured against its original goal, the use of HSCO went well beyond statistics.

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<sup>1</sup> Hungarian Standard Classification of Occupations

The political, economic and social changes brought about by the political changeover raised the need for a revamp of the statistical and labour-related systems. Another pressing issue was to enable the Hungarian system of occupational classification to conform to its international counterpart (ISCO-88) more closely. After several years of preparation, HSCO-93, i.e. an updated system went into effect following broad-based inter-ministerial discussions and tests. The old system remained in use for another year from the effective date. Based on the experience gained during the transition period, a few minor alterations were made, and the system became mandatory on 1 January 1994.

In light of the fact that a relatively new occupational classification system was introduced, HSCO-93 was revised soon, in 1996. No fundamental changes were made during the revision; a few new occupational categories were created, and a few occupations were reallocated from one major group to another. It should be noted that the use of HSCO-93 was greatly facilitated by the fact that the content descriptions of the individual occupations and the names of the related jobs were available. (Such was not available in the case of the 1975 HSCO.)

The system of occupational classification (HSCO-93) revised in 1996 was in force between 1 January 1997 and 31 December 2010. In this period there was no change in either the nomenclature or the related content descriptions.

The revision of the HSCO-93 became justified for a number of reasons:

- The revision of ISCO-88, which commenced several years ago, was completed in 2008, and an updated system called ISCO-08 was introduced.
- There have been significant changes in the world of work since the last revision: new work activities have emerged, the content of some occupations has changed or become meaningless, which necessitates their removal from the system.
- Censuses and other data collections affecting the population, e.g. labour survey experience related to the registration of occupations have always been instrumental in the updating of occupational classification systems and can be relied on during the revision of HSCO-93 as well.

The revision of HSCO-93 was a process lasting for approximately 3 years, as a result of which – after panel discussions and tests – the updated version was published in the form of a HCSO President communique, with 1 January 2011 as its effective date. The HCSO assists with the application of HSCO by making the content descriptions of occupations, the related typical jobs and correspondence tables for HSCO-93 and HSCO-08 available in an electronic format. (The digits in the designation generally denote the year when the given revision is completed. The crucial part of the revision of ISCO-88 and HSCO-93 was completed in 2008, for that reason the digits of both nomenclatures was 08, however, the year of coming into force has been shifted to later years.)

### ***Major characteristics of the changes between HSCO-93 and HSCO-08***

There was no change in the number of the major groups of occupations in HSCO-08; however, the names of some major groups had been modified. The number of the occupations decreased from 632 in HSCO-93 to 485 in HSCO-08. As a result, both the number and the composition of the occupational groups and sub-groups changed significantly. The underlying reason for a decrease in the number of the occupations is that HSCO-08 conforms to ISCO-08 more closely than did HSCO-93 to ISCO-88. In the early 1990's, when HSCO-93 was compiled, a decisive factor was that the basic principles underlying HSCO introduced in 1975 were significantly different from those of the effective international

classification system; therefore, the structured system of the effective ISCO-88 could not be fully adopted during the changeover in 1993. What should also be borne in mind is that the 1975 HSCO adhered closely to an occupational breakdown reflecting the prevailing division of labour in industry, construction industry and agriculture, and such breakdown could not be abandoned altogether without risking historical comparability. As such considerations are now of lesser importance, the Hungarian system of occupational classification can be better approximated to its international counterpart. What considerably facilitates the switchover is that it is a decimal system of classification, thus, special needs can be met through the further breaking down of the four-digit occupations of HSCO-08 into a fifth, sixth, etc. decimal place. Occupations, with their content taken into account, were combined or subdivided, and new occupations were created. Some occupations were reallocated to different major groups, groups and sub-groups. Although the number of the persons in the individual occupations was not a major consideration when an occupation was incorporated into the system, activities taken up by few were mostly included in categories of occupations of similar nature or in the “other” type of occupations.

HSCO-08 had to reflect the technology development of the past decades, especially changes in computer technology, more specifically, the fact that the use of the computer is an integral part of work. Technology development has transformed mainly administrative work, and also had a major impact on other types of white collar occupations.

### ***Major changes in a breakdown by major groups of occupations***

#### ***Major group 1 – Managers***

Compared with HSCO-93, HSCO-08 took into account functional rather than sectoral considerations in grouping senior occupations. Similar to ISCO-08, HSCO-08 abandoned the category of ‘general managers of small enterprises’ and included them in the category of unit/division managers engaged in various activities. International experience also reveals that this distinction was hard to be made consistently, thus, the classification of certain senior occupations became easier. In the case of various statistical surveys, when data on employers are also collected, it is possible, in the possession of such data, to identify the general managers of small enterprises on the basis of employee headcount.

The HSCO introduced in 1975 created a separate category for foreman (site manager/plant manager/supervisor)-type occupations, which HSCO-93 also adopted despite the fact that ISCO did not use this category. ISCO-08 introduced occupations of a supervisory nature (ISCO-08: “312 Mining, manufacturing and construction supervisors”) that are very similar to foreman (site manager/plant manager/supervisor)-type occupations, and included them in either major group 3 or a separate category within the given major group (e.g. ISCO-08: “3341 Office supervisors”, “5222 Shop supervisors”). HSCO-08 also adopted this solution. If the given occupation involves an actual senior managerial function, then the activity that used to be defined as a foreman (site manager/plant manager/supervisor)-type activity may remain in the category of unit managers engaged in the appropriate activity within major group 1.

#### ***Major group 2 – Professionals***

HSCO-08 provides an even more detailed breakdown of IT, where it introduced a number of new occupations. The same holds true for major group 3.



### *Major group 3 – Technicians and associate professionals*

HSCO-08 makes easier the classification of the occupations in major group 3 which involve routine tasks and relatively few situations where decisions have to be made independently, and require a lower level of education. In a way, these occupations complement those in major group 2 (e.g. engineer – technician). HSCO-08 adopts the conceptual approach of ISCO-08, namely, that heavier emphasis is put on the work carried out than the required formal education. Thus, the majority of cultural occupations had been included in major group 2 (e.g. folk musicians in major group 3 in HSCO-93 had been re-classified and registered under code “2724 Composer, musician, singer”). One of the lessons learned from the application of HSCO-93 is that users think of the classification system as a hierarchical system and tend to place certain work activities at a higher level despite the fact that separation from other work activities is clear even within the given major group.

Two major changes had affected major group 3 in HSCO-08. One was that the category of supervisors and controllers had been added to this group (“32 Supervisors”) and the other was that the sub-group of operators of complex systems powered by advanced computers (e.g. nuclear power plants) had been removed from major category 8 and included in this category (e.g. “315 Process controllers (controllers of equipment”).

### *Major group 4 – Office and management (customer services) occupations*

HSCO-08 somewhat altered the system of this major occupational groups in HSCO-93 in order to reflect the changes that had occurred in information supply services and other areas of communication in the years preceding the update, and took into consideration the fact that the majority of occupations now required the use of a computer. There had been an increase in the number of the professions with information supply-related content.

### *Major group 5 – Commercial and services occupations*

A few minor alterations had been made to this major group in HSCO-08. It had combined a few occupations and broken down a few more into sub-groups (e.g. occupations related to personal care).

### *Major group 6 – Agricultural and forestry occupations*

Overall, HSCO-08 adopted the structure of HSCO-93; however, it combined a few occupations (e.g. professions related to keeping and raising cattle, horses, sheep, swine, and goats).

### *Major group 7 – Industry and construction industry occupations*

Most of the blue collar occupations in HSCO introduced in 1975 had been included in this major group of HSCO-93. Distinction between certain occupations in major groups 7 and 8 posed a problem consistently. Therefore, adopting the arrangement in ISCO-08, we combined a number of occupations in HSCO-08, and, eliminating duplication, we included some occupations (e.g. mining-related occupations) exclusively in major group 8.

The application of HSCO-93 revealed that, in the case of the individual sub-groups, the content of the occupations included in the “other” category had changed or become meaningless. As there had been a number of occupations of this kind in this major group, some of them had been discontinued.

### *Major group 8 – Machine operators, assembly workers, drivers of vehicles*

Technology development affected the occupations in this major group significantly. Change had been especially fundamental in the case of the operation of machines/machinery involved in the process of production/manufacturing; often, it required high-level sophisticated

knowledge (sometimes engineering expertise) and focussed attention, and placed enormous responsibility on the operator. Therefore, HSCO-08 had reallocated process operators engaged in this activity to major group 3, while leaving machine operators where similar, but less extensive knowledge is required in this group.

A relatively high number of occupations had been combined in major group 8. Consolidation mainly affected activities where similar technologies were applied, and the type of products manufactured on the given production line was of lesser importance (e.g. operator of food or beverage manufacturing machines).

#### *Major group 9 – (elementary) occupations not requiring qualifications*

As in other major groups, HSCO-08 took into consideration the fact that the content of elementary occupations (unskilled work) had changed. The nature of physical work had changed: the performance of even simple jobs, e.g. cleaning, now required the operation of machines; furthermore, jobs requiring some prior or on-the-job training had also emerged. Neither the role nor the importance of this major group had disappeared; it was its function that had changed.

#### *Major group 0 – Armed forces occupations*

HSCO-08 included military occupations pursued in the Hungarian Armed Forces in this category.

### **III. Structure and major characteristics of HSCO-08, major criteria for occupational classification**

The major characteristics of the occupational classification system can be summed up as follows:

- four-digit decimal system;
- takes into account the fact that in a market economy there are a larger number of more differentiated users than there used to be; offers a “common denominator”;
- for an independent use of the system the name of the occupation or the job in question and related major tasks as well as a list of the typical jobs suffice;
- an open system, i.e. users can meet their own needs through the further breaking down of the four-digit occupations of HSCO-08 into a fifth, sixth, etc. decimal place.

**In the four-digit decimal system** the first place denotes the major occupational group, the second the occupational group, the third the occupational sub-group and the fourth the occupation itself. The table below lists the groupings of HSCO-08.

*Differences between the occupational structure of HSCO-93 and that of HSCO-08<sup>3d</sup>*

Major groups		Groups	Sub-groups	Occupations
serial number	designation	number		
1	Managers	4 (4)	8 (11)	33 (64)
2	Professionals	8 (7)	25 (24)	115 (112)
3	Technicians and associate professionals	8 (8)	26 (24)	101 (123)
4	Office and management (customer services) occupations	2 (2)	6 (6)	26 (20)
5	Commercial and services occupations	2 (3)	9 (13)	41 (62)
6	Agricultural and forestry occupations	2 (4)	6 (7)	16 (30)
7	Industry and construction industry occupations	6 (6)	14 (23)	73 (120)
8	Machine operators, assembly workers, drivers of vehicles	4 (3)	12 (17)	50 (76)
9	(Elementary) occupations not requiring qualifications	3 (2)	7 (8)	27 (23)
0	Armed forces occupations	3 (3)	3 (3)	3 (3)
	<b>Total</b>	<b>42 (42)</b>	<b>116 (136)</b>	<b>485 (632)</b>

\*) In brackets: data pertaining to HSCO-93

Accordingly, the classification of “blacksmith” is performed for example as follows:

Major group	(1 <sup>st</sup> digit)	7	Industry and construction industry occupations
Group	(digits 1 and 2)	73	Metal and electrical industry occupations
Sub-group	(digits 1-3)	732	Metal working occupations
Occupation	(digits 1-4)	7326	Blacksmith, hammersmith and forging press worker

It may sometimes be the case that in sub-groups consisting of a number of occupations the content of some activity cannot be associated directly with any one of the listed occupations. In such a situation the occupation whose content approximates that of the occupation in question the most closely should be used as a reference basis.

For instance, the content is boilersmith. This occupation belongs to “Sub-group 732 Metal working occupations”. Although no (four-digit) occupation under this name exists in HSCO-08, “boilersmith” is one of the typical jobs linked to “7326 Blacksmith, hammersmith and forging press worker”, therefore, this activity must be included in this sub-group. Even if a job is not listed among the typical jobs linked to an occupation, but it clearly follows from the job title that the job is related to this occupation (the list of the job titles related to the given occupation is not exhaustive; rather, they offer examples).

If the name of the occupation to be classified does not feature in the four-digit system or among the typical jobs, nor is it any one of the four-digit occupations denoting a particular activity, then within the given occupational sub-group, with the prevailing order, if any, the designation “other” referring to the absence of a separate category and denoted by “9” (the last digit in a four-digit code) must be used.

*For instance*, the content of the occupation is biophysicist. This occupation is in sub-group “216 Natural science professionals”, however, it cannot be classified into any one of the four-digit occupations. This is when the category of “Other natural sciences professional” must be used.

It may sometimes be the case that there is no “other” category at a sub-group level; in such a case, the job or activity must be classified into the occupation that approximates the given job or activity the closest.

In keeping with the basic principles described, four-digit occupations serve as a minimum, are for general reference and ensure the comparability of the individual systems that users develop. It stands to reason that no classification system can combine all existing jobs and occupations. Even if such a system existed, it should be modified continuously because the more categories jobs are broken down into, the more possible it is for some jobs to disappear and others to evolve.

It follows from the decimal structure of HSCO-08 that it is an open occupational nomenclature which users can expand to include new occupations. As a result users can improve their own registries and make them more clearly arranged.

In addition to the already existing four digits the use of further digits depends on users’ own needs and circumstances. (Factors like the size and tasks/responsibilities of an entity, the type of the registries that it keeps, particularly, an already functioning computerised registry or one that is being developed, have a role to play here.)

In this compilation typical occupations, which can be used for the further breaking down of the four-digit occupations, constitute an integral part of content descriptions.

Since the four-digit occupations of HSCO-08 are basically “collective” occupations (most of them comprise more than one occupation), users can break them down into further occupations depending on their own aims. Considering that some occupations can, due to their complexity, be broken down into as many as ten duties, it is reasonable to reserve two digits (e. g. the fifth and sixth) for a detailed description of jobs.

It should be noted that, in line with international recommendations, the structure of HSCO-08 does not differentiate between white collar and blue collar activities. However, it does provide for the possibility that clear distinctions can be made between the individual white collar and blue collar occupations. Major groups 1-4 comprise mainly white collar occupations, and major group 5-9 include blue collar occupations, and even in major group 0 the two types of activities can be differentiated. (If this arrangement does not suit the user, further digits can be used to create a different classification of white collar and blue collar occupations.)

Using further digits when the need arises also enables the user to identify the skill level and position of the person pursuing the given occupation. Although HSCO-08 does provide some direction that, for instance, occupations in major groups 5–8 require skilled or semi-skilled qualifications and that no qualification is required for the pursuing of occupations in major group 9, it does not identify the qualification level needed for the individual occupations clearly. For this very reason users can use further digits to indicate the skill level (skilled, semi-skilled or unskilled) linked to the given occupation. Further details regarding the complexity of tasks can be provided. In the case of managerial occupations in major group 1 – especially in the case of managers of small organisational units and product line managers – the size of the organisational unit and other main characteristics of the occupation can also be indicated.

Moreover, by using further digits, users can also provide the level of education, skill specialisation, vocational qualification, training courses, foreign language proficiency, etc. associated with the given occupation.

## ***Major considerations underlying occupational classification***

### *Occupational content, skills*

An “*occupation*” is defined as a set of jobs, tasks and activities that are characterised by a high degree of similarity. When identifying and defining an occupation, it is the content of the actual activity that should count; a further important criterion is the skill level and subject-matter knowledge required for the pursuit of the given occupation.

“Skills” is defined as the ability to carry out the tasks and duties of a given job.

“Skills level” is defined as a function of the complexity and range of tasks and duties to be performed in an occupation.

When the skills level is established, the level of formal education required for the competent performance of the tasks and duties involved can be taken into account. Another major consideration is the amount of informal on-the-job training and /or previous experience in a related occupation. The most decisive component of any skills level is the nature and complexity of the work to be done in a given occupation. In some cases extensive relevant work experience and prolonged on-the-job training may substitute for or complement the formal education.

Skills level pertains to the work typically performed as part of a given occupation rather than to the abilities and qualification of a person who performs the work well or badly. It may sometimes be the case that individuals have a higher or lower level of skills than what is needed for the given occupation. The minimum level of skills are set in a way that even a person new to the job can carry out the tasks or do the work typical of the given occupation.

Similar to HSCO-93, HSCO-08 also identifies four skills levels, clarifying situations where the requirements of formal education do not fully cover skills levels. The skills levels are as follows:

Occupations at Skills Level 1 typically require the performance of simple and routine physical or manual tasks. For some jobs basic skills in literacy and numeracy and/or the completion of primary education may be required. However, generally, no vocational education is required in these occupations. A short period of on-the-job training may be required for some jobs.

Occupations at Skills Level 2 typically involve the performance of tasks such as operating machinery and electronic equipment, driving vehicles, maintenance and repair of electrical and mechanical equipment, management of information and ordering and storage of goods; the knowledge and skills required for competent performance in all occupations at Skills Level 2 are generally obtained through completion of primary education and primary or secondary vocational education. In some cases extensive relevant work experience and prolonged on-the-job training may substitute for the formal education.

Occupations at Skills Level 3 typically involve the performance of complex technical and practical tasks which require an extensive body of factual, technical and procedural knowledge in a specialised field. The knowledge and skills required at Skills Level 3 are usually obtained as the result of study at a secondary school (e.g. grammar school, a comprehensive or secondary modern school) and a higher educational institution following completion of secondary education. In some cases extensive relevant work experience and prolonged on-the-job training may substitute for the formal education.

Occupations at Skills Level 4 typically involve the performance of tasks which require complex problem solving and decision making based on an extensive body of theoretical and factual knowledge in a specialised field. The capacities and skills required at Skills Level 4 are usually obtained as the result of study at a higher educational institution leading to the award of a first degree or higher qualification.

HSCO-08 stipulates only one skills level (out of the possible four) for each major group in 8 out of the ten major groups, despite the fact that in both major group 1 (Managers) and major group 0 (Armed forces occupations), skills (education) levels may vary by occupational groups.

### Skills (qualification) levels linked to the main occupational groups of HSCO-08

HSCO-08 major groups	Skills level(s)	Levels of qualification
1 – Managers	3 + 4	University or college (or equivalent) degree or, in some cases <sup>1</sup> , tertiary or post-secondary specialist education, secondary education (at grammar schools, vocational schools, trade schools)
2 – Professionals	4	University or college (or equivalent) degree
3 – Technicians and associate professionals	3	Tertiary or post-secondary vocational education, secondary education (at grammar schools, vocational schools, trade schools)
4 – Office and management (customer services) occupations 5 – Commercial and services occupations 6 – Agricultural and forestry occupations 7 – Industry and construction industry occupations 8 – Machine operators, assembly workers, drivers of vehicles	2	Tertiary or post-secondary vocational education, secondary education (at grammar schools, vocational schools, trade schools), trade qualification, primary level of education
9 – (Elementary) occupations not requiring qualifications	1	No formal qualification required.
0 – Armed forces occupations	1, 2 + 4	The individual groups are at various skills levels.

1) In major group 1, occupations in sub-group “133 *Heads of units providing commercial, catering and similar servicing activities*” are at skills level 3.

#### *Status in employment*

Occupations and the content of the activity at work must be taken into account irrespective of ownership and employment status (employee, member of a co-operative, self-employed, etc.) It bears no relevance whatsoever to classification whether a gainfully occupied person works as an employee, a member of co-operative, a member of a partnership or is self-employed. Nevertheless, the owner, the co-owner or a member of the partnership can be classified into an occupational category only if s/he also participates in the work process. Generally speaking, in the course of occupational classification, industrial and organisational classification need not be taken into account; however, in certain cases it seemed reasonable that the logic of the unified sectoral classification system of economic activities (Hungarian abbreviation: TEÁOR) is followed. There are occupations included even in the updated HSCO-08 where the activity and the organisational classification of the employer cannot be ignored.

*For instance*, only senior officials employed by local municipality authorities can be classified into the category of “1123 Appointed head of local government”.

### *Degree of decision-making independence*

As an additional criterion, qualification helps the classification of occupations; however, the degree of independence in decision-making should also be taken into account. Compared with a situation where major steps in a work process are pre-determined and the person engaged in an activity cannot exercise any control over the way in which work is organised or cannot exercise any discretion at all, a situation where a high degree of independence is enjoyed during work, and the person engaged in the given activity can decide on the order of the tasks and the measures to be taken, the connection between the various phases of an activity is completely different. This consideration becomes especially important when it is difficult to make an automatic distinction between occupations on the basis of educational criteria. Regarding HSCO-08, it is especially major groups 2, 3, 7 and 8 where we are likely to encounter difficulties in classification based on the degree of responsibility and the possibility of decision making.

*For instance*, suppose that two employees, each with a degree in foreign trade work for a foreign trade company. One reports directly to the manager of the company; however, other than this, s/he enjoys independence and can use his/her decision-making competences in conducting negotiations with foreign business partners, conclude transactions on behalf of the company and perform other tasks with a high degree of independence. The tasks of the other employee reporting to the marketing manager are confined to correspondence with foreign business partners and the implementation of the concluded transactions strictly in accordance with the detailed instructions of the marketing manager. The classification under HSCO-08 of the two employees is different despite the fact that both have the same type of degree: the HSCO classification of the employee with independent decision-making powers is “2533 Sales professional”, the other’s “3622 Sales administrator”.

### *Classification of activities of various types*

It may often be the case (especially at small organisations) that in the case of employees who have to perform various types of activities, a certain order of precedence must be established. The rule of thumb is that if various types of activities are performed, the activity (occupation) that is the most typical or takes up most of the working hours must be taken into account. If there are significant differences regarding qualification, expertise and decision-making competences required for the fulfilment of various tasks, occupations requiring more extensive subject-matter knowledge and a wider remit of decision making powers should be prioritised.

*For instance*, if a "8425 Lifting truck operator" also doubles as a "9223 Freight handler", occupational code 8425 denoting an occupation requiring qualification must be allocated to the occupation.

The same person may be engaged in manufacturing and trade activities.

*For instance*, a self-employed (“7214 Furrier, fur-dyer”) fur-dyer sells his/her own ware (“5111 Shopkeeper”). In this case – all things being equal – the activity that produces new goods (7214) forms the basis for occupational classification.

## **IV. A summary description of the content of the major occupational groups of HSCO-08; management of cases of special classification**

### ***Major group 1 – Managers***

Under the HSCO-08 managerial occupations belong to one major group (the first one). Main tasks include the working out, revising, designing, directing, aligning and evaluating of state

legislation, public administration, justice, special-interest organisations, businesses and other entities, along with their organisational units; drawing up laws and rules, setting objectives and standards; designing and evaluating programmes and strategies and their application; ensuring the designing and implementing of the appropriate systems and procedures in the interest of fiscal control; approving the use of material, human and financial resources needed for the implementation of strategies and programmes; planning and directing the daily operation of the organisation or business entity, planning and directing the performance and selection of employees, planning and directing compliance with occupational health and work safety regulations; representation of the organisation or organisational unit under the manager's direction at meetings and other forums; conduct of negotiations.

*Special classification criteria applicable to major occupational group 1:*

The nature of managerial activities is related, to a certain extent, to the headcount of the organisational unit under the manager's direction. The direction of outlets (e.g. shops, workshops, service providing premises, etc.) employing only a few (1 or 2) person(s) (employee(s)) including the manager is classified in the occupational category that best approximates the nature of their activities rather than in major group 1.

*111 Legislator and senior officials*

This occupational sub-group includes members of parliament, office-holders elected by parliament, members of the government (cabinet members), secretaries of state, state (government) officials, elected office-holders of counties and regions, members of local municipality authorities.

*112 Heads of national and regional public administration and jurisdiction*

“1121 Head of national and regional public administration and jurisdiction” includes appointed national and regional senior officials (e.g. heads of division, commander-in-chief) and middle managers (e.g. head of department) responsible for the performance of the basic tasks of the given organisation. “1122 Elected head of local government” include elected senior officials (e.g. mayors) of a settlement, and “1123 Appointed head of local government” include the appointed senior officials (e.g. chief executive of local government) of a settlement.

*1210 Managing director and chief executive of business organisation and budgetary institutions*

This occupation includes the executive officers of larger organisations who also direct the activities of other senior officials. This category includes the regional executive officers with discretion of major corporations, members of the board of directors and supervisory boards of corporations and the executive officers of state-owned corporations; however, unit managers working in the central office of the company or in different regions and managers of organisationally unstructured organisations with low employee headcount do not fall into this category.

*13 Production and specialized services managers and 14 Heads of units assisting business activities*

The categories of these occupational groups include the senior officials of not only business associations and budgetary organisations, but also small independent entities performing manufacturing, service-providing and business activities in the given line of business for other organisations or households.



### *1331 Hotel manager*

Operators of small facilities, e.g. boarding houses and guest houses, who provide accommodation and limited catering services for guests – similar to bed and breakfast services –, and in whose case the direction and supervision of employees do not cover most of the daily jobs are included in “5242 Housekeeper”.

### ***Major group 2 – Professionals***

This major group includes occupations that can be characterised by the consistent widening of subject matter knowledge, the working out and putting into practice of scientific theories, the conduct of analyses and research, the working out of operational methods in the field of history and social sciences, the teaching, at various levels, of theoretical and factual knowledge of one or more discipline(s) of sciences, the provision of technical/technological, economic, business, legal, social and healthcare services, the pursuit of cultural activities and the performance of tasks requiring other tertiary level education.

#### *Special classification criteria applicable to major group 2:*

Generally, HSCO-08 does not differentiate between research-type occupations and utilisation (practice)-oriented occupations in the field of natural or social sciences. The approach that research and the results of research should not be separated sharply has been gaining ground.

For instance, the persons whose task is to conduct economic analyses and make calculations for practical purposes for manufacturing companies or commercial organisations should fall into the category of “2624 Analytical economist”. The same holds true for the activity of economists conducting economic research and dealing with theoretical issues.

A major consideration for HSCO-08 classification is that, in the case of public administration and special-interest organisations, it is the professional content of actual activities that matters.

*For instance*, occupational code “2611 Lawyer, legal adviser” refers to both legal advisors of business associations responsible for managing the legal matters of their respective organisations and lawyers responsible for pre-legislation work at the Ministry of Public Administration and Justice.

If none of the occupations in this major group matches an activity in the field of public administration or advocacy, then, as an exception, “2910 Other highly qualified executive” can be applied. (Naturally, the principles related to this job must be observed in both major group 2 and other major groups, in particular, major group 3.) HSCO-08 classified the activity of senior public servants as a separate occupation within major group 1, thereby differentiating between national and local senior officials.

It is often the case that occupation titles especially in major group 2, but in other groups as well, also mean qualification (e.g. “2117 Chemical engineer”). In such cases, it is always the content of the concept characterising the activity in question that matters in regard to the classification of a given occupation.

### *2730 Priest (pastor), church-related professional*

Members of religious orders who, as part of their job, perform tasks associated with other occupations (e.g. teaching, care-giving and social care) should be classified on the basis of the main activity that they carry out in pursuit of their occupation.

### ***Major group 3 – Technicians and associate professionals***

This major group includes occupations that can be characterised by providing support for (1) the putting into practice of scientific theories, (2) the conduct of analyses and research and (3) the working out of operational methods in the field of natural and social sciences, the provision of technical/technological, economic, business, legal, social and healthcare services, the pursuit of cultural activities and the performance of tasks requiring other secondary or tertiary education.

#### *Special classification criteria applicable to major group 3:*

This major group includes, inter alia, occupations that support or complement the activities (occupations) in major group 2, and for the pursuit of which education lower than university level education is required. As qualifications vary widely in major group 3 relative to other major groups, it is especially important that, the content of the occupations in this major group should be thoroughly checked from the perspective of the level of education, the nature of the activities, the degree of independence and the possibility of decision-making or the lack of it.

It follows from the interconnection between major groups 2 and 3 that the breakdown (structure) of these two major groups – the design and construction of occupational groups and sub-groups – is also identical, reflecting the fact that some of the occupations in major group 2 are complemented by the occupations in major group 3. (Independence, the possibility of decision-making and a lower level of the required subject-matter knowledge must, of course, be taken into account.)

*For instance*, the following occupations complement each other:

“2118 Mechanical engineer” – “3116 Mechanical engineering technician”

“2241 Veterinarian” – “3341 Veterinary assistant”.

In some cases distinction must be made with regard to the supportive or complementary nature of an occupation not only between the occupations in major groups 2 and 3, but also between those in 3 and 4.

*For instance*, “3614 Accounting administrator” – “4121 Accountant (analytical)”.

In this major group, in addition to the above occupations, there are a number of occupations that do not have counterparts in other major groups (e.g. “3173 Air traffic controller, “3334 Orthopaedic equipment manufacturer”).

#### *32 Supervisors*

Compared with HSCO-93, a major change was that, of the production control-type occupations (supervisors) in major group 1, only managerial-type activities properly classified into the appropriate managerial occupations, had been left in major group 1; some of the control and supervisory activities, where controllers and supervisors are often engaged in the activities that they control or supervise, had been allocated to occupational group 32 (e.g. 3222 Head-cook, chef) or retained their original classification in the relevant major group where such activities are classified (e.g. 5112 Shop supervisor).

#### *315 Process controllers (controllers of equipment)*

Another major change relative to HSCO-93 was that activities such as the management and control of computerised control systems and multifunctional process controlling equipment at power plants, electricity distribution facilities, sewage and waste management plants, oil and natural gas refineries, metal processing and other factories have been included in this category.

#### *3327 Assistant to alternative therapy practitioners*

The occupations in the field of traditional and alternative medicine for the pursuit of which thorough knowledge of their respective benefits and use is required must be classified into the

category of “2228 Complementary medicine professional”. Such thorough knowledge can be obtained in formal education where the techniques mentioned as well as the components of human anatomy and modern medicine are taught. The occupations for the pursuit of which less extensive knowledge obtained through short-term, formal or informal, training, and where knowledge is passed down from one generation to the next, must be classified into the category of “3327 Assistant to alternative therapy practitioners”. Occupations where therapies massage and pressure are involved, e.g. acupressure and shiatsu therapists, must be classified into the category of “3332 Physiotherapist assistant, masseur/masseuse”.

Traditional and non-professional midwives who provide care and advice before, during and after childbirth primarily on the basis of experience passed down from one generation to the next must be classified into the category of “3312 Midwifery associate professional”.

### *365 Government administrators*

Relative to HSCO-93, HSCO-08 classifies administrative clerks into an occupational subgroup. Activities include enforcement and application of the appropriate state regulations in connection with cross-border traffic, taxes, social benefits, establishment of businesses, the construction of buildings and other activities subject to authority approval. In keeping with the solution offered in ISCO-08, administrative activities performed by clerks are kept in major group 3. The same cannot be done in major group 2, as no similarly clear distinctions can be made there.

### ***Major group 4 – Office and management (customer services) occupations***

This major group comprises occupations the shared characteristics of which is recording, arranging, storing, calculating and retrieving data related to management of cash, travel arrangements and requests for information, and the fulfilment of various clerical tasks related to the listed activities, shorthand, typing, editing, the operation of office equipment, computerised recording of data; fulfilment of secretarial tasks; recording data on inventories, production and passenger and freight transport; performance of clerical tasks in libraries; filing of documents; provision of postal services; preparation and checking of documents for printing; management of cash; fulfilment of tasks related to travel arrangements; reconciliation of information requested by customers, booking dates; handling of the telephone exchange.

#### *Special classification criteria applicable to major group 4:*

Secretaries and personal assistants provide professional support for senior management at work. Persons in “4111 Secretary (general)” in major group 4 perform mainly administrative tasks, whereas those in “3641 Personal assistant” have more significant responsibilities, in some cases, even acting on behalf of the manager; those whose activities also include the direction of employees reporting to the manager must be included in the category of “3221 Office supervisor”.

Providing information for customers characterises the activities of those in the category of “4224 Client (customer) information clerk” and “4225 Customer service centre enquiry clerk”. The main difference between the two types of activities is that while the former usually have a direct relationship with customers, the latter work at call centres and are located at a long way from customers and the organisations on the operation of which they provide information.

### ***Major group 5 – Commercial and services occupations***

This major group comprises occupations whose main characteristics are the selling of different goods, organising and supplying of services related to travels and journeys, housekeeping, preparation and serving of dishes and beverages, provision of care for children and the elderly, provision of hairdressing and beautician services, supplying funeral, security, personal and property security services.

*Special classification criteria applicable to major group 5:*

#### *511 Commercial occupations*

Street vendors must be included in the category of “5115 Street and market salesperson”, vendors in markets and in the street and vendors selling food and drink for immediate consumption from vehicles, baskets, containers, etc. into the category of “5116 Street and market salesperson selling food and beverages”, and vendors preparing and selling simple dishes for immediate consumption into the category of “9235 Fast food restaurant assistant”.

#### *5121 Service station attendant*

Those employees who work as cashiers in outlets at petrol stations or sell goods, but who do not directly provide services (e.g. the filling up of tanks, replenishing of lubricants, cleaning and maintenance) to customers belong to the category of “5113 Shop salesperson” or “5117 Shop cashier, ticket clerk”.

#### *522 Personal care workers*

Persons responsible for providing personal care for inmates of organisations and facilities (e.g. hospitals, rehabilitation centres, personal care and nursing facilities, assisted living homes) providing continuous medical care and nursing and operating under the direct oversight of nurses and physicians are to be included in the category of “5222 Assistant nurse, dresser”. Persons providing personal care for inmates at separate living quarters with no continuous medical care and nursing must be included in the category of “5223 Home personal care worker”. Employees in occupational sub-group 522 do not usually fulfil such tasks, e.g. administering of medicines and cleaning and dressing of wounds, that require such qualification or extensive medical knowledge. If they do, they are usually simple tasks done as part of the daily routine; care givers and nurses whose job requires more complex and extensive knowledge belong to major group 2 or 3.

### ***Major group 6 – Agricultural and forestry occupations***

This major group includes occupations whose characteristics include the growing and harvesting of arable crop, the growing of trees and bushes, the collection of wild fruit and plants, the raising and hunting of animals, the fulfilment of tasks related to the cultivation, protection and logging of forests, the growing and netting of fish, storing products, carrying out some basic processing tasks related to products, the selling of products to bulk buyers or directly in markets.

*Special classification criteria applicable to major group 6:*

HSCO-08 combines agricultural and forestry occupations, creating a separate sub-group for crop growing and animal husbandry. As an exception in the HSCO-08 system, these two sub-groups comprise two such occupations (“6111 Field crop grower” and “6121 Cattle, horse, pig, sheep producer”) the content of which is not the same as that of any one of the “other...” type of occupations. This illustrates the fact that there are complex inseparable agricultural activities

that have to be included in one of the above categories. “6130 Mixed crop and animal producer” describes an occupation where complexity emerges in crop growing and animal husbandry; these activities are mostly performed in the context of farming. Persons responsible for managing and directing agricultural production are to be included in major category 1 only if they perform their managerial tasks for agricultural, horticultural, forestry management and fishing facilities. Those responsible for either small farms employing only few persons or family farms must be included in one of the appropriate occupations in major group 6.

Regarding the occupations in the major group, it should be borne in mind that operators of agricultural machines have been included in major group 8 and employees carrying out simple agricultural or forestry management tasks in major group 9. What helps isolate agricultural tasks is the classification under TEÁOR (the unified sectoral classification system of economic activities) of the agricultural production facilities and farms that offer employment; the TEÁOR classification of agricultural production facilities and farms does not necessarily coincide with HSCO’s.

### ***Major group 7 – Industry and construction industry occupations***

This major group comprises occupations whose characteristics include the construction, maintenance and repair of buildings and other structures, the melting, weltering and moulding of metals, the establishment and installation of metal structures, pulley blocks and related equipment, manufacture of machines, tools, equipment and other metal structures, the set-up for operators and operation of machine tools, the installation, maintenance and repair of industrial machines, including engines and vehicles, electric and electronic instruments and other equipment, manufacture of precision instruments, jewellery, household goods, precious metal goods, pottery, glassware and other products, handicraft goods, printing, manufacture and processing of food, wood, textile, leather or similar materials.

#### *Special classification criteria applicable to major group 7:*

This major group comprises occupations for the pursuit of which special trade knowledge, craftsmanship or experience is required; pursuers of these jobs must be familiar with the materials to be used during the work process, the instruments and tools and the individual stages of the manufacturing process, able to overview the characteristics of end products and services, have experience regarding intended use and are provided with the possibility of selecting materials, instruments and operations. Based on the characteristics listed above, occupations in major group 7 are relatively easy to separate from those in 8. Nevertheless, in order to correctly separate the occupations in the two major groups, we often have to consider and assess the nature and content of the activities involved and the characteristics of the production process. Therefore, it is not a distinction between skilled and semi-skilled, rather, the intrinsic content of the activity characterising the given job that is decisive. An important component of the intrinsic nature of the activity characterising the given job is the degree of independence in decision-making. (It should be noted that activities at smaller entities are likely to grant more room for discretionary decisions than work performed in large factories.)

*For instance,* turners who work for owners of small businesses or smaller units of factories, gain, in the course of their work, an overview of the entire work process and can make decisions in connection with their work can be included in the category of “7323 Machining worker”. If, however, they participate in a work process of a manufacturing type and work as part of a pre-designed technological process, then they have to be categorised as “8152 Metal finishing and coating machine operator”.

However, there are activities, similar to those in major group 7, that have to be included in the (simple) occupations that do not require any qualification. These are simple tasks, part

of the daily routine; they mostly require the use of hand-held tools and the exertion of physical power; they only require little prior experience at most; only a limited number of independent initiatives or decisions are needed; having an overview of the entire work process or a large part of it is not a requirement.

### ***Major group 8 – Machine operators, assembly workers, drivers of vehicles***

This major group comprises occupations for the pursuit of which reliable practical knowledge of mainly industrial machines and equipment as well as the equipment operated and controlled is required. To be able to keep pace with the speed of the individual phases of the operation of the machines and remain up-to-date on technological innovations regarding machinery and equipment are often very important.

Accordingly, it includes the putting into operation, operation and inspection of various unportable machines and equipment; ability to identify errors and take the necessary measures; trouble-shooting; ability to detect defects of finished products; compliance with technical specifications; maintenance, repair and cleaning of equipment.

#### *Special classification criteria applicable to major group 8:*

Occupations where processes are highly mechanised, of the production line-type and regulated by very strict technological requirements are in major group 8 only (e.g. “8126 Paper and cellulose products machine operator and production-line worker”, “8311 Mineral and stone processing machinery operator (coal, stone)” and “8312 Well driller, deep drilling rig machine operator (oil, natural gas, water)”.

### ***Major group 9 – (Elementary) occupations not requiring qualifications***

This major group comprises occupations where the following activities are performed: cleaning and maintenance of hotels, offices and other buildings; simple tasks related to manual work in restaurants and the preparation of simple dishes; management and storage of letters, packages and shipments; replenishing and emptying of vending machines, meter-reading; collection and selection of garbage; simple tasks related to farming, fishing, gaming or trapping; simple tasks related to mining, construction industry and industrial production.

#### *Special classification criteria applicable to major group 9:*

Those having occasional jobs may be engaged in industrial, construction-related, agricultural, service- and delivery-related activities of not clearly identifiable nature; such activities often require the exertion of physical power. These activities must be included in the category of “93 Simple industry, construction industry, agricultural occupations”; the occupation selected must reflect the activities that are performed during the given period (day, week or month).

“9237 Domestic helper” include persons performing activities ranging from cleaning, kitchen work to shopping. “9111 Domestic cleaner and helper” clean the interior of living spaces, “9236 Kitchen helper ” help with the preparation of preparing food.

### ***Major group 0 – Armed forces occupations***

Employees of the Hungarian Armed Forces belong to this major group.

## V. Structure and fundamental principles of the description of the content of occupations

The content description of the individual occupations facilitates the use of HSCO-88 to a large extent. Content descriptions clarify classifications and offer information on the intrinsic nature of the individual occupations and the major components of the given activities. They play an important role in separating similar activities from each other and describe the tasks specific to the individual activities and occupations.

As the most important principles underlying the classification of occupations have already been described, this section is limited to describing the structure of content descriptions and some of their components. Naturally, it is inevitable that reference should be made to some of the principles of classification.

One of the main sources of content descriptions is the descriptions provided by experts as well as the one offered by ISCO-08.

Closely related to content description is the most detailed possible description of the jobs that are normally done in a given occupation. The following sources were used in the compilation of typical jobs:

- the updating of the detailed descriptions of jobs in the earlier versions of HSCO;
- census-related experience;
- information from other resources (e.g. advertisements, expert proposals, content descriptions of ISCO-08).

The structure of the content description of occupations is as follows:

- a) Code and title of occupation
  - b) Introductory (key) sentence
  - c) Tasks and responsibilities
  - d) Typical jobs
  - e) A few related occupations classified elsewhere
- a) The code and title of the occupation are identical to what is specified in the HCSO President communiqué no. 7/2010. (IV. 23.), effective from 1 January 2011.
  - b) Introductory (key) sentence  
The objective of a brief content definition of the occupation is to provide an illustrative summary of the most important characteristics of the given activity.
  - c) Tasks and responsibilities  
Formally, the content description of occupations means specifying tasks. For the sake of clarity, we list the individual tasks separately and furnished them each with a serial number. Naturally, the degree to which tasks are detailed depends on the complexity of the activity typical of the occupation and the intrinsic nature of the jobs. The jobs listed are the jobs that are the most characteristic of a given occupation; the drawing up of an exhaustive list of tasks was not an objective. In the case of “other” occupations of the occupational sub major groups, we do not provide a detailed description of tasks and consistently refer to the functions characteristic of the given occupation. (“Other” occupations include the activities that cannot be included in any one of the occupations in the occupational sub-group.)
  - d) Typical jobs  
The occupations in the HSCO-08 nomenclature comprise a large number of diverse jobs. (This compilation uses the word “job” as a term denoting the further breakdown of occupations.) The most important considerations related to the compilation of the most typical jobs are:

- the most detailed possible list of jobs has to be provided,
- the name of the given occupation should not be repeated for the typical jobs.

e) A few related occupations classified elsewhere

A list of the related occupations provided as an example helps separate occupations from each other. Criteria for listing the related occupations were as follows:

- the list provided by way of an example only comprises four-digit occupations;
- as only the four-digit occupations whose content can be clearly defined can help separate occupations from each other, the “other...” types of occupations are not included in the related occupations; accordingly, we do not list any related occupations in the “other...” category either;
- it follows from the structure of the occupational system and the function of the related occupations that there are cross-references to the individual occupations.

For instance, the related occupation for “2625 Statistician” is “3615 Statistical administrator” and, vice versa, the related occupation for “3615 Statistical administrator” is “2625 Statistician”.

The occupations in the various major groups may serve as each other's related occupations, except major group 1, where occupations can act as each other's related occupations strictly in major group 1. Professional controllers and supervisors in major group 3 can also act as occupations related to their counterparts in major group 1. (Conversely, managerial-type occupations would have to be listed for nearly all occupations in the individual major groups.)

In listing the related occupations, we did not strive to provide a complete list; rather, we confined ourselves to listing the most typical occupations that can be used as an example.

Skills (education) levels are not provided along with the content description of the individual occupations; classification criteria applicable to this issue are contained in the general section of this guide.





# HUNGARIAN STANDARD CLASSIFICATION OF OCCUPATIONS, HCSO-08/FEOR-08<sup>2</sup>

## 1 MANAGERS

### 11 Chief executives, senior officials and legislators

#### *111 Legislator and senior officials*

1110 Legislator and senior officials

#### *112 Heads of national and regional public administration and jurisdiction*

1121 Head of national and regional public administration and jurisdiction

1122 Elected head of local government

1123 Appointed head of local government

#### *113 Senior officials of national and regional special -interest organisations*

1131 Senior official of national and regional special -interest organisations

1132 Religious leader

### 12 Managing directors and chief executives of business organisations and budgetary institutions

#### *121 Managing directors and chief executives of business organisations and budgetary institutions*

1210 Managing director and chief executive of business organisations and budgetary institutions

### 13 Production and specialized services managers

#### *131 Production managers*

1311 Agricultural, forestry, fisheries, hunting production manager

1312 Manufacturing and mining manager

1313 Construction manager

#### *132 Specialized services managers*

1321 Supply, distribution, storing manager

1322 Information and communications technology service manager

1323 Banking manager

1324 Social welfare manager

1325 Childcare service manager

1326 Aged care service manager

1327 Health service manager

1328 Educational manager

1329 Other services manager

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<sup>2</sup> The Methodology Guide of HSCO-08 and the four-digit-system list of occupations can be found in this publication and on the HCSO's website as well. The definitions of occupations, the supporting search program and the correspondence table between the nomenclatures (HSCO-93 – HSCO-08) are available only electronically on the HCSO's homepage: ([http://portal.ksh.hu/portal/page?\\_pageid=37,872163&\\_dad=portal&\\_schema=PORTAL](http://portal.ksh.hu/portal/page?_pageid=37,872163&_dad=portal&_schema=PORTAL)).

- 133 *Hotel, restaurant and trade managers*
  - 1331 Hotel manager
  - 1332 Restaurant manager
  - 1333 Sales and marketing manager
  - 1334 Business service manager
  - 1335 Cultural centre manager
  - 1336 Sports and recreational centre manager
  - 1339 Other commercial, catering and similar service manager

#### **14 Heads of units assisting business activities**

- 141 *Heads of units assisting business activities*
  - 1411 Accounting and financial services branch manager
  - 1412 HR manager
  - 1413 R&D manager
  - 1414 Policy and planning manager
  - 1415 Retail and wholesale trade manager
  - 1416 Advertising and PR manager
  - 1419 Other service manager not elsewhere classified

## **2 PROFESSIONALS**

### **21 Technical, information technology and science related professionals**

- 211 *Industry and construction industry engineers*
  - 2111 Mining engineer
  - 2112 Metallurgical and materials engineer
  - 2113 Food industry engineer
  - 2114 Wood and light industry engineer
  - 2115 Architect
  - 2116 Civil engineer
  - 2117 Chemical engineer
  - 2118 Mechanical engineer
- 212 *Electrical engineers*
  - 2121 Electrical engineer (energetics engineer)
  - 2122 Electrical engineer (electronics engineer)
  - 2123 Telecommunications engineer
- 213 *Other engineers*
  - 2131 Agricultural engineer
  - 2132 Forestry and nature conservation environment protection engineer
  - 2133 Landscape and gardening architect
  - 2134 Regional and transport planning engineer, town and traffic planner
  - 2135 Surveyor and GIS (Geographical Information System) engineer
  - 2136 Graphic and multimedia designer
  - 2137 Quality assurance engineer
  - 2139 Other engineer, not elsewhere classified
- 214 *Software and applications developers and analysts*
  - 2141 System analyst (information technology)
  - 2142 Software developer
  - 2143 Network and multimedia developer

- 2144 Applications programmer
- 2149 Other software and applications developer and analyst

215 *Database and network analysts, operators*

- 2151 Database designer and operator
- 2152 System administrator
- 2153 Computer network analyst, operator
- 2159 Other database and network analyst, operator

216 *Natural science professionals*

- 2161 Physicist
- 2162 Astronomer
- 2163 Meteorologist
- 2164 Chemist
- 2165 Geologist
- 2166 Mathematician
- 2167 Biologist, botanist, zoologist and related professional
- 2168 Environmental surveyor, adviser
- 2169 Other natural sciences professional

## 22 Health professionals

221 *Physicians, pharmacists*

- 2211 General practitioner
- 2212 Specialized medical doctor
- 2213 Dentist, specialized dentist
- 2214 Pharmacist, specialized pharmacist

222 *Human health (related) professionals*

- 2221 Environmental and occupational health professional
- 2222 Optometrist
- 2223 Dietician and nutrition adviser
- 2224 Physiotherapist
- 2225 District nurse
- 2226 Ambulance officer
- 2227 Audiologist and speech therapist
- 2228 Complementary medicine professional
- 2229 Other human health (related) professional

223 *Nurse, midwifery professionals*

- 2231 Nursing professional
- 2232 Midwifery professional

224 *Animal and plant hygiene occupations*

- 2241 Veterinarian
- 2242 Plant hygienist (plant protection expert)

## 23 Social services professionals

231 *Social services occupations*

- 2311 Social policy expert
- 2312 Social worker and adviser

## **24 Educators, teachers**

- 241 *University and higher education teachers*
  - 2410 University and higher education teacher
  
- 242 *Educators, teachers in secondary level institutions of education*
  - 2421 Secondary education teacher
  - 2422 Vocational education teacher
  
- 243 *Teachers, educators in kindergartens and primary level institutions of education*
  - 2431 Primary school teacher
  - 2432 Early childhood educator
  
- 244 *Special educators, teachers*
  - 2441 Special needs teacher
  - 2442 Conductor
  
- 249 *Other specialized teaching professionals*
  - 2491 Education expert, school adviser
  - 2492 Language teacher (outside the educational system)
  - 2493 Music teacher (outside the educational system)
  - 2494 Teacher of other arts (outside the educational system)
  - 2495 Teacher of information technology (outside the educational system)
  - 2499 Other specialized teacher, educator

## **25 Business type professionals**

- 251 *Finance and accounting professionals*
  - 2511 Finance analyst and investment adviser
  - 2512 Tax adviser, tax consultant
  - 2513 Auditor, accountant
  - 2514 Controller
  
- 252 *Institution management and business policy professionals*
  - 2521 Management and organization analyst, organizer
  - 2522 Business policy analyst, organizer
  - 2523 Personnel and careers professional
  - 2524 Training and staff development professional
  
- 253 *Sales and marketing occupations*
  - 2531 Advertising and marketing professional
  - 2532 Public relations professional
  - 2533 Sales professional
  - 2534 Information and communications technology sales professional

## **26 Legal and social sciences professionals**

- 261 *Legal professionals*
  - 2611 Lawyer, legal adviser
  - 2612 Prosecutor
  - 2613 Judge
  - 2614 Notary public
  - 2615 Attorney-at-law
  - 2619 Other legal sciences professional

- 262 *Social sciences professionals*
  - 2621 Philosopher, political scientist
  - 2622 Historian, archaeologist
  - 2623 Ethnographer
  - 2624 Analytical economist
  - 2625 Statistician
  - 2626 Sociologist, demographer
  - 2627 Linguist, translator, interpreter
  - 2628 Psychologist
  - 2629 Other social sciences professional

## **27 Culture, sports, arts and religion professionals**

- 271 *Culture and sports professionals*
  - 2711 Librarian, information specialist librarian
  - 2712 Archivist
  - 2713 Museologist, museum collection curator
  - 2714 Cultural organizer
  - 2715 Editor of book and magazine publication
  - 2716 Journalist, editor of radio and television broadcast
  - 2717 Specialized coach, sports organizer, manager
  - 2719 Other culture and sports professional
  
- 272 *Creative and performing arts professionals*
  - 2721 Writer (except journalists)
  - 2722 Artist
  - 2723 Artist-craftsman, industrial designer, clothes-designer
  - 2724 Composer, musician, singer
  - 2725 Director, director of photography
  - 2726 Actor, puppet player
  - 2727 Dancer, choreographer
  - 2728 Artist in circus and in similar performing arts
  - 2729 Other creative and performing arts professional
  
- 273 *Religious professionals*
  - 2730 Priest (pastor), church-related professional

## **29 Other highly qualified executives**

- 291 *Other highly qualified executives*
  - 2910 Other highly qualified executive

# **3 Technicians and associate professionals**

## **31 Technicians and other related technical professionals**

- 311 *Industrial, construction industry technicians*
  - 3111 Mining technician
  - 3112 Metallurgical and materials technician
  - 3113 Food industry technician
  - 3114 Wood and light industry technician
  - 3115 Chemical engineering technician
  - 3116 Mechanical engineering technician
  - 3117 Architecture and construction engineering technician

- 312 *Electrical engineering technicians*
  - 3121 Electrical (power current) engineering technician
  - 3122 Electronics (light current) engineering technician
- 313 *Other technicians*
  - 3131 Agricultural technician
  - 3132 Forestry and environmental protection technician
  - 3133 Surveying and GIS (Geographical Information System) technician
  - 3134 Environmental protection technician
  - 3135 Quality assurance technician
  - 3136 Draughtsperson
  - 3139 Other technician not elsewhere classified
- 314 *Computer engineering (information technology) and communications professionals*
  - 3141 Information and communications technology operations technician
  - 3142 Information and communications technology user support technician
  - 3143 Computer network and systems technician
  - 3144 Web technician
  - 3145 Broadcasting and audio-visual technician
  - 3146 Telecommunications engineering technician
- 315 *Process controllers (controllers of equipment)*
  - 3151 Power production plant operator
  - 3152 Incinerator and water treatment plant operator
  - 3153 Chemical processing plant controller
  - 3154 Petroleum and natural gas refining plant operator
  - 3155 Metal production process controller
  - 3159 Process control technician not elsewhere classified
- 316 *Plant maintenance professionals*
  - 3161 Work and production organizer
  - 3162 Power management specialist
  - 3163 Working and operating safety specialist
- 317 *Captains of vessels, pilots of aircrafts, air traffic controllers*
  - 3171 Commodore, captain, watchkeeper
  - 3172 Aircraft pilot, navigating engineer
  - 3173 Air traffic controller
  - 3174 Operator of air traffic control engineering equipment
- 319 *Other technical occupations*
  - 3190 Other technical occupation

## **32 Supervisors**

- 321 *Supervisors in mining, industry and construction*
  - 3211 Mining supervisor
  - 3212 Manufacturing supervisor
  - 3213 Construction supervisor
- 322 *Other supervisors*
  - 3221 Office supervisor
  - 3222 Head-cook, chef

### **33 Health professionals**

#### *331 Medical care and obstetrics related professionals*

- 3311 Nursing associate professional
- 3312 Midwifery associate professional

#### *332 Health care assistant*

- 3321 Medical assistant
- 3322 Health care documentarist
- 3323 Operator of medical imaging diagnostic and therapeutic equipment
- 3324 Medical laboratory assistant
- 3325 Dental assistant
- 3326 Pharmacy and pharmaceutical supplies assistant
- 3327 Assistant to alternative therapy practitioners

#### *333 Human health care related professionals*

- 3331 Environmental and occupational health assistant
- 3332 Physiotherapist assistant, masseur/masseuse
- 3333 Dental technician
- 3334 Orthopaedic equipment manufacturer
- 3335 Dispensing optician
- 3339 Other human health care related professional

#### *334 Animal and plant hygiene related professionals*

- 3341 Veterinary assistant
- 3342 Plant physiologist (plant protection) assistant

### **34 Educational assistants**

#### *341 Educational assistants*

- 3410 Educational assistant

### **35 Social health care and labour market services professionals**

#### *351 Social occupations*

- 3511 Social assistant
- 3512 Official foster parent, full-time mother
- 3513 Social services assistant, special social assistant
- 3514 Signing interpreter
- 3515 Youth assistant

#### *352 Labour market services assistants*

- 3520 Labour market services administrator

### **36 Business related services administrators, administrators of authorities, agents**

#### *361 Finance, economics administrators*

- 3611 Finance administrator (except banking administrator)
- 3612 Banking administrator
- 3613 Stock exchange and finance representative, broker
- 3614 Accounting administrator
- 3615 Statistical administrator
- 3616 Valuer and loss assessor



362 *Trade and sales administrators, agents*

- 3621 Insurance agent, administrator
- 3622 Sales administrator
- 3623 Materials manager, purchasing agent
- 3624 Agent (except insurance agent)

363 *Administrators of other business related services*

- 3631 Conference and event planner
- 3632 Marketing and PR administrator
- 3633 Real estate agent, real estate sales administrator
- 3639 Administrator of other business type services, not elsewhere classified

364 *Administrative and legal assistants*

- 3641 Personal assistant
- 3642 Legal assistant
- 3649 Other administrative and legal assistant

365 *Government administrators*

- 3651 Customs and finance guard officer
- 3652 Tax and duty office administrator
- 3653 Social security and aid authority administrator
- 3654 Government licensing officials
- 3655 Police detective
- 3656 Bailiff, debt collector
- 3659 Other government administrator

**37 Arts, cultural, sports and religious professionals**

371 *Arts and cultural professionals*

- 3711 Supernumerary, extra
- 3712 Assistant director
- 3713 Photographer
- 3714 Scenery shifter, decorator
- 3715 Complementary film producing and theatre occupation
- 3716 Interior designer, decorator
- 3717 Special technician in cultural institutions
- 3719 Other arts and cultural professional

372 *Sports and leisure professionals*

- 3721 Athlete and sports player
- 3722 Fitness and recreation instructors and programme leader

373 *Other religious professionals*

- 3730 Other religious professional

**39 Other administrators**

391 *Other administrators*

- 3910 Other administrator

## **4 OFFICE AND MANAGEMENT (CUSTOMER SERVICES) OCCUPATIONS**

### **41 Office clerks**

#### *411 General office clerk*

- 4111 Secretary (general)
- 4112 General office administrator
- 4113 Typist, word processing operator
- 4114 Data entry clerk, encoder

#### *412 Accounting occupations*

- 4121 Accountant (analytical)
- 4122 Payroll clerk
- 4123 Finance, statistics, insurance administrator
- 4129 Other accounting worker

#### *413 Office special recording occupations*

- 4131 Stocks and materials clerk
- 4132 Transport and forwarding clerk
- 4133 Library, archives clerk
- 4134 Human policy administrator
- 4135 Postal services clerk (delivery, sorting)
- 4136 Documents manager, filing-clerk

#### *419 Other office, management occupations*

- 4190 Other office, management occupation, not elsewhere classified

### **42 Customer services occupations**

#### *421 Cash administrators, banking cashiers*

- 4211 Bank teller
- 4212 Gaming and betting organizer
- 4213 Pawn office administrator and moneylender

#### *422 Customer service occupations*

- 4221 Tour operator, consultant
- 4222 Receptionist
- 4223 Hotel receptionist
- 4224 Client (customer) information clerk
- 4225 Customer service centre enquiry clerk
- 4226 Survey and market research interviewer
- 4227 Postal customer service clerk
- 4229 Other customer services clerk

## **5 COMMERCIAL AND SERVICES OCCUPATIONS**

### **51 Commercial and catering occupations**

#### *511 Commercial occupations*

- 5111 Shopkeeper
- 5112 Shop supervisor
- 5113 Shop salesperson
- 5114 Lender

- 5115 Street and market salesperson
- 5116 Street and market salesperson selling food and beverages
- 5117 Shop cashier, ticket clerk

512 *Other commercial occupations*

- 5121 Service station attendant
- 5122 Sales demonstrator, fashion model
- 5123 Contact centre salesperson
- 5129 Other commercial occupation, not elsewhere classified

513 *Catering industry occupations*

- 5131 Restaurant keeper
- 5132 Waiter
- 5133 Bartender
- 5134 Cook
- 5135 Confectioner

**52 Service workers**

521 *Personal service workers*

- 5211 Hairdresser
- 5212 Beautician
- 5213 Manicurist, pedicurist
- 5219 Other personal services workers

522 *Personal care workers*

- 5221 Babysitter, nurse
- 5222 Assistant nurse, dresser
- 5223 Home personal care worker
- 5229 Other personal care worker

523 *Stewards, attendants*

- 5231 Conductor, ticket inspector
- 5232 Travel attendant (airplane, ship)
- 5233 Travel guide

524 *Building maintenance occupations*

- 5241 Cleaning supervisor
- 5242 Housekeeper
- 5243 Building caretaker

525 *Life and property protection occupations*

- 5251 Police officer
- 5252 Fire-fighter
- 5253 Prison guard
- 5254 Property guard, bodyguard
- 5255 Nature conservation warden
- 5256 Public place inspector
- 5259 Other life and property protection occupation

529 *Other services occupations*

- 5291 Driving instructor
- 5292 Pet groomer and animal care worker
- 5293 Funeral services worker
- 5299 Other services occupation, not elsewhere classified

## **6 AGRICULTURAL AND FORESTRY OCCUPATIONS**

### **61 Agricultural occupations**

#### *611 Plant cultivation occupations*

- 6111 Field crop grower
- 6112 Organic plants grower
- 6113 Vegetable grower
- 6114 Grapes and fruit grower
- 6115 Ornamental plants, flowers and tree nursery gardener, seedling nursery gardener
- 6116 Herbs grower
- 6119 Other plants grower

#### *612 Animal producing occupations*

- 6121 Cattle, horse, pig, sheep producer
- 6122 Poultry producer
- 6123 Apiarist
- 6124 Small animal producer

#### *613 Mixed crop and animal producers*

- 6130 Mixed crop and animal producer

### **62 Forestry, game-farming and fisheries occupations**

#### *621 Forestry workers*

- 6211 Forestry worker
- 6212 Logger (wood-cutter)

#### *622 Game-farming occupations*

- 6220 Game-farmer

#### *623 Fish-farming occupations*

- 6230 Fishery worker

## **7 INDUSTRY AND CONSTRUCTION INDUSTRY OCCUPATIONS**

### **71 Food processing workers**

#### *711 Food producing, processing and preservation occupations*

- 7111 Butcher
- 7112 Fruit and vegetables processing and preservation worker
- 7113 Dairy processing worker, dairy products maker
- 7114 Baker, confectionery maker
- 7115 Wine producer, manufacturer of other alcoholic beverages, soda-water producer

### **72 Light industry occupations**

#### *721 Garment and leather industry workers*

- 7211 Pattern design maker
- 7212 Tailor, sewing worker
- 7213 Hatter, glove-maker
- 7214 Furrier, fur-dyer
- 7215 Tanner
- 7216 Fancy leather goods maker, trunk-maker, leather products maker, repairs worker
- 7217 Shoemakers and related worker

- 722 *Wood industry occupations*
  - 7221 Woodworker
  - 7222 Wood turner
  - 7223 Cabinet-maker
  - 7224 Upholsterer
  - 7225 Cooper, wheelwright

- 723 *Printing trades workers*
  - 7231 Pre-press worker
  - 7232 Printer, printing machine operator
  - 7233 Bookbinder

### **73 Metal and electrical industry occupations**

- 731 *Metallurgical occupations*
  - 7310 Metal moulder

- 732 *Metal working occupations*
  - 7321 Locksmith
  - 7322 Toolmaker
  - 7323 Machining worker
  - 7324 Metal polisher, wheel grinder and tool sharpener
  - 7325 Welder and flamecutter
  - 7326 Blacksmith, hammersmith and forging press worker
  - 7327 Spray painter and varnisher
  - 7328 Metal and other structure erector

- 733 *Maintenance and repair mechanics of machines and equipment*
  - 7331 Motor vehicle mechanic and repairer
  - 7332 Aircraft engine mechanic and repairer
  - 7333 Agricultural and industrial machinery (engine) mechanic and repairer
  - 7334 Mechanical equipment mechanic and repairer
  - 7335 Bicycle mechanic and repairer

- 734 *Technicians and mechanics of electrical equipment*
  - 7341 Technician and mechanic of electrical equipment and devices
  - 7342 Information and communications technology installer and repairer
  - 7343 Electrical line installer and repairer

### **74 Handicraft workers**

- 741 *Handicraft workers*
  - 7411 Sign writer
  - 7412 Jeweller, goldsmith, precious-metal worker
  - 7413 Potter
  - 7414 Glass-maker
  - 7415 Musical instrument maker
  - 7416 Fur and feather processing worker
  - 7417 Reed and willow processing worker, broom and brush maker
  - 7418 Textile maker, embroiderer, lace-maker
  - 7419 Other handicraft worker

- 742 *Precision instrument mechanics*
  - 7420 Precision instrument mechanic

## **75 Building industry occupations**

### *751 Master builders' occupations*

- 7511 Bricklayer
- 7512 Plasterer
- 7513 Carpenter
- 7514 Building joiner
- 7515 Building frame worker
- 7519 Other master builders' occupation

### *752 Construction, assembly occupations*

- 7521 Plumber and pipe fitter (water, gas, heating)
- 7522 Fitter of ventilation, cooling and air-conditioning equipment
- 7523 Elevator mechanic
- 7524 Fitter of building electric network, electric fitter
- 7529 Other building, fitting occupation

### *753 Specialized construction industry occupations*

- 7531 Insulation worker
- 7532 Roofer
- 7533 Building, construction plumber
- 7534 Floor layer and tile setter
- 7535 Painter and decorator
- 7536 Stonemason, artificial stone maker
- 7537 Stove-maker and fireplace-builder
- 7538 Glazier
- 7539 Other specialized construction industry occupation

## **79 Other industry and construction industry occupations**

### *791 Other industry and construction industry occupations*

- 7911 Industrial diver
- 7912 Industrial alpinist
- 7913 Blaster
- 7914 Fumigator, weed controller
- 7915 Chimney sweeper, building structure cleaner
- 7919 Other industrial and construction industrial occupation not elsewhere classified

## **8 MACHINE OPERATORS, ASSEMBLY WORKERS, DRIVERS OF VEHICLES**

### **81 Manufacturing machine operators**

#### *811 Food, beverage and tobacco products machine operators*

- 8111 Food, beverage products machine operator
- 8112 Tobacco products machine operator

#### *812 Light industry machine operators and production-line workers*

- 8121 Textile industry machine operator and production-line worker
- 8122 Clothing industry machine operator and production-line worker
- 8123 Leather tanning and processing machine operator and production-line worker
- 8124 Shoe products machine operator and production-line worker
- 8125 Wood processing machine operator and production-line worker
- 8126 Paper and cellulose products machine operator and production-line worker

- 813 *Basic chemicals and chemical products manufacturers machine operators*  
8131 Oil and natural gas processing machine operator  
8132 Basic chemicals and chemical products machine operator  
8133 Pharmaceutical products machine operator  
8134 Fertilizers and plant-protection products machine operator  
8135 Plastic products machine operator  
8136 Rubber products machine operator  
8137 Photographs and films laboratory assistant

- 814 *Base materials products machine operators*  
8141 Ceramics industry products machine operator  
8142 Glass and glass-ware products machine operator  
8143 Cement, stone and other minerals processing machine operator  
8144 Paper industry base materials products machine operator

- 815 *Metal processing and finishing plant operators*  
8151 Metal processing plant operator  
8152 Metal finishing and coating machine operator

- 819 *Other manufacturing machine operators*  
8190 Other manufacturing machine operator not elsewhere classified

## **82 Assemblers**

- 821 *Assemblers*  
8211 Mechanical machinery assembler  
8212 Electrical and electronic equipment assembler  
8219 Assembler of other products

## **83 Stationary machine operators**

- 831 *Mining plant operators*  
8311 Mineral and stone extraction machine operator (coal, stone)  
8312 Well driller, deep drilling rig machine operator (oil, natural gas, water)
- 832 *Other stationary machine operators*  
8321 Power engineering machine operator  
8322 Water treatment machine operator  
8323 Boiler plant operator  
8324 Radioactive decontamination machine, equipment operator  
8325 Packing, bottling, and labelling machine operator  
8326 Cinema operator, projectionist  
8327 Laundry machine operator  
8329 Stationary machine operator not elsewhere classified

## **84 Drivers and mobile machinery operators**

- 841 *Drivers of vehicles and related occupations*  
8411 Locomotive engine driver  
8412 Occupations related to driving railway vehicles  
8413 Tram driver  
8414 Underground driver  
8415 Trolleybus driver  
8416 Car driver  
8417 Heavy truck and lorry driver

- 8418 Bus driver
- 8419 Other drivers of vehicles and related occupation

842 *Mobile machinery operators*

- 8421 Agricultural, forestry, plant protection machine operator
- 8422 Earthmoving and related light and heavy machine operator
- 8423 Public hygiene, local sanitation machine operator
- 8424 Crane, hoist and related plant operator
- 8425 Lifting truck operator

843 *Shipping occupations*

- 8430 Ship's crew, helmsman, sailor

## **9 (ELEMENTARY) OCCUPATIONS NOT REQUIRING QUALIFICATIONS**

### **91 Cleaners and related simple occupations**

911 *Cleaners and helpers*

- 9111 Domestic cleaner and helper
- 9112 Cleaner and helper in offices, hotels and other establishments
- 9113 Hand launderer, presser
- 9114 Vehicle cleaner
- 9115 Window cleaner
- 9119 Other cleaner and helper

### **92 Simple service, transport and similar occupations**

921 *Garbage collectors and similar occupations*

- 9211 Garbage collector, street sweeper
- 9212 Refuse sorter

922 *Transport and storage labourers*

- 9221 Hand and pedal vehicle driver
- 9222 Driver of animal-drawn vehicles
- 9223 Freight handler
- 9224 Counter and shelf filler
- 9225 Hand packer

923 *Other simple service and transport occupations*

- 9231 Door-keeper, gate-keeper, simple guard
- 9232 Meter reader and similar simple occupations
- 9233 Office attendant, deliverer
- 9234 Luggage porter, package deliverer
- 9235 Fast food restaurant assistant
- 9236 Kitchen helper
- 9237 Domestic helper
- 9238 Car park guard
- 9239 Other simple service and transport occupation not elsewhere classified

### **93 Simple industry, construction industry, agricultural occupations**

931 *Simple industry occupations*

- 9310 Simple industry occupation



932 *Simple construction industry occupations*  
9321 Navy  
9329 Other simple construction industry occupation

933 *Simple agricultural, forestry, hunting, fishery labourers*  
9331 Simple agricultural labourer  
9332 Simple forestry, hunting, fishery labourer

## **0 ARMED FORCES OCCUPATIONS**

### **01 Armed forces occupations requiring tertiary qualification**

011 *Armed forces occupations requiring tertiary qualification*  
0110 Armed forces occupation requiring tertiary qualification

### **02 Armed forces occupations requiring secondary qualification**

021 *Armed forces occupations requiring secondary qualification*  
0210 Armed forces occupation requiring secondary qualification

### **03 Armed forces occupations not requiring secondary qualification**

031 *Armed forces occupations not requiring secondary qualification*  
0310 Armed forces occupation not requiring secondary qualification