# Fields of Education and Training 

## Manual



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Contents Page
Introduction ..... 3
Structure and Rationale of the Classification ..... 5
Relation to other classifications and ISCED 97 dimensions ..... 10
Iinter-disciplinary and broad programmes ..... 12
Field Descriptions ..... 14
0 General Programmes ..... 14
1 Education ..... 16
2 Humanities and Arts ..... 18
3 Social Sciences, Business and Law ..... 23
4 Science, Mathematics and Computing ..... 29
5 Engineering, Manufacturing and Construction ..... 32
6 Agriculture and Veterinary ..... 38
7 Health and Welfare ..... 41
8 Services ..... 45
Appendices:
Rationale for fields ..... 50
References ..... 53
Systematic Code List ..... 54
Alphabetic Code List ..... 65

## Introduction

## Background

The International Standard Classification of Education (ISCED) has been designed as an instrument suitable for assembling, compiling, and presenting statistics of education both within countries and internationally. The system has recently been revised and updated, and the 'new' ISCED was introduced in 1997 (ISCED 97).

The ISCED system is built up by classifying each educational programme by field of education and by level. This manual deals with the classification into fields.

The manual is the outcome of an EUROSTAT project carried out in close co-operation with UNESCO and OECD but not yet adopted by the UNESCO General Conference and thus not forming an integral part of ISCED 97 although it is based on it.

## Fields of Education

ISCED 97 contains 25 two-digit fields of education. The classification presented here uses a three-digit code in a hierarchical system for classifying fields of education, where the two-digit level is the ISCED 97 fields of education ${ }^{1}$. It is mainly the first two digits that will be used in international data collection. However, the third digit gives a more flexible system, and other aggregations based on the third digit may be used in ad hoc data collections to suit specific purposes. It is also believed that the more detailed fields at the three-digit level will bring a better understanding when allocating programmes into the two-digit fields.

The third digit is also intended for national purposes. Countries which have not developed comprehensive national classification system may adopt it as it stands or modify it to suit national conditions.

CEDEFOP and EUROSTAT ${ }^{2}$ developed the 'Fields of training' system for classifying vocational education and training in 1997-1998. It should be emphasised that the 3-digit level of fields in the classification presented here has been synchronised with the 'Fields of training' classification. That is also the reason for calling this manual Fields of Education and Training. There are some small differences compared to the manual on Fields of Training. Such changes are clearly marked in this manual.

## Aim of the Manual

The availability of a common classification is only the first step towards the collection of comparable data. The second step is to ensure a consistent application of the classification across countries. Thus, it is the aim of this manual to offer clear guidelines on how to apply the classification for fields of education and training. This

[^0]is done by both specifying a number of rules to be observed and by providing detailed lists of examples.

It should in principle be possible to classify all education programmes, both initial and continuing education, both general education and vocational training, into one and only one field of education and training. When doing this, some decisions have to be made. With the help of this manual, all countries should hopefully be in a position to make similar decisions.

# Structure and Rationale of the Classification 

Structure for fields of education and training
Broad fields Narrow fields Detailed fields Programmes/Subjects

X
XX
XXX

XXX

XX
Xxx
XXX

XX
XXX

Xxx

## The Structure of the Classification System

This classification of fields uses a 3-digit code in a hierarchical system for classifying fields of education and training - one for 'broad fields', one for 'narrow fields' and one for 'detailed fields'. There are 9 broad fields, 25 narrow fields and about 80 detailed fields.

The 2-digit level (the narrow fields) will normally be used by the international organisations when collecting data, and the term 'fields of education' usually refers to this level. The 2-digit level or the narrow fields are the same as the ISCED 97 fields of education. The 3-digit level (the detailed fields) are referred to as 'fields of education and training'. To summarise:

| Digits | Names of fields |  | Amount <br> of fields |
| :--- | :--- | :--- | :--- |
| 1-digit | Broad field |  | 9 |
| 2-digit | Narrow field | Fields of education (ISCED 97) | 25 |
| 3-digit | Detailed field | Fields of education and training | $\cong 80$ |

## Fields - independent of level

It is worth mentioning that the fields are not defined within levels, but are independent of levels. It is recognised, however, that not all fields appear at all levels.

## Rationale of the Classification; Subject content approach

Fields of Education and Training is defined as the subject matter taught in an educational programme. The rationale of the classification for fields of education and training is the subject content approach. The programmes are put together by closeness in subject matter content. The programmes are aggregated to detailed, narrow and broad fields, based on 'knowledge closeness'. It must be emphasised that it is the main subject content of the programme which decides into which field it should be classified.

Thus, the distinction between fields does not take into account the personal purposes of the participation in the programmes (pleasure, leisure, to get a job etc.), nor is the intended occupation explicitly taken into account.

In developing the structure of the field classification the following criteria were used in priority order when trying to decide 'closeness in subject matter content':

* Theoretical content, which is by far the most important criteria.
* Purpose of learning,
* Objects of interest,
* Methods and techniques,
* Tools and equipment.

More details on the rationale of this classification may be found in Appendix 1.

## General, broad programmes at secondary level

General, broad programmes at secondary level which cover a range of subjects such as languages and literature, social science, natural science, mathematics, arts, physical education etc. should be classified into 010 'Basic / broad, general programmes'. This should be the case even if there is some concentration on a certain category of subject matter such as humanities, social science, natural science etc.

Example: A broad, general programme at secondary level, mainly preparing for further studies and covering a wide range of subjects should be classified into field 010 'Basic / broad, general programmes', even if some emphasis is given on e.g. humanities.

## Vocational programmes including supporting subjects

In some long vocational programmes, often at upper secondary school, more time may be devoted to several other supporting subjects than the 'intended occupation' subject. Such programmes should all the same be classified into the appropriate vocational field.

Example: A health care programme should be classified into field 723 'Nursing and caring', even if more time altogether is devoted to other subjects than 'nursing and caring' subjects.

## Teacher training programmes with a subject-matter speciality

Teacher training programmes consisting primarily of a subject-matter speciality should be classified as teacher training, even if the main content is a subject-matter speciality. When using the 3-digit level, these programmes should be classified into 145 'Training for teachers with subject specialisation' or 146 'Training for teachers of vocational subjects'.

## Educational programmes for engineers

Educational programmes for engineers should normally be included in some of the fields under 52 'Engineering ${ }^{3}$ and engineering trades' or, if civil engineer / constructional engineer, under 58 'Architecture and building'. This should be the case even if these programmes are oriented towards computing, media techniques, environmental protection, textiles, food etc., if the emphasis is on designing and constructing machinery, engines, electrical devices, electronics, computers etc. or buildings, roads and bridges.

## Manufacturing programmes

Manufacturing programmes should be classified into the appropriate field under 52 'Engineering and engineering trades' if the emphasis is towards the engineering industry, i.e. on metals, mechanics, machinery, engines, electrical devices etc.
Other manufacturing programmes should be classified under 54 'Manufacturing and processing'. This is the case for programmes with emphasis on manufacturing specific products such as food, textiles, shoes, paper, furniture, glass, plastic etc., However, manufacturing of metal products is excluded from 54 and included in field 521 'Mechanics and metal work'.

[^1]
## Fields of Education and Training

| Broad fields | Narrow fields | Detailed fields |  |
| :---: | :--- | :--- | :--- | :--- | :--- |
| 0 General ${ }^{4}$ | 01 Basic / broad, general programmes | 010 | Basic / broad general programmes |
| Programmes | 08 Literacy and numeracy | 080 | Literacy and numeracy |
|  | 09 Personal skills | 090 | Personal skills |

[^2]| Broad fields | Narrow fields | Detailed fields |
| :---: | :---: | :--- | :--- |
|  | 48 Computing | 481 Computer science |
|  | 482 Computer use |  |

## Relation to other classifications and ISCED 97 dimensions

## Programme orientation and fields

Programme orientation (general, vocational and pre-vocational education) and fields are two different dimensions in ISCED 97 and must not be confused.

Many programmes which are classified as General education under Programme orientation should be classified by their main subject in fields. Example: An educational programme in mathematics may be general education for programme orientation, but the field should be 461 'Mathematics'.

## Differences compared to fields of training

When creating fields of training a third digit was added to divide most of the two-digit ISCED-fields, especially fields in areas with a lot of VET (Vocational Education and Training). 'Academic' fields, that is fields where it was believed there was not much VET, were kept undivided. In the classification presented here 'academic' fields have also been sub-divided and thus giving a more 'balanced' field classification.

| Field of training | Field of education and training |
| :---: | :---: |
| 141 Teaching and training | 143+144+145+146 |
| 224 History, philosophy and related subjects | $225+226$ |
| 310 Social and behavioural science | $311+312+313+314$ |
| 420 Life science | $421+422$ |
| 440 Physical science | $441+442+443$ |
| 460 Mathematics and statistics | $461+462$ |
| 722 Medical services | $725+726+727$ |
| 850 Environmental protection | $851+852+853$ |
| A few minor changes in the names of the fields of training have also been made in order to make them clearer. |  |
| The only 'major' change of content is training is classified together with Envir this classification Environmental scienc field 422. The reason being that this according to the criteria used. There changes are not believed to make any education and training. | Environmental science, which in fields of mental protection under field 850 , while in Ecology is classified under Life science in considered a more correct classification also a few other small changes, but the difference in the statistics on vocational |
| Compared to Fields of training it has general programmes at upper secondary social sciences, natural science without n classified under field 010 'Basic broad/ge | een made clearer in this manual that broad vel with some emphasis on e.g. humanities, glecting other fields of knowledge should be eral programmes'. |

## Relation to ISCO-88

The International Standard Classification of Occupations (ISCO-88) provides a system for classifying and aggregating occupational information obtained by means of population censuses and other statistical surveys, as well from administrative records.
The framework necessary for designing and constructing ISCO- 88 has been made on two main concepts: the concept of the kind of work performed (job) and the concept of skill.
$J o b$ - defined as a set of tasks and duties executed by one person - is the statistical unit classified by ISCO-88. A set of jobs whose main tasks and duties are characterised by a high degree of similarity constitutes an occupation. Persons are classified by occupation through their relationship to a past, present or future job.
Skill - defined as the ability to carry out the tasks and duties of a given job - has for the purpose of ISCO-88 the following dimensions:

1. Skill level - which is a function of the complexity and range of the tasks and duties involved.
2. Skill specialisation - defined by the field of knowledge required, the tools and machinery used, the materials worked on or with, as well as the kinds of goods and services produced.

Four broad skill levels were defined and made operational by using ISCED 76.
Obviously, there are connections between ISCO-88 and ISCED-fields, but it should be remembered that they classify different statistical units using different criteria. Fields try to classify educational programmes by subject content and ISCO-88 classifies jobs (occupational information) using the concepts mentioned above. A cross tabulation of e.g. census data by ISCED-fields and ISCO-88 should reveal interesting and valuable statistical information for education planners and decision makers.

# Inter-disciplinary and broad programmes 

## Inter-disciplinary programmes

'Inter-disciplinary programmes' has here the meaning of programmes combining (generally two) fields of education and training. For these programmes (see example 1 to 3 ), the 'majority rule' should be used, that is the subject that dominates decides into which field the programme should be classified. The criteria for dominating is normally the time used on the subject.

Example 1: A programme consisting of both political science (313) and economics (314) should be classified according to which of the subjects dominates, that is on which subject most of the time is spent.
In Example 2 subjects also fall into the same field of education but in two different fields of education and training. Also in this example, use the majority rule. The programme is not broad enough to be considered as a 'broad programme' according to the definition given below.

Example 2: A programme combining study of retail sales with study of office work should be classified according to which of the fields dominates; 341 'Wholesale and retail sales' or 346 'Secretarial and office work'.

In Example 3 below subjects fall into two different narrow fields (2-digit level). Use the majority rule; you are more or less obliged to do that as there is no other solution (except 999).

Example 3: A programme that mainly includes subjects within the area of computer science should be allocated to field 481 ('Computer science') even if a certain amount of computer engineering (field 523 'Electronics and automation') is included.

## Broad programmes

'Broad programmes' here means that an education or training programme comprises parts from several - at least three - fields of education and training, mainly within the same field of education, and none of the fields of education and training is clearly dominating. These broad programmes should be classified by using ' 0 ' as the third digit ${ }^{6}$.

Note that the ' 0 ' in the third position will be used for information about broad programmes, and it should not be used as a rest code. Note that a ' 0 ' in the second position is in principal not allowed.
Examples 4: A programme in business and administration, consisting of management, financing, sales and marketing etc. should be classified as 340 'Broad programmes in business and administration'.

Programmes aiming at one specific vocational field consisting also of supporting subjects from other fields are not considered as broad programmes in this context.

Example 5: In a programme in electrical installation, more time may be devoted to other supporting subjects (language, mathematics, natural science etc.) than the

[^3]intended vocational subject. However, this programme should be classified as 522 'Electricity and energy' and not as a broad programme.

## Not specified or not able to classify

As a last resort, the ' 9 ' may be used in the third position if available information about a programme is not available or if a specific programmes is not possible to classify into any of the detailed fields. A ' 9 ' in the second position is in principal not allowed' ${ }^{7}$, except that in data collections on the 2-digit level, '99' can be used if the 2-digit field is not known.

## Example 6: A programme in engineering where more information is not available should be classified as 529 .

## How to Use the Manual

1. When classifying an educational programme or a group of programmes, look at the overview of the classification on pages 8-9. Start by deciding into which broad field it should be classified into. Go on and look at the narrow fields. In many cases, it is more or less obvious which of the fields the programme belongs to.
2. When you have found an appropriate narrow field, check the description given for each detailed field to confirm that it is the right narrow field - and if wanted also the right detailed field - that has been chosen.
3. If it is not obvious into which field a programme should be classified, or if you need more help, look up the name of the programme in the alphabetical code list (appendix 4). Then, check the description given for the detailed fields to see if it is the right code.
4. You may also use the rationale of this classification (see appendix 1) in order to allocate the programme. In cases where particular problems are encountered in the application of the field classification, it would be appreciated if they could be brought to the attention of the organisations responsible for co-ordinating the data collection, so as to allow for the improvement of the field manual in the future.
[^4]
## Field Descriptions

This part of the manual describes each field of education and training with regard to the subject content of the field. When classifying programmes, it is very important to look at these descriptions of the content and see which field best corresponds to the programme (programme group) that is to be classified.

If classifying only from the names of the programmes, large mistakes may be made. Especially, this is the case with some popular terms like 'communication', 'management' etc, which are used in many contexts. Also, a programme name might have different meanings in different countries. So, be careful with the names of the programmes and, as far as possible, consider the main subject content of the programmes instead.

Note that the lists of programmes given under each field description below are not complete. At the end of the manual (appendix 3) a more comprehensive list of programmes/subjects is found.
It should be pointed out that the codes 140, 210, 220, 310, 340, 440, 520, 540, 620, $720,810,850$ and 860 are implementations of the ' 0 ' in the third position mentioned in the footnote in the table presenting an overview if the field classification.

## 0 General Programmes

'General' in this context refers to basic and personal skills ('general' as opposed to 'specialised'), and has not explicit the meaning of 'general' as opposed to 'vocational'.

This category 0 'General programmes' must not be used as a residual category. Programmes with a subject emphasis should be classified in fields 1 to 8.

Countries may be asked to report which programmes they have classified as 0 'General programmes', especially at ISCED level 3 . Educational programmes at levels 4, 5, and 6 should only by way of exception be classified here.

## 010 Basic / broad, general programmes

Basic / broad, general programmes are programmes designed to give a basic education in reading, writing and arithmetic along with an elementary understanding of other subjects such as history, geography, natural science, social science, art and music, and in some cases religious instruction is featured. Basic programmes are normally given at primary and lower secondary level. Broad, general programmes at upper secondary level are also classified here - which should be the case even if there is some concentration on a certain category of subject matter such as humanities, social science, natural science etc. Vocational programmes are included only by way of exception. Programmes with the following main content are classified here:

[^5]
## Inclusions:

Broad, general programmes at upper secondary level (in some countries at lower secondary level) with some emphasis on e.g. humanities, social science, natural science without neglecting other fields of knowledge are included in this field. In some countries such programmes are given in a kind of modular system. These programmes should also be classified here.

## Exclusions:

Programmes that are considered as general in the program orientation meaning (nonvocational) but have a clear emphasis on a subject or a group of subjects are excluded from this field and are included in one of the fields 1-8, depending on the subject.

## 080 Literacy and numeracy

Literacy and numeracy are programmes arranged mainly for illiterate adults, designed to teach basic reading, writing and sometimes arithmetic. The typical age range can be used to distinguish between field 010 'Basic / broad, general programmes' and this field. Programmes with the following main content are classified here:

```
Basic remedial programmes for adults
Literacy
Numeracy
```

Personal skills programmes can be defined by reference to the effects on the individual's capacity (mental, social etc.). This field covers personal skills programmes, not included in 010 'Basic / broad, general programmes' or 080 'Literacy and numeracy', giving key competencies and transferable skills. Programmes with the following main content are classified here:

Argumentation and presentation
Assertiveness training
Communication skills
Co-operation
Development of behavioural capacities
Development of mental skills
Job-seeking programmes
Public speaking
Self esteem skills
Social competence
Time management

## Inclusions:

Education and training in leadership in the context of personal development is included in this field.

Education and training related to the working place or to the assignments is included in this field if it has more to do with personal development than work development.

Programmes for the intellectually disabled on how to cope with their daily life are included here

## Exclusions:

Study of leadership in the context of management is excluded from this group and included in field 345 'Management and administration'.

## 1 Education

## 140 Teacher training and education science (broad programmes)

Teacher training and education science (broad programmes) is the study of pedagogical theory combined with practice of teaching without specialising in basic teaching, special subject teaching, vocational teaching etc. Broad programmes with the following main content are classified here:

Teacher training, general
Practical pedagogical courses, general

## 142 <br> Education science

Education science is the study of the learning process and the theories, methods and techniques of imparting knowledge to others. Programmes with the following main content are classified here:

Didactics
Education science
Educational assessment, testing and measurement
Educational evaluation and research
Pedagogical sciences

## Exclusions:

Teacher training programmes which combine education science with the practice of teaching are excluded from this field and included in the some of the fields for teacher training (143-146).

## 143 Training for pre-school teachers

Training for pre-school teachers is the study of the theories, methods and practice of teaching children between approximately 3-7 years of age within formal school settings at pre-primary level. Programmes with the following main content are classified here:

Early childhood teaching
Pre-primary teacher training

## 144 Training for teachers at basic levels

Training for teachers at basic levels is the study of the theories, methods and practice of giving children between normally 5-15 years of age a sound basic education in reading, writing and mathematics along with an elementary understanding of other subjects such as history, geography, social science etc. Subject specialisation should be stressed less than in field 145 'Training for teachers with subject specialisation'. The study of teaching children with special needs is included in this field, likewise the study of teaching adults basic reading and writing and teaching immigrants the basics in their home language. Programmes with the following main content are classified here:

Class teacher training
Home language teacher training
Primary teaching
Teacher training for children with special need

## Inclusions:

The study of teaching adults basic reading and writing is included in this field.

## 145 Training for teachers with subject specialisation

Training for teachers with subject specialisation is the study of the theories, methods and practice of teaching a special subject, mostly at secondary or higher levels.
Programmes included in this field often comprise study also of the subject/subjects that are going to be taught. Programmes with the following main content are classified here:

Secondary teaching
Teacher training - theoretical subjects, e.g. English, Mathematics, History

## Inclusion:

Teacher training programmes with both a vocational and a theoretical subject is included in this field.

## Exclusions:

Teaching programmes in vocational, practical and artistic subjects is excluded from this field and included in field 146 'Training for teachers of vocational subjects ${ }^{8}$.

## 146 Training for teachers of vocational subjects

Training for teachers of vocational subjects is the study of the theories, methods and practice of vocational/practical teaching and training. Training for music teachers, art teachers and other teachers in aesthetic subjects are included, likewise training for teachers in physical training. Programmes with the following main content are classified here:

Teacher training - arts and crafts
Teacher training - commercial subjects
Teacher training - music
Teacher training - nursing
Teacher training - physical training
Teacher training - technical subjects
Driving instructor training
Training of instructors at companies
Training of trainers

## Inclusions:

Training of driving instructors is included in this field. Training of trainers for work is included in this field.

Exclusions:
Training of sport trainers is excluded from this field and included in field 813 'Sports'.
Teacher training programmes with both a vocational and a theoretical subject is excluded from this field and included in field 145 'Training for teachers with subject specialisation'.

[^6]
## 2 Humanities and Arts

## 210 Arts (broad programmes)

Arts (broad programmes) is the study of arts without specialising in any of the detailed fields. Broad programmes with the following main content are classified here:

Arts
Arts and crafts

## 211 Fine arts

Fine arts is the study of visual forms of creative expressions, dealing with theory, history, techniques, performance and production in fine arts. Programmes with the following main content are classified here:

```
Art theory
Etching
Fine art printmaking
History of art
Painting
Philosophy of art
Sculpture
```


## Exclusions:

Training in ceramics, pottery etc is excluded from this field and included in field 215 'Craft skills'.

Study of architecture is excluded from this field and included in field 581
'Architecture and town planning'.
Teacher training in arts is excluded from this field and included in field 146 'Training for teachers of vocational subjects'.

## 212 Music and performing arts

Music and performing arts is the study of the principles and techniques associated with performance involving music, speech, movement, mime, characterisation, improvisation and stage craft. Programmes with the following main content are classified here:

```
Acting and directing
Choreography
Circus
Composition (music)
Conducting (music)
Dance (art)
Drama
History of film and theatre
History of music
Music
Theatre
```


## Inclusions:

Study of music and performing arts history and theory is included in this field.

## Exclusions:

Teacher training in music and other performing arts is excluded from this field and included in field 146 'Training for teachers of vocational subjects'.

## 213 Audio-visual techniques and media production

Audio-visual techniques and media production is the study of techniques and skills to produce books, newspapers, radio/TV production, film/video production, recorded music production and graphic reproduction. It includes programmes in methods of colour reproduction, photography and computer graphics. Study of combining pictures, words and decorations in the production of books, magazines, posters, adverts etc. is also included. Programmes with the following main content are classified here:

```
Bookbinding
Camera operating
Compositing (printing)
Computer type-setting
Film production
Graphic design
Graphic reproduction
Illustration
Media techniques
Multimedia production
Photography
Printing
Publishing design, lay-out
Radio and TV production
Recorded music production
Sound technique
Type-setting
```


## Inclusions:

Programmes in desktop publishing and lay-out are included in this field.

## Exclusions:

Separate programmes in using specific software applications for desktop publishing are excluded from this field and included in field 482 'Computer use'.
Study of journalism (wording and content of messages) is excluded from this field and included in field 321 'Journalism and reporting'.

## 214 Design

Design is the study of creatively combining line, form and fabric in designing and constructing e.g. fashion garments, industrial products and interiors. Programmes with the following main content are classified here:

Costume design
Design of industrial products
Fashion design
Interior architecture
Interior design
Stage designing
Window dressing

## Exclusions:

Study of Building design is excluded from this field and included in field 581
'Architecture and town planning'.
Study of Industrial design is excluded from this field if emphasis is given to technical subjects and not to artistic design, and included in the appropriate field under 52 'Engineering and engineering trades’.

Publishing design and graphic design are excluded from this field and included in field 213 'Audio-visual techniques and media production'.

Craft skills is the study of techniques and skills in a chosen aspect of handicraft, such as jewellery, pottery, weaving, woodcarving etc. Programmes with the following main content are classified here:

```
Ceramics
Crafts, folk arts and artisanry
Decorative metal crafts
Embroidery
Floristry (flower arranging)
Glass arts and craft
Goldsmithing
Handicrafts
Jewellery
Making of musical instruments (not industrial)
Musical instruments (repairing and tuning)
Silversmithing
Stone carving (craft)
Weaving (craft)
Woodcarving
```


## Exclusions:

Study of industrial production of pottery, woven materials, embroidery etc. is excluded from this field and included in some of the detailed fields under broad field 5 'Engineering, manufacturing and construction'.

## 220 Humanities (broad programmes)

Humanities (broad programmes) is the study of humanities without specialising in any of the detailed fields. Education and training programmes with the following main content are classified here:

Humanities

## 221 Religion

Religion is the study of religious beliefs, concepts, symbols, expressions, texts and spirituality. Programmes with the following main content is classified here:

Religious history
Study of sacred books
Study of different religions

## Inclusions:

Included in this field are programmes for children and young people, usually given in religious schools or seminars, in monasteries etc, aiming to develop an interest in the tenets of their religion and sufficient familiarity with its philosophy to assist in the propagation of their faith.

## Exclusions:

Basic programmes given in religious schools, seminars etc. containing religious instruction but not emphasising it or leading to a religious vocation, are excluded from this field and included in 010 'Basic / broad, general programmes'.

## 222 Foreign languages

Foreign languages is the study of the structure and composition of foreign languages. It includes the study of related cultures, literature and linguistics. Programmes with the following main content are classified here:

Dead languages
Foreign languages
Interpretation programmes
Second languages
Translation programmes

## Inclusions:

Foreign languages is the study of a language being taught as a foreign language or a second language. A second language means a national language taught to pupils whose main language is another language.

## Exclusions:

Programmes teaching the mother tongue, even if this language is not the national language (e.g. programmes for immigrants learning their mother tongue) are excluded from this field and included in field 223 'Mother tongue'.

## 223 Mother tongue

Mother tongue is the study of the native language, including the study of related literature and linguistics. Programmes with the following main content are classified here:

Creative writing
Home language
Languages, native
Mother tongue programmes
Sign language

## Inclusions:

Mother tongue is study of a language taught as the mother tongue, even if the language is not the national language of the country, e.g. programmes for immigrants in their home language.

## Exclusions:

National language programmes are excluded from this field if the language is taught as a foreign or a second language, and are then included in 222 'Foreign languages'.
Programmes in literacy and numeracy are excluded from this field and included in field 080 'Literacy and numeracy'.

## 225 History and archaeology

History is the study of past events, especially the political, social and economic development of a country, a continent or the world. Study of comparative literature is included in this field, likewise the study of history of science and ideas. Archaeology is the study of ancient civilisations by scientific analysis of what is found in the ground. Programmes with the following main content are classified here:

```
Archaeology
Cultural history
History
History of literature
History of science and ideas
```


## Inclusions:

Study of literature in general (not combined with study of a special language) is included in this field.

Study of general linguistics (not related to a the study of a particular language) is included in this field.

## Exclusions:

If study of literature is combined with study of a special language it is excluded from this field and included in field 222 'Foreign languages' or 223 'Mother tongue'.

Study of dead languages (latin etc.) is excluded from this field and included in field 222 'Foreign languages'.

Study of History of art is excluded from this field and included in field 211 'Fine arts'.
Study of Music and performing arts history is excluded from this field and included in field 212 'Music and performing arts'.

Study of Economic history/history of economics is excluded from this field and included in field 314 'Economics'.

## 226 Philosophy and ethics

Philosophy and ethics is the study of philosophy, ethics and related subjects dealing with conception of life. Programmes with the following main content are classified here:

Ethics
Logic
Morals
Philosophy

## Exclusions:

Study of religion is excluded from this field and included in field 221 'Religion'.
Study of Philosophy of arts is excluded from this field and is included in field 211
'Fine arts'

## 3 Social Sciences, Business and Law

## 310 Social and behavioural science (broad programmes)

Social and behavioural science (broad programmes) is the study of social and behavioural science without specialising in any of the detailed fields. Training programmes with the following main content are classified here:

Behavioural science
Social sciences

## 311 Psychology

Psychology is the study of the human mind and behaviour as a result of individual differences, experience and environment. Programmes with the following main content are classified here:

Psychology
Psychoanalysis
Psychotherapy

## 312 Sociology and cultural studies

Sociology and cultural studies is the study of human beings and the way they behave in groups and in relation to the society. Study of ethnology and social anthropology is included in this field, likewise is the study of human and social geography. Programmes with the following main content are classified here:

Cultural geography
Cultural studies
Demography/population studies
Gender studies
Ethnology
Social anthropology
Social geography
Sociology

## Exclusions:

Social welfare programmes where emphasis is given to practical social work are excluded from this field and included in field 762 'Social work and counselling'.

## 313 Political science and civics

Political science and civics is the study of government and political principles or practice. Subjects dealing with rights and duties of the citizens are included. Programmes with the following main content are classified here:

## Civics

Human rights
International relations
Peace and conflict studies
Political history
Political science

## Exclusions:

Study of political economics is excluded from this field and included in the field 314 'Economics'.

## 314 Economics

Economics is the study of economic policy, economic theory and economic decision making. Programmes with the following main content are classified here:

Economic history
Economics
Political economy

## Exclusions:

Study of economics where emphasis is given to business studies is excluded from this field and classified as 340 'Business and administration (broad programmes)'.

## 321 Journalism and reporting

Journalism and reporting is the study of the theory and practices of journalism/reporting as part of the field of mass communication. Journalism and reporting is about the wording and content of messages. It comprises news reporting, writing commentaries and feature stories of public interest etc. Programmes with the following main content are classified here:

Broadcast journalism
Information (wording and content)
Journalism
Mass communication (wording and content)
News reporting

## Exclusions:

Study of techniques for mass communication (e.g. printing and radio/TV production) is excluded from this field and included in field 213 'Audio-visual techniques and media production'.
Study of lay-out and publishing design is excluded from this field and included in field 213 'Audio-visual techniques and media production'.

Study of public relations is excluded from this field and included in field 342
'Marketing and advertising'.

## 322 Library, information, archive

Library, information, archive is the study of the methods of selecting, acquiring, organising and storing collections of information, and facilitating the use of information. Library programmes are included in this field. Programmes with the following main content are classified here:

```
Archival sciences
Documentation
Information science
Library programmes
Museum documentation
```


## 340 Business and administration (broad programmes)

Business and administration (broad programmes) is the study of the theory and practice of planning, directing, organising and co-ordinating the resources of private and public organisations and institutions. Programmes with the following main content are classified here:

Business and administration
Business economics
Business studies

## Inclusions:

Study of business and administration where emphasis is not given towards any of the detailed fields under 34 is included in this field.

## Exclusions:

Business programmes where emphasis is given to any of the detailed fields under 34 'Business and administration' (management, administration, marketing etc) should be classified according to the specialisation.

## 341 Wholesale and retail sales

Wholesale and retail sales is the study of buying and selling goods and services, including stock management, pricing practice, loss prevention, sale systems and procedures. It includes the study of the workings and current trends of the wholesale and retail industries. Selling of buildings and properties is also included. Programmes with the following main content are classified here:

```
Auctioneering
Consumer services
Demonstration techniques
Purchasing
Real-estate business
Retailing
Stock-keeping
Ware-housing
Wholesaling
```


## Inclusions:

```
Study of buying and selling buildings and properties is included in this field.
```


## 342 Marketing and advertising

Marketing and advertising is the study of exchange processes of goods and services between organisations and/or individuals, and the study of consumer behaviour and requirements. It includes the study of the role of product development, pricing, distribution, promotion and sales in order to maximise business performance. Programmes with the following main content are classified here:

```
Advertising
Market research
Marketing
Merchandising
Public relations
```


## 343 Finance, banking, insurance

Finance, banking, insurance is the study of planning, directing, organising and controlling financial activities and services. It includes the control and monitoring of the financial resources of organisations, institutions and individuals, and the provision of financial services at the corporate and individual level. Programmes with the following main content are classified here:

[^7]Pension insurance
Social insurance
Stock-broking

## Exclusions:

Study of actuarial science is excluded from this field and included in field 462 'Statistics'.

## 344 Accounting and taxation

Accounting and taxation is the study of maintaining, auditing and recording financial transactions. Programmes with the following main content are classified here:

Accounting
Auditing
Bookkeeping
Tax accounting

## 345 Management and administration

Management and administration is the study of planning, directing and operating the functions and activities of organisations and institutions. Programmes in management also including administration, economics, finance etc. are included in this field if emphasis is given to management and administration. Programmes with the following main content are classified here:

Administration
Educational management
Employment management
Logistic management
Management science
Office management
Organisational theory and behaviour
Personnel administration
Personnel management
Start your own business-courses
Training management

## Inclusions:

Study of leadership in the context of management is included in this field.

## Exclusions:

Training of leadership in the context of personal development is excluded from this field and included in field 090 'Personal skills'.

Study of administration in the meaning of office work is excluded from this field and included in field 346 'Secretarial and office work'.

## 346 Secretarial and office work

Secretarial and office work is the study of administrative procedures and practises, office technology and clerical, shorthand and keyboard skills. Specialised secretarial programmes (bilingual, medical, law, accounting etc) are included if the programme has secretarial work as its objective, rather than work as specialised assistants. Programmes with the following main content are classified here:

[^8]Keyboard skills
Legal secretary programmes
Medical secretary programmes
Operation of office machines
Receptionist training
Secretarial programmes
Shorthand
Switchboard operating
Typing

## Inclusions:

Broad secretarial programmes comprising among other thing computer courses are included in this field.

## Exclusions:

Separate programmes in using a specific computer software are excluded from this field and included in 482 'Computer use'.

Office management is excluded from this group and included in field 345
'Management and administration'.
Hotel receptionist programmes are excluded from this field and included in field 811 'Hotel, restaurant and catering'.

## 347 Working life

Working life is the study of the structure and function of working life. It comprises programmes, mainly given as staff training, related to the working place and to assignments. Programmes with the following main content are classified here:

Company knowledge
Introductory courses
Clients' needs
Organisation at work
Quality assurance
Trade union courses (general)
Work development

## Inclusions:

Staff training related to the working place or the assignments is included in this field if not possible to classify into any other fields.

## Exclusions:

Training related to the working place or the assignments is excluded from this field if it has more to do with personal development than work development and is included in field 090 'Personal skills'.

Staff training which can be classified to any other field is excluded from this field and included in the appropriate field. E.g. quality courses should, if technical, be included in the fields under 52 'Engineering and engineering trades'.
Programmes in work environment should be included in filed 862 'Occupational health and safety'.
Programmes, mostly at tertiary level, dealing with working life in general in terms of the labour market, the social partners, industrial psychology etc. are excluded in this field and included in the fields under 31 'Social and behaviour science'.

## 380 Law

Law is the study of the principles and procedures for formally maintaining social order, including training for legal professions such as advocate or training for the judicial bench. Programmes with the following main content are classified here:

Commercial law
Criminal justice studies
History of law
Jurisprudence
Labour law
Legal practice
Notary/Notary's practise

## 4 Science, Mathematics and Computing

## 421 Biology and biochemistry

Biology and biochemistry is the study of the structure, function, reproduction, growth, evolution and behaviour of all living organisms. It comprises the study of biological and related sciences, and includes the study of the chemistry of living organisms. Programmes with the following main content are classified here:

```
Biochemistry
Biology
Botany
Genetics
Pharmacology
Toxicology
Zoology
```


## Inclusions:

Study of chemical processes in living organisms (biochemistry, toxicology, pharmacology etc.) is included in this field.

## Exclusions:

Study of environmental science, which is study of the relation between living organisms and the environment, is excluded from this field and included in field 422 'Environmental science'.

## 422 Environmental science

Environmental science ${ }^{9}$ is the study of organisms in relation to one another and to the environment. Programmes with the following main content are classified here:

Ecology
Environmental science

## Exclusions:

Study of biology and toxicology is excluded from this field and included in field 421 'Life science'.

## 440 <br> Physical science (broad programmes)

Physical science (broad programmes) is the study of physical science without specialising in any of the detailed fields. Broad programmes within the physical science are classified here.

## 441 <br> Physics

Physics is the study of properties and interactions of matter and energy. It includes the study of astronomy and space science. Programmes with the following main content are classified here:

Astronomy
Optics
Physics
Space science

[^9]
## Exclusions.

Opticians' practice is excluded from this field and included in field 725 'Medical diagnostic and treatment technology'.

## 442 Chemistry

Chemistry is the study of substances and their elements and how they react when combined. Programmes with the following main content are classified here:

Chemistry
Organic chemistry

## Exclusions:

Biochemistry is excluded from this field and included in field 421 'Life science’.

## 443 Earth science

Earth science is the study of the composition and structure of earth including the hydrosphere and the atmosphere. Programmes with the following main content are classified here:

Earth science
Geography (nature)
Geology
Meteorology
Oceanography
Seismology

## Exclusions:

Social geography is excluded from this field and included in field 312 'Sociology and cultural studies'.

## 461 Mathematics

Mathematics is study of abstract deductive systems. It includes algebra, arithmetic, geometry, real and complex analysis and applied mathematics. Programmes with the following main content are classified here:

```
Algebra
Geometry
Mathematics
Numerical analysis
```


## 462 Statistics

Statistics is the study of collecting, describing, arranging and analysing numerical data. Study of probability theory and actuarial science is included. Programmes with the following main content are classified here:

Actuarial science
Mathematical (theoretical) statistics
Probability theory
Statistics, applied
Survey design
Survey sampling

## Inclusions:

Study of applied statistics is included in this field.
Study of mathematical (theoretical) statistics is included in this field.

## Exclusions:

Study of demography/population studies is excluded from this field and included in field 312 'Sociology and cultural studies'

## 481 Computer science

Computer science is the study of the design and development of computer systems and computing environments. It includes the study of the design, maintenance and integration of software applications. Programmes with the following main content are classified here:

Computer programming
Computer science
Computer system analysis
Computer system design
Informatics
Network administration
Operating systems
Programming languages (Visual Basic, $\mathrm{C}++$ etc.)

## Exclusions:

Computer engineering (hardware) is excluded from this field and included in field 523 'Electronics and automation'.

Programmes in using computer applications are excluded from this field and included in field 482 'Computer use'.

## 482 Computer use

Computer use is the study of using computers and computer software and applications for different purposes. These programmes are generally of short duration. Programmes with the following main content are classified here:

## Computer use

Software for calculating (spreadsheets)
Software for data processing
Software for desk top publishing
Software for word processing
Use of Internet

## 5 Engineering, Manufacturing and Construction

## 520 <br> Engineering and engineering trades (broad programmes)

Engineering and engineering trades (broad programmes) is the study of engineering and engineering trades without specialising in any of the detailed fields. Training programmes with the following main content are classified here:

```
Engineering
Engineering industry programmes
Maintenance engineering
```


## 521 Mechanics and metal work

Mechanics and metal work (Engineering and engineering trades) is the study of planning, designing, developing, producing, maintaining and monitoring machines, mechanical plants and systems and metal products. It includes designing and maintaining machines which produce goods and services. The focus of programmes in this field is machines, mechanical systems and metal products. Programmes with the following main content are classified here:

```
Gunsmith
Hydraulics
Locksmith and safe repairer
Mechanical engineering
Mechanical trades programmes
Metal casting and patternmaking
Metal fitting, turning and machining
Metallurgical engineering
Precision mechanics
Sheetmetal working
Steel production
Tool and die making
Welding
```


## Exclusions:

Study of motor vehicle mechanics and engineering is excluded from this field and included in field 525 'Motor vehicles, ships and aircraft'.

Electricity (Engineering and engineering trades) is the study of installing, maintaining, repairing and diagnosing faults in electrical wiring and related equipment in domestic, commercial and industrial establishments. Installation and maintenance of overhead and underground electrical power distribution networks is included. Energy is the study of energy generation. Programmes with the following main content are classified here:

```
Air-conditioning trades programmes
Climate engineering
Electrical appliances repairing
Electrical engineering
Electrical fitting
Electrical power generation
Electrical trades programmes
Energy programmes
Gas distribution
Heating trades programmes
```

Nuclear, hydraulic and thermal energy
Power production
Powerline installation and maintenance
Refrigeration programmes

## Inclusions:

The study of installing, diagnosing faults in and repairing heating, air-conditioning and refrigeration equipment is included in this field.

## Exclusions:

Study of vehicle electricity is excluded from this field and included in field 525 'Motor vehicles, ships and aircraft'.

## 523 Electronics and automation

Electronics and automation (Engineering and engineering trades) is the study of planning, designing, developing maintaining and monitoring electronic equipment, machinery and systems. It includes designing computers and equipment for communication. Programmes with the following main content are classified here:

Broadcasting electronics
Communication systems
Communications equipment installation
Communications equipment maintenance
Computer engineering
Computer repairing
Control engineering
Data processing technology
Digital technology
Electronic engineering
Electronic equipment servicing
Network technology
Robotics
Telecommunication technology
Television and radio repairing

## Exclusions:

Computer science (design of computer systems and software applications) is excluded from this field and included in 481 'Computer science'.

## 524 Chemical and process

Chemical and process (Engineering and engineering trades) is the study of planning, designing, and developing products and processes where chemical and physical changes occur. It includes designing chemical plants and control systems. Programmes with the following main content are classified here:

```
Biochemical technologies
Biotechnology engineering
Chemical engineering
Chemical process engineering
Laboratory technology
Oil/gas/petrochemicals processing
Plant and machine operation (processing)
Process technology
```


## Inclusions:

Programmes in laboratory technology are included in this field if emphasis is not given to a specific application.

## Exclusions:

Laboratory technology programmes are excluded from this field if emphasis is given to a specific application (biological, medical, etc.) and are included under appropriate field (420, 725 etc).

Programmes with emphasis on production of a specific material are excluded from this field; e.g. programmes with emphasis on paper processing should be included in field 543 'Materials (wood, paper, plastic, glass)'.

## 525 Motor vehicles, ships and aircraft

Motor vehicles, ships and aircraft (Engineering and engineering trades) is the study of designing, developing, producing, maintaining, diagnosing faults in, repairing and servicing motor vehicles, including earth moving equipment and agriculture machines. Typical is the combining of studies in both metal structures and motors. Programmes with the following main content are classified here:

```
Air craft engineering
Air craft maintenance
Automotive electricity
Automotive engineering
Coachwork
Motorcycle engineering
Panel beating
Shipbuilding
Varnishers/sprayers
Vehicle building and repairing
```


## Inclusions:

Study of vehicle electricity is included in this field.

## Exclusions:

Study of producing and repairing non-motor vehicles is excluded from this field and included in 521 'Mechanics and metal work' (e.g. bicycles) or 543 'Materials; wood, paper, plastic, glass' (e.g. boats, non-motor).

## 540 Manufacturing and processing (broad programmes)

Manufacturing and processing (broad programmes) is the study of manufacturing and processing without specialising in any of the detailed fields. Broad programmes within manufacturing and processing is classified here.

## 541 Food processing

Food processing (Manufacturing and processing) is the study of processing and packaging of food and beverages, and the equipment and procedures used in the production and distribution of foods. Programmes with the following main content are classified here:

[^10]
## Pastry cooking

Tobacco processing
Wine production

## Inclusions:

Study of food handling and food hygiene is included in this field.
Study of tobacco processing is included in this field.

## Exclusions:

Restaurant and catering programmes are excluded from this group and included in field 811 'Hotel, restaurant and catering'.

Nutritional science is excluded from this field and included in field 726 'Therapy and rehabilitation'.

## 542 Textiles, clothes, footwear, leather

Textiles, clothes, footwear, leather (Manufacturing and processing) is the study of the manufacture of textiles, textile and leather products, clothing and related items, shoes and other forms of footwear. Programmes with the following main content are classified here:

Clothing trades programmes
Dressmaking
Footwear making
Fur making
Garment production
Leather processing
Saddlery
Shoemaking
Skins and leather production
Spinning
Tailoring
Textile trades programmes
Upholstery
Weaving (industrial)
Wool science

## Exclusions:

Handicraft programmes (weaving, embroidery etc.) are excluded from this field and included in field 215 'Craft skills’.

## 543 Materials (wood, paper, plastic, glass)

Materials (Manufacturing and processing) is the study of the manufacturing of products in wood, paper, plastic, glass or other materials like stone, clay, artificial materials etc. Programmes included in this field have more to do with a specific material than general technical knowledge. Programmes with the following main content are classified here:

Boat building (non-motor)
Cabinet making
Carpentry (not building)
Ceramics (industrial)
Furniture making
Glass working (industrial)
Industrial diamond production
Paper manufacturing and processing

Plastic manufacturing
Rubber manufacturing
Timber technology
Wood machining and turning
Woodwork trades programmes

## Exclusions:

Study of metal work is excluded from this field and included in field 521 'Mechanics and metal work'.

Study of building carpentry and joinery is excluded from this field and included in field 582 'Building and civil engineering'.
Study of chemical processing in general is excluded from this field and included in field 524 'Chemical and process'.
Study of printing and bookbinding is excluded from this field and included in field 213 'Audio-visual techniques and media production'.

Handicraft programmes (glass arts and crafts, woodcarving etc) are excluded from this field and included in field 215 'Craft skills'.

## 544 Mining and extraction

Mining and extraction (Manufacturing and processing) is the study of planning, developing, assessing and directing the extraction of minerals, oil and gas from the earth. Programmes with the following main content are classified here:

Coal mining
Mineral technology
Oil and gas extraction
Raw material extraction

## Exclusions:

Study of metallurgical engineering is excluded from this field and included in 521
'Mechanics and metal work'
Study of geology is excluded from this field and included in field 443 'Earth science'.

## 581 Architecture and town planning

Architecture is the study of the art, science and techniques of building design. It encompasses both utilitarian ends - such as the soundness of the structure and the functional and economic efficiency of the building - and aesthetic considerations. Town planning is the study of the regulated growth and improvement of towns in both functional and aesthetical points of view. Programmes with the following main content are classified here:

Architectural urban design and planning
Architecture
Building design
Cartography/Land surveying
City planning
Community development
Landscape architecture
Structural architecture
Surveying
Town and country planning
Urban planning

## Inclusions:

Study of cartography and surveying is included in this field

## Exclusions:

Study of interior design is excluded from this field and included in field 214 'Design'.
The laying out and construction of parks and gardens is excluded from this field and included in field 622 'Horticulture'.

## 582 Building and civil engineering

Building is the study of the science, technology and techniques of assembling, erecting and maintaining public, commercial, industrial and residential structures and their fittings. Civil engineering is the study of planning, designing, testing and directing the construction of large scale buildings and structures, including systems for transport, water supply, sewage etc. Programmes with the following main content are classified here:

Bricklaying
Bridge construction
Building construction
Building engineering
Building technology
Carpentry and joinery (building)
Civil engineering
Constructional metalwork (building)
Dock and harbour engineering
Floor and wall tiling
Floor covering
Mason and tile setting
Painting and wall covering
Plastering
Plumbing and pipefitting
Road building
Water engineering and technology
Water supply and sewerage engineering
Ventilation

## Exclusions:

Installation of electricity is excluded from this field and included in field 522
'Electricity and energy'. Similarly, installing and repairing of heating, airconditioning and refrigeration equipment is excluded from this field and included in field 522 'Electricity and energy'.

## 6 Agriculture and Veterinary

## 620 Agriculture, forestry and fichery (broad programmes)

Agriculture, forestry and fishery (broad programmes) is the study of agriculture, forestry and fishery without specialising in any of the detailed fields. Broad programmes within agriculture, forestry and fishery are classified here.

## 621 Crop and livestock production

Crop and livestock production (agriculture) is the study of growing, maintaining and harvesting crops and pastures, and grazing and managing animals. It includes the study of managing and maintaining farms and producing unprocessed plant and animal products. Programmes with the following main content are classified here:

```
Agricultural sciences
Agronomy and crop science
Animal husbandry
Crop husbandry
Dog breeding
Farm and ranch management
Farming
Fruit growing
Grain growing
Horse breeding
Pig farming
Poultry husbandry
Rye and wheat growing
Sheep farming
Soil science
Vegetable plantation
Wine growing
```


## Inclusions:

Study of soil science, soil fertility and irrigation techniques is included in this field.
Study of growing intensively managed crops such as fruit and vegetables is included in this field.

## Exclusions:

Study of wine production is excluded from this field and is included in field 541 'Food processing'.

Jockeying is excluded from this field and is included in field 813 'Sports'

## 622 <br> Horticulture

Horticulture (gardening) is the study of horticultural technology and management, floriculture, greenhouse methods, nursery management, landscape gardening etc. Programmes with the following main content are classified here:

Floriculture
Gardening
Greenkeeping
Horticultural techniques
Nursery management
Turf cultivation

## Inclusions:

The laying out and construction of urban and domestic parks and gardens is included in this field.

Gardening programmes combining floriculture and growing vegetables are included in this field.

## Exclusions:

Study of growing crops (plants such as wheat, rice, fruit, vegetables etc, grown in order to be eaten) is excluded from this field and included in field 621 'Crop and livestock production'.
Study of soil science, soil fertility and irrigation techniques is excluded from this field and included in field 621 'Crop and livestock production'.

Study of National park management is excluded from this field and included in field 853 'Natural environments and wildlife'.

Study of Landscape architecture is excluded from this field and included in field 581 'Architecture and town planning'.

## 623 Forestry

Forestry is the study of establishing, cultivating, harvesting and managing forests. It includes study of hunting and trapping. Programmes with the following main content are classified here:

Forest keeping
Forest product techniques
Forestry
Hunting and trapping

## Exclusions:

Study of National park management is excluded from this field and included in field 852 'Natural environments and wildlife'.

Timber technology (sawmill production etc) is excluded from this field and included in field 543 'Materials (wood, paper, plastic, glass)'.

## 624 Fisheries

Fisheries is the study of breeding, rearing and harvesting fish and other seafood. Programmes with the following main content are classified here:

Fish breeding
Fish farms
Fishery
Fishery science and technology
Shellfish breeding

## Inclusions:

Programmes for operating fishing boats are included in this field.

## Exclusions:

Study of industrial processing of fish is excluded from this group and included in field 541 'Food processing'.

## 640 Veterinary

Veterinary is the study of preventing, diagnosing and treating diseases and injuries in animals, and their general care. The study of caring for sick, injured and infirm animals undergoing treatment in veterinary clinics is included. Programmes with the following main content are classified here:

Animal health care
Animal reproduction (science)
Veterinary assisting
Veterinary medicine
Veterinary science

## Inclusions:

The science of animal reproduction is included in this field.
Exclusions:
Study of animal breeding is excluded from this field and included in field 621 ' Crop and livestock production'.

## 7 Health and Welfare

## 720 Health (broad programmes)

Health (broad programmes) is the study of health without specialising in any of the detailed fields. Training programmes with the following main content are classified here:

Health
Public health programmes

## 721 Medicine

Medicine is the study of the principles and procedures used in preventing, diagnosing, caring for and treating illness, disease and injury in humans and the maintenance of general health. Principally, this field consists of training of physicians/doctors. Programmes with the following main content are classified here:

```
General medicine
Gynaecology
Medical science
Medical training
Medicine
Paediatrics
Surgery
Training of physicians/doctors
```


## 723 Nursing and caring

Nursing and caring is the study of providing health care for the sick, disabled or infirm and assisting physicians and other medical and health professionals diagnose and treat patients. The focus of qualifications in nursing is maintaining and caring for the health during illness and rehabilitation. It includes care of old people and care of the disabled. Programmes with the following main content are classified here:

```
Assistant nursing
Basic nursing
Care of old people
Care of the disabled
Health care programmes
Infant hygiene (nursing)
Midwifery
Nursing aide/Orderly
Psychiatric nursing
```


## Inclusions:

Caring programmes comprising both health care and social care e.g. for old people, are included in this field.

## Exclusions:

Veterinary nursing is excluded from this field and is included in field 640 'Veterinary'.
Dental nursing is excluded from this field and is included in field 724 'Dental studies'.
Care of children (if not health care) is excluded from this field and included in field 761 'Child care and youth services'.

## 724 <br> Dental studies

Dental studies is the study of diagnosing, treating and preventing diseases and abnormalities of the teeth and gums. It includes the study of designing, making and repairing dental prostheses and orthodontic appliances. It also includes the study of providing assistance to dentists. Programmes with the following main content are classified here:

Dental assisting
Dental hygiene
Dental laboratory technology
Dental nursing
Dental science
Dental surgery
Odontology
Orthodontics

## Inclusions:

Study of dental hygiene and public dental health is included in this field.

## 725 Medical diagnostic and treatment technology

Medical diagnostic and treatment technology is the study of a wide range of technlogies used for diagnosing and treating diseases and handicaps. Programmes with the following main content are classified here:

Ambulance technology
Medical laboratory technology
Radiology technology
Radiotherapy
Hearing aid technology
Optical technology
Prosthetic technology
X-ray technology

## Inclusions:

Medical laboratory technology is included in this field.

## Exclusions:

Study of laboratory technology is excluded from this field if emphasis is not given to medical laboratory technology. General laboratory technology is included in field 524 'Chemical and process'. Laboratory technology where emphasis is given to other specific applications (biology, physics, chemistry etc) is included in the appropriate field (421, 441, 442 etc).

Study of dental technology is excluded from this field and included in field 724 'Dental studies'.

## 726 Therapy and rehabilitation

Therapy and rehabilitation is the study of restoring normal physical conditions to those incapacitated by temporary or permanent disability. Programmes with the following main content are classified here:

Dietician programmes
Medical massage
Nutrition/Dietetics
Occupational therapy
Physiotherapy

## Rehabilitation

Speech therapy

## Inclusions:

Study of vocational rehabilitation and occupational therapy is included in this field.

## Exclusions:

Study of psychotherapy is excluded from this field and included in field 311 'Psychology'.
Study of nutrition science is excluded from this field and included in field 421 'Biology and biochemistry'.

## 727 Pharmacy

Pharmacy is the study of drugs and their effects on humans. It includes their preparation, dispensing and administration. Programmes with the following main content are classified here:

Dispensing pharmacy
Pharmacy

## Exclusions:

Study of pharmacology is excluded from this field and included in field 421 'Biology and biochemistry'.

## 761 Child care and youth services

Child care and youth services is the study of the development and care of children and youths. It includes study of recreation and leisure activities as a social service for school children. Programmes with the following main content are classified here:

Child care
Children recreation programmes
Youth services
Youth worker programs

## Exclusions:

Study of early childhood education is excluded from this field and included in field 143 'Pre-primary teaching'.

Study of health care of children is excluded from this field and included in field 723 'Nursing and caring'.

## 762 Social work and counselling

Social work and counselling is the study of the welfare needs of communities, specific groups and individuals and the appropriate ways of meeting these needs. The focus is on social welfare with emphasis on social policy and practice. Programmes with the following main content are classified here:

Alcohol and drug abuse counselling
Alcohol, tobacco, drugs (knowledge about)
Crisis support
Family and marriage counselling
Mobbing and maltreatment (knowledge about)
Social policy

Social practice
Social theory (applied)
Social work (welfare)
Vocational counselling
Vocational guidance

## Inclusions:

Study of vocational guidance is included in this field.

## Exclusions:

Study of sociology and social science is excluded from this field and included in field 312 'Sociology and cultural studies'.
Caring programmes combining health care and social care, e.g. for old people, are excluded from this field and included in field 723 'Nursing and caring'.

## 8 Services

## 810 Personal services (broad programmes)

Personal services (broad programmes) is the broad study of personal service without specialising in any of the detailed fields. The field consists to a large extent of programmes at secondary level. Training programmes with the following main content are classified here:

Personal services

## 811 Hotel, restaurant and catering

Hotel, restaurant and catering is the study of providing food, beverages, accommodation and related services at hotels, restaurants etc. Programmes with the following main content are classified here:

```
Catering
Cooking (restaurant and hotel-type)
Food serving
Hospitality services
Hotel- and restaurant programmes
Hotel receptionist training
Hotel services
Waiting and bar service
```


## Exclusions:

Study of food processing (industrial) is excluded from this field and included in field 541 'Food processing'.

Receptionist training (general) is excluded from this field and included in field 346 'Secretarial and office work'.

## 812 Travel, tourism and leisure

Travel and tourism is the study of marketing and advertising tourist destinations and events. It includes the study of ticketing and reservation practices. Leisure is the study of recreational and leisure activities for individuals and groups. Programmes with the following main content are classified here:

```
Ground crew training (airport)
Guiding, tour leading
Recreation and leisure
Tourist trades programmes
Travel agency services
Travel and tourism
Travel services
```


## Exclusions:

Study of recreation and leisure activities for school children is excluded from this field and included in field 761 'Child care and youth services'.

## 813 Sports

Sports is the study of techniques and skills in a chosen sport. Programmes with the following main content are classified here:

Sport trainer programmes
Techniques and skills in a chosen sport
Programmes for umpires and other sports officials

## Inclusions:

Jockeying is included in this field.

## Exclusions:

Training of school teachers in physical education (sports teachers) is excluded from this field and included in field 146 'Training for teachers of vocational subjects'.

## 814 Domestic services

Domestic services is the study of various domestic services, such as housekeeping, cleaning, laundering, sewing etc. Programmes with the following main content are classified here:

Caretaking, housekeeping and homeservice workers
Chimney sweeping
Cleaning
Cooking (home)
Domestic science
Dry-cleaning
Funeral services and mortuary science
Home economics
Laundry
Needlework (home)
Sewing (home)

## Inclusions:

Cleaning programmes are included in this field even if directed towards cleaning schools, hospitals, factories etc.

## Exclusions:

Study of building maintenance is excluded from this field and included in field 582 'Building and civil engineering'.

## 815 Hair and beauty services

Hair and beauty services is the study of caring for the hair and the body for beautification. Programmes with the following main content are classified here:

```
Barbering
Beauty therapy
Cosmetology (make up)
Hairdressing
Fitness and weight control
```


## 840 Transport services

Transport services is the study of operating, navigating and directing ships, aircraft and other forms of transportation. Programmes with the following main content are classified here:

Air traffic control
Aircraft operation
Cabin crew training

Communication (air, railway, road etc.) programmes
Crane and truck driving
Driving programmes
Flying and navigation
Navigation technologies
Postal service
Railway operations
Road motor vehicle operations
Ship operation
Transport programmes

## Inclusions:

Cabin crew training is included in this field.

## Exclusions:

Programmes in telephone network services are excluded from this field and included in field 523 'Electronics and automation'. Programmes in switchboard operating are excluded from this field and included in field 346 'Secretarial and office work'.

## 850 Environmental protection (broad programmes)

Environmental protection (broad programmes) is the study of environmental protection without specialising in any of the detailed fields. Training programmes with the following main content are classified here:

Environmental protection
Natural resources use programmes

## 851 Environmental protection technology

Environmental protection technology is the study of processes in order to minimise discharge and waste and avoid pollution. It includes programmes dealing with control of water, air, soil etc. Programmes with the following main content are classified here:

Air pollution control
Ecological technology
Noise pollution control
Industrial discharge control
Recycling
Water pollution control

## Exclusions:

Programmes dealing with hygienic standards in food, water etc. are excluded from this field and included in field 853 'Community sanitation services'.

## 852 Natural environments and wildlife

Natural environments and wildlife is the study of the relationships between living organisms in natural environments in order to protect nature and wildlife. It includes study of establishing and maintaining national parks in order to preserve their original natural state. Programmes with the following main content are classified here:

National parks and wildlife management
Nature conservation
Wildlife

## Exclusions:

Study of forestry and horticulture is excluded from this field and included in some of the fields under 62 'Agriculture, forestry and fishery'.

Study of hunting and trapping is excluded from this field and included in field 623 'Forestry'.

## 853 Community sanitation services

Community sanitation services is the study of community services dealing with items that affect public health such as hygienic standards in food, water supply, disposal of sewage and garbage and street cleaning. Programmes with the following main content are classified here:

Hygienic standards
Hygiene, community
Refuse collection
Refuse/sewage disposal
Street cleaning
Water supply (service)

## Inclusions:

Programmes in services to the community dealing with items that affect public health, such as hygiene standards in food and water supply, disposal of garbage, street cleaning etc. is included in this field.

## 860 Security services (broad programmes)

Security services (broad programmes) is the study of security services without specialising in any of the detailed fields. Broad programmes within security services are classified here.

## 861 Protection of persons and property

Protection of persons and property is the study of services to the community concerning protection of property and persons. It comprises training in police work, public security, fire protection and fire fighting. Programmes with the following main content are classified here:

Civil security
Customs programmes
Fire technology
Fire-protection (fire fighting)
Life guarding
Police work
Policing studies
Prison work
Public security
Security and loss prevention services

## Exclusions:

Study of law is excluded from this field and included in field 380 'Law'.
Study of criminology is excluded from this field and included in field 312 'Sociology and cultural studies'.

## 862 Occupational health and safety

Occupational health and safety is study of recognising, evaluating and controlling environmental factors associated with the workplace. Programmes with the following main content are classified here:

```
Ergonomics (occupational health and safety)
Health and safety in the workplace
Industrial welfare
Labour protection
Labour security
Labour welfare (safety)
Occupational health and industrial hygiene
Occupational safety
Stress
Work environment
```


## Exclusions:

Study of vocational rehabilitation and occupational therapy is excluded from this field and included in field 726 'Therapy and rehabilitation'.

Study of labour law is excluded from this field and included in 380 'Law'.
Study of ergonomics is excluded from this field if emphasis is given to technical aspects and is included in the appropriate field under 52 'Engineering and engineering trades'.

## 863 Military and defence

Military and defence is the study of services to the community connected with war and defence, designed to provide training in the principles and practice of military science. Programmes with the following main content are classified here:

## Army training

Defence studies
Military science
War theory

## Exclusions:

Military personnel participating in non-military programmes should be classified according to the subject content of the training programme.

# Rationale for fields 

Much of the wording in this appendix comes from ABSCQ, the Australian Bureau of Statistics Classifications of Qualifications. Also when writing the field descriptions in this manual, the 'Australian Bureau of Statistics Classification of Qualifications' (ABSCQ) has been helpful. Thank you, Australia, for letting us use some of your wordings.

## Introduction

The rationale of the classification for fields of education and training is the subject content approach. The programmes are put together by closeness in subject matter content. The programmes are aggregated to detailed, narrow and broad fields, based on 'knowledge closeness'. It must be emphasised that it is the main content of the programme which decides into which field it should be classified.
This is the same rationale as for fields of study in the old ISCED (ISCED76).
A number of existing classifications were considered as a starting point for developing the new classification (see Andersson and Olsson (1996) : Fields of Training. Appendices).

The conclusion was very clear; the subject content approach is the best rationale for fields of education.

But what is meant by closeness in subject matter content or 'knowledge closeness'?

## Subject matter

Fields of Education and Training is defined as the subject matter taught in an educational programme. The Field of Education of an educational programme refers to factual and practical learning (subject matter). The subject matter knowledge is applied to a particular type of problem or for a specific purpose. This purpose may be practical (e.g. engineering), abstract (e.g. philosophy) or both (e.g. architecture).

Field of Education is a function of the subject matter content. Therefore, two educational programmes have the same field of education if the main subjects studied are the same. In practise, educational programmes are classified in the same detailed field of education if the main subjects studied are sufficiently similar for the purpose of the classification. This, evidently, leaves room for subjective judgements. When making the classification, we have tried to think that:

1. The major requirements of users should be met.
2. We should provide a reasonably accurate reflection of reality.
3. The classification must be manageable.
4. The statistical output, for example the detailed fields should not be too small. Though size of the fields are not seen as an important factor in a worldwide classification, the same fields are small in some countries and large in others.
5. The classification must build on the two-digit ISCED-Fields of Education and also the EUROSTAT/CEDEFOP Fields of Training.

There is no absolute objective way to create a classification. It should also be clearly understood that one definitive best system for classifying educational programmes into fields does not exist. It is always a compromise between different views and considerations. It is impossible to find one classification system that satisfies all
demands. However, it is believed that the classification given in this manual is a reasonably good solution.

Fields of education are related to each other through the amount of subject matter they have in common, through the broad purpose for which the study is undertaken and through the theoretical knowledge which underpins the subject matter. For example, biology is related to chemistry and physics because:

* in order to understand biology it is necessary to know some physics and chemistry
* studies are undertaken for the same broad purpose of understanding natural phenomena
* the same theoretical knowledge is applied, e.g. the scientific method and the nature of the universe.


## Criteria for Fields of Education

In ISCED 97 fields of education are classified into groups according to the following criteria in priority order:

* Theoretical content
* Purpose of learning
* Objects of interest
* Methods and techniques
* Tools and equipment

Theoretical content refers to the ideas and concepts included in an educational programme.

Purpose of learning refers to the aim of the skills and knowledge gained from an educational programme. Note that this has nothing to do with the students personal purposes, it is what the educational programme is designed for, that is the purpose of the programme.

Objects of interest are the phenomena, problems or entities studied. They are the 'things' to which the students learns to apply the knowledge and skills of the course. They may, for example, be mathematical problems, vehicles requiring repair, people with a particular illness.

Methods and techniques are the specific procedures for applying the skills and knowledge gained in an educational programme. They may, for example, be steps for solving mathematical problems, techniques for repairing vehicles or procedures for treating particular ailments.

Tools and equipment are the instruments and implementations which an individual learns to use and operate in an educational programme.

## Application of the Criteria

All educational programmes are associated with a blend of theoretical understanding, factual knowledge and practical skill. In trade educational programmes, for example, the emphasis is primarily on practical skill, but a certain amount of theoretical understanding and factual knowledge is also necessary. If it is determined that the factual knowledge and the theoretical understanding associated with such a trade educational programme form part of the same body of knowledge as certain higher level educational programmes, then these programmes should have the same field of education. For example, a tool-making programme includes some of the mathematics,
factual knowledge and engineering theory used in mechanical engineering, thus toolmaking and mechanical engineering should have the same field of education (but different levels of attainment). The same applies to electrical trade programmes which are related to higher level programmes in electrical engineering, thus the same field of education. Nursing and caring is classified as 723 and Medicine as 721 , why not in the same detailed field? They are obviously close, but there are differences in content. There is also a strong user interest to be able to differentiate between nurses and doctors, and in some countries the educational level is the same so the differentiation must come through fields.

When the criteria points at different directions, then the border line cases appear. The most obvious example is veterinary studies, should this be associated with medicine or animal husbandry? We have chosen the latter. Another example is Environment science and Environment protection. The first is close to biology and is classified as life science. The second is closer to other protection services and even if it contains subjects related to biology etc., we have classified it under services.

Countries should use the criteria mentioned above when allocating into fields new educational programmes not found in the field descriptions.

Example 1. Educational programmes for intellectually handicapped how to cope with their daily life is classified under '090 Personal skills', because the content in such programmes is development of personal capacity.
Example 2. Cabin crew programmes contain elements of safety, aircraft knowledge, medical assistance and hospitality service etc. Applying the criteria above it was found that such programmes should be classified as ' 840 Transport" and not ' 811 Hotel, restaurant and catering'.

## Appendix 2

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## Appendix 3

## Numerical Code List

010 Basic / broad, general programmes
Basic programmes
Broad, general programmes
General programmes with no special subject emphasis
080 Literacy and numeracy
Basic remedial programmes for adults
Functional literacy
Literacy
Numeracy
Simple literacy
090 Personal skills
Argumentation technique
Assertiveness
Co-operation
Communication skills
Development of behavioural capacities
Development of mental skills
Development of personal organisational capacities
Enhancing personal skills
Family life development training
Job-seeking programmes
Life orientation programmes
Personal career planning
Personal development
Positive thinking
Presentation technique
Public speaking
Self esteem skills
Self-confidence
Social competence
Teamwork
Time management
140 Teacher training and education science (broad programmes)
Education technology
Practical pedagogical courses
Teacher education
Teacher training
142 Education science
Curriculum development (theory)
Didactics
Distance education methodology
Education science

Educational assessment, testing and measurement
Educational evaluation and research
Pedagogical sciences (education)
143 Training for pre-school teachers
Early childhood teaching
Pre-primary teacher training
144 Training for teachers at basic levels
Class teacher training
Elementary teacher education
Home language teacher training
Primary teaching
Special education teaching
145 Training for teachers with specialisation in general subjects
Secondary teaching
Special subject teaching
Teacher training, theoretical subjects
146 Training for teachers of vocational subjects
Driver and safety teacher education
Driving instructor training
Flight instructor training
Nursing teacher training
Physical education teacher training
Post-school teacher training
Teacher training in arts and crafts
Teacher training in commercial subjects
Teacher training in music
Teacher training in nursing
Teacher training in technical subjects
Teacher training, physical training
Teacher training, vocational subjects
Technical teaching
Training of instructors in companies etc.
Training of trainers
Vocational teacher training
210 Arts (broad programmes)
Arts (broad programmes)
Arts and craft (broad programmes)
211 Fine arts
Aesthetics
Art history
Art studies
Art theory
Calligraphy
Drawing (artistic)

Etching (artistic)
Fine art printmaking
History of art
Lithography
Painting (art)
Philosophy of art
Sculpture
Sketching (art)
212 Music and performing arts
Acting and directing
Choreography
Circus
Composition (music)
Conducting (music)
Dance
Directing (theatre)
Drama
Elocution
Fashion modelling
History of music
History of film and theatre
Music
Music and the stage
Performing arts
Theatre
213 Audio-visual techniques and media production
Animation
Binding and finishing (printing)
Bookbinding
Camera operating
Cinematography
Compositing (printing)
Composition equipment operating
Computer graphics
Computer type-setting
Desktop publishing
Discjockey training
Film and TV editing
Film production
Graphic design
Graphic reproduction
Illustration
Lay-out
Media techniques
Multimedia production
Photo developing
Photography
Printing
Printing machining
Publishing design
Radio and TV production
Recorded music production
Screen printing
Silk screen printing
Sound and vision
Sound technique

Type-setting

## 214 Design

Costume design
Design
Design of industrial products (artistic)
Fashion design
Industrial design (artistic)
Interior architecture
Interior decorating
Interior design
Stage designing
Three dimensional design
Window dressing

## 215 Craft skills

Ceramics (craft)
Conservation of cultural material
Craft programmes
Crafts, folk arts and artisanry
Decorative metal crafts
Embroidery (craft)
Fibre, textile and weaving arts
Floristry (flower arranging)
Glass arts and craft
Goldsmithing
Handicrafts
Jewellery design
Jewellery making (craft)
Lapidary and jewellery
Making of musical instruments (not industrial)
Musical instruments (repairing and tuning)
Needle craft
Picture framing
Silversmithing
Stone carving (craft)
Weaving (craft)
Woodcarving
220 Humanities (broad programmes)
Humanities
221 Religion
Religion
Religious history
Religious studies
Sacred books, study of
222 Foreign languages
Interpretation programmes
Languages, dead
Languages, foreign
Linguistics, foreign languages
Second languages
Semantics, foreign languages
Translation programmes
223 Mother tongue
Creative writing
Home language
Language maintenance
Languages, native

Linguistics, native language
Mother tongue programmes
Philology (native language)
Semantics, native language
Sign language
Speech and rhetorical studies (native language)
225 History and archaeology
Archaeology
Comparative literature
Cultural history
History
History and philosophy of science and technology
History of science and ideas
Literature history
Medieval and renaissance studies
Museology
226 Philosophy and ethics
Ethics
Logic
Morals
Philosophy
310 Social and behavioural science
(broad programmes)
Behavioural sciences
Social sciences
311 Psychology
Conversational therapy
Development and child psychology
Psychoanalysis
Psychology
Psychotherapy
312 Sociology and cultural studies
Criminology
Cultural geography
Cultural studies
Demography/population studies
Ethnology
Futurology
Gender studies
Geography (social)
Human geography
Regional cultures
Social anthropology
Social conflict theory
Social geography
Sociology
Women studies
313 Political science and civics
Civics
Human rights
International relations
Peace and conflict studies
Political history
Political science
Politics

## 314 Economics

Econometrics
Economic history
Economics
International economics
Macro economics
National accounts
Political economy
321 Journalism and reporting
Broadcast journalism
Communication, mass- (wording and content)
Information (wording and content)
Journalism
Mass communication (wording and content)
News reporting
Publishing (dissemination of messages)
322 Library, information, archive
Archival sciences
Documentation
Information science
Information searching
Librarianship training
Library programmes
Museum documentation
340 Business and administration
(broad programmes)
Business and administration
Business programmes, broad
Business studies (broad programmes)
Economics, business
341 Wholesale and retail sales
Auctioneering
Buying and selling
Consumer services
Dairy retailing
Demonstration techniques
Property sales
Purchasing
Purchasing, procurement and contracts
Real-estate business
Retailing
Sales representatives
Stock-keeping
Telephone selling
Ware-housing
Wholesaling
342 Marketing and advertising
Advertising
Market research
Marketing
Merchandising
Public relations
Sales and marketing
343 Finance, banking, insurance
Bank teller programmes
Banking and finance

Business finance
Finance theory
Finance, banking, insurance
Financial management
Insurance
Investment analysis
Investments and securities
Pension insurance
Social insurance
Stock-broking
344 Accounting and taxation
Accounting
Auditing
Bookkeeping
Tax accounting
345 Management and administration
Administration
Business administration
Educational management
Employment management
Enterprise training
Human resources management
Local public administration
Logistic management
Management of education
Management science
Management skills
Office management
Organisational theory and behaviour
Performance appraisal
Personnel administration
Personnel management
Public administration
Public and institution management
Quality management
Recruitment
Start your own business-courses
Training management
346 Secretarial and office work
Administrative and secretarial services
Business correspondence
Clerical programmes
Court reporting
Data entry
Foreign language secretary programmes
Information processing/data entry
Keyboard skills
Legal secretary programmes
Management support services
Medical secretary programmes
Office automation
Operation of office machines
Receptionist training
Secretarial programmes
Shorthand
Stenography

Switchboard operating
Typing
347 Working life
Clients' needs
Company knowledge
Industrial relations
Introductory courses at work
Organisation at work
Quality assurance
Trade union courses (general)
Work development
Working life
380 Law
Commercial law
Criminal justice studies
History of law
Jurisprudence
Labour law
Law
Legal practice
Legal studies
Notary/Notary's practise
Para-legal studies
421 Biology and biochemistry
Biochemistry
Biology
Biometrics
Biophysics
Botany
Entomology
Genetics
Life sciences
Limnology
Microbiology
Molecular biology
Ornithology
Parasitology
Pharmacology
Toxicology
Virology
Zoology
422 Environmental science
Ecology
Environmental science
440 Physical science (broad programmes)
Physical programmes (broad programmes)

## 441 Physics

Acoustics
Astronomy
Astrophysics
Nuclear physics
Optics
Physics
Planetary sciences
Space science
442 Chemistry

|  | Analytical chemistry |  | Software for calculating (spreadsheets) |
| :---: | :---: | :---: | :---: |
|  | Chemistry |  | Software for data processing |
|  | Organic chemistry |  | Software for desktop publishing |
|  | Petrology |  | Software for word processing |
|  | Polymer chemistry | 520 | Engineering and engineering trades |
| 443 | Earth science |  | (broad programmes) |
|  | Atmospheric sciences |  | Engineering |
|  | Earth science |  | Engineering industry programmes |
|  | Geodesy |  | Maintenance engineering |
|  | Geography (nature) |  | Materials technology |
|  | Geography (physical) |  | Quality control (technical) |
|  | Geology | 521 | Mechanics and metal work |
|  | Geophysics |  | Bicycle production |
|  | Geoscience |  | Bicycle repair |
|  | Hydrogeology |  | Boilermaking and welding |
|  | Hydrology |  | Gunsmith |
|  | Marine science |  | Hydraulics |
|  | Meteorology |  | Locksmith and safe repairer |
|  | Mineralogy |  | Mechanical engineering |
|  | Ocean life sciences |  | Mechanical trades programmes |
|  | Oceanography |  | Metal casting and patternmaking |
|  | Palaeontology |  | Metal fitting, turning and machining |
|  | Seismology |  | Metal trades programmes |
|  | Vulcanology |  | Metallurgical engineering |
| 461 | Mathematics |  | Metallurgical technology |
|  | Algebra |  | Micromechanics |
|  | Applied mathematics |  | Precision mechanics |
|  | Data analysis (mathematics) |  | Sheetmetal working |
|  | Geometry |  | Steel production |
|  | Mathematics |  | Tool and die making |
|  | Numerical analysis |  | Watchmaking |
|  | Operations research |  | Welding |
| 462 | Statistics | 522 | Electricity and energy |
|  | Actuarial science |  | Air-conditioning programmes |
|  | Mathematical (theoretical) statistics |  | Climate engineering |
|  | Probability theory |  | Electrical appliances repairing |
|  | Statistics, applied |  | Electrical engineering |
|  | Survey design |  | Electrical fitting |
|  | Survey sampling |  | Electrical power generation |
| 481 | Computer science |  | Electrical trades programmes |
|  | Computer programming |  | Energy programmes |
|  | Computer science |  | Energy studies |
|  | Computer system analysis |  | Gas distribution |
|  | Computer system design |  | Heating trades programmes |
|  | Informatics (computer science) |  | Nuclear, hydraulic and thermal energy |
|  | Network administration |  | Power production |
|  | Operating systems |  | Powerline installation and maintenance |
|  | Programming (computer) |  | Refrigeration programmes |
|  | Programming languages (Visual Basic, C++ | 523 | Solar energy |
|  | etc.) Software localisation | 523 | Electronics and automation Automation |
|  | Software testing |  | Broadcasting electronics |
| 482 | Computer use |  | Communication systems |
|  | Computer software use |  | Communications equipment installation |
|  | Computer use |  | Communications equipment maintenance |
|  | Internet use programmes |  | Computer repairing |

Computer engineering
Control engineering
Data processing technology
Digital technology
Electronic data processing
Electronic engineering
Electronic equipment servicing
Network technology
Robotics
Telecommunication technology
Television and radio repairing
524 Chemical and process
Biochemical technologies
Biotechnology engineering
Chemical engineering
Chemical process engineering
Laboratory assistant programmes
Laboratory technician programmes
Laboratory technology
Oil refining
Oil/gas/petrochemicals processing
Plant and machine operation (processing)
Process technology
525 Motor vehicles, ships and aircraft
Aeronautical engineering
Aerospace engineering
Agriculture machinery mechanics
Air-craft engineering
Air-craft maintenance
Automotive electricity
Automotive engineering
Coachwork
Helicopter construction
Marine construction
Maritime engineering
Motorbike mechanics
Motorcycle engineering
Naval engineering
Panel beating
Shipbuilding
Varnishers/sprayers
Vehicle and motor engineering
Vehicle building
Vehicle diagnostics
Vehicle electricity
Vehicle mechanics
Vehicle painting
Vehicle repairing
Vehicle trimming
540 Manufacturing and processing (broad programmes
Manufacturing and processing (broad programmes)
541 Food processing
Baking
Beer brewing

Brewing
Butchering
Cheese production
Confectionery
Dairy foods (industrial)
Dairy science
Distilling
Food and drink processing
Food handling/hygiene
Food preparation
Food preservation
Food processing industry
Food programmes
Food science
Food science and technology
Food technique
Industrial bakery/flour production
Meat processing
Pastry cooking
Tobacco processing
Wine production
Wine science
Wine storing/maturing
542 Textiles, clothes, footwear, leather
Clothing industry
Clothing trades programmes
Clothing, apparel and textile working
Custom tailoring
Cutting and tailoring
Dressmaking
Embroidery and needlework (industrial)
Footwear making
Fur making
Furrier
Garment production
Knitting (industrial)
Leather goods maker
Leather goods production
Leather processing
Leather trades programmes
Pelt worker
Saddlery
Sewing (industrial)
Shoe production
Shoe, boot and leather repairing
Shoemaking
Skins and leather production
Soft furnishings
Spinning
Tailoring
Textile technique
Textile trades programmes
Textiles, clothing and footwear
Upholstery
Weaving (industrial)
Wool science

543 Materials (wood, paper, plastic, glass)
Boat building (non-motor)
Cabinet making
Cane willow and bamboo work
Carpentry (not building)
Ceramics (industrial)
Furniture crafts
Furniture making
Glass production
Glass working (industrial)
Industrial diamond production
Paper manufacturing and processing
Plastic manufacturing
Rubber processing
Stone cutting
Synthetic fibre manufacturing
Timber technology
Wood machining and turning
Wood technology
Woodwork trades programmes
Woodworking and carpentry

## 544 Mining and extraction

Coal mining
Mineral technology
Mining engineering
Mining technology
Oil and gas extraction
Quarry supervision
Raw material extraction
581 Architecture and town planning
Architectural urban design and planning
Architecture
Building design
Cartography/Land surveying
City planning
Community development
Community planning
Landscape architecture
Rural development
Structural architecture
Surveying
Topography
Town and country planning
Town and regional planning
Town planning
Urban planning
Urban studies
582 Building and civil engineering
Bricklaying
Brickwork and masonry
Bridge construction
Building construction
Building engineering
Building maintenance
Building renovation
Building technology

Carpentry and joinery (building)
Cement working
Civil engineering
Constructing plant operation
Construction technology
Constructional engineering
Constructional metalwork (building)
Demolition
Dock and harbour engineering
Drawing, technical
Excavation engineering
Floor and wall tiling
Floor covering
Glazing
Insulation
Irrigation and drainage (construction)
Joining and carpentry
Mason and tile setting
Masonry
Painting and wall covering
Pipe fitting
Plastering (building)
Plumbing
Quantity surveying
Road building
Roof fixing
Sanitation (building)
Scaffolding work
Stonemasonry
Structural engineering
Technical drawing
Water supply and sewerage engineering
Water technology and engineering
Ventilation (building)
620 Agriculture, forestry and fishery (broad programmes)
Agriculture, forestry and fishery (broad programmes)
621 Crop and livestock production
Agricultural business/agribusiness operations
Agricultural economics
Agricultural sciences
Agriculture
Agronomy and crop science
Animal breeding
Animal husbandry
Animal training
Basic skills in agriculture
Crop husbandry
Dog breeding
Farm and ranch management
Farm maintenance
Farming
Fruit growing
Fruit production
Goose keeping

Grain growing
Horse breeding
Horse husbandry
Irrigation techniques
Olive growing
Orchards construction
Pig farming
Poultry husbandry
Race horse care
Rye and wheat growing
Sheep farming
Soil and water technician programmes
Soil fertility
Soil science
Vegetable plantation
Wine growing
Vineyard construction
Viticulture
622 Horticulture
Floriculture
Gardening
Greenhouse operations
Greenkeeping
Horticultural technique
Horticulture
Landscape gardening
Maintaining sports turf
Nursery management (horticulture)
Production of ornamental plants
Sports grounds maintenance
Turf cultivation
Turf management
623 Forestry
Forest keeping
Forest product techniques
Forest ranging
Forestry
Hunting and trapping
624 Fisheries
Deep sea fishing
Fish breeding
Fish farms
Fish husbandry
Fishery
Fishery science and technology
Mariculture
Shellfish breeding
640 Veterinary
Animal health care
Animal reproduction (science)
Veterinary assisting
Veterinary medicine
Veterinary science
720 Health (broad programmes)
Health (broad programmes)
Public health programmes

## 721 Medicine

Anaesthesiology
Anatomy
Audiology/hearing sciences
Bacteriology
Cardiology
Cytology
Dermatology
Epidemiology
Forensic medicine
General medicine
Gerontology
Gynaecology
Haematology
Histology
Homeopathic medicine
Immunology
Internal medicine
Medical science
Medical training
Medicine
Naturopathic medicine
Neurology
Obstetrics and gynaecology
Oncology
Ophthalmic
Ophthalmology
Paediatrics
Pathology
Physiology
Plastic surgery
Preventive and social medicine
Psychiatry
Stomatology
Surgery
Training of doctors
Training of physicians
723 Nursing and caring
Assistant nursing
Basic nursing
Care of old people
Care of the disabled
Community nursing
Elder care
Gerontological services
Health care programmes
Hygiene, medical
Infant hygiene (nursing)
Midwifery
Mothercraft nursing
Nursing
Nursing aide/Orderly
Psychiatric nursing
724 Dental studies
Clinical dentistry
Dental assisting

Dental hygiene
Dental laboratory technology
Dental nursing
Dental science
Dental surgery
Dental technology
Dentistry
Odontology
Orthodontics
725 Medical diagnostic and treatment technology
Ambulance service
Ambulance technology
Auditory prosthetics
Emergency para-medical technologies
Forensic medicine technology
Hearing aid technology
Medical laboratory technology
Medical technology
Nuclear medicine technologies
Optical lens making
Optical prosthetics/lenses
Optical technology
Orthopaedic prosthetics
Prosthetic technology
Radiography
Radiology technology
Radiotherapy
X-ray technology (medical)
726 Therapy and rehabilitation
Chiropractic
Dietician programmes
Massage (medical)
Mental health services
Nutrition/dietetics
Nutrition and dietetics
Occupational therapy
Optometry
Osteopathy
Physiotherapy
Reflexology
Rehabilitation
Speech pathology and therapy
Vocational rehabilitation
727 Pharmacy
Dispensing pharmacy
Pharmacy
761 Child care and youth services
Child care
Children recreation programmes
Youth recreation programmes
Youth services
Youth worker programmes
762 Social work and counselling
Alcohol and drug abuse counselling
Alcohol, tobacco, drugs (knowledge about)
Career advising

Counselling
Crisis support
Family and marriage counselling
Maltreatment (knowledge about)
Mobbing (knowledge about)
Social care
Social policy
Social practice
Social theory (applied)
Social work (welfare)
Vocational counselling
Vocational guidance
810 Personal services (broad programmes)
Personal services (broad programmes)
811 Hotel, restaurant and catering
Bar service
Bartender/mixologist
Catering
Cooking (restaurant and hotel-type)
Culinary arts
Food and hospitality services
Food serving
Hospitality services
Hotel receptionist training
Hotel services
Hotel- and restaurant programmes
Hotel/motel and restaurant services
Waiting and bar service
812 Travel, tourism and leisure
Ground crew training (airport)
Guiding, tour leading
Leisure and tourism
Recreation and leisure
Recreation management
Tourism
Tourist trades programmes
Travel agency services
Travel and tourism
Travel services

## 813 Sports

Bookmaking (horses etc)
Diving (sport)
Football playing
Gymnastics
Jockeying
Physical training (sports)
Sport leadership
Sport trainer training
Sports
Sports coaching
Sports instructor training
Umpires and other sports officials
814 Domestic services
Caretaking, housekeeping, homeservice
Chimney sweeping
Cleaning


Military science
National security
War theory

## Appendix 4

## Alphabetic Code List

## A

344 Accounting
441 Acoustics
212 Acting and directing
462 Actuarial science
345 Administration
346 Administrative and secretarial services
342 Advertising
525 Aeronautical engineering
525 Aerospace engineering
211 Aesthetics
621 Agricultural business/agribusiness operations
621 Agricultural economics
621 Agricultural sciences
621 Agriculture
525 Agriculture machinery mechanics
621 Agronomy and crop science
840 Air crew programmes (flying and navigation)
851 Air pollution control
840 Air traffic control
522 Air-conditioning programmes
525 Air-craft engineering
525 Air-craft maintenance
840 Aircraft operation
762 Alcohol and drug abuse counselling
762 Alcohol, tobacco, drugs (knowledge about)
461 Algebra
725 Ambulance service
725 Ambulance technology
721 Anaesthesiology
442 Analytical chemistry
721 Anatomy
621 Animal breeding
640 Animal health care
621 Animal husbandry
640 Animal reproduction (science)
621 Animal training
213 Animation
461 Applied mathematics
225 Archaeology
581 Architectural urban design and planning
581 Architecture
322 Archival sciences
090 Argumentation technique
863 Army training
211 Art history
211 Art studies
211 Art theory

210 Arts (broad programmes)
210 Arts and craft (broad programmes)
090 Assertiveness
723 Assistant nursing
441 Astronomy
441 Astrophysics
443 Atmospheric sciences
341 Auctioneering
721 Audiology/hearing sciences
344 Auditing
725 Auditory prosthetics
523 Automation
525 Automotive electricity
525 Automotive engineering
840 Aviation

## B

721 Bacteriology
541 Baking
343 Bank teller programmes
343 Banking and finance
811 Bar service
815 Barbering
811 Bartender/mixologist
723 Basic nursing
010 Basic programmes
080 Basic remedial programmes for adults
621 Basic skills in agriculture
815 Beauty therapy
541 Beer brewing
310 Behavioural sciences
521 Bicycle production
521 Bicycle repair
213 Binding and finishing (printing)
524 Biochemical technologies
421 Biochemistry
421 Biology
421 Biometrics
421 Biophysics
524 Biotechnology engineering
543 Boat building (non-motor)
521 Boilermaking and welding
213 Bookbinding
344 Bookkeeping
813 Bookmaking (horses etc)
421 Botany
541 Brewing
582 Bricklaying

582 Brickwork and masonry
582 Bridge construction
010 Broad, general programmes
321 Broadcast journalism
523 Broadcasting electronics
582 Building construction
581 Building design
582 Building engineering
582 Building maintenance
582 Building renovation
582 Building technology
840 Bus and coach driving
345 Business administration
340 Business and administration (broad programmes)
346 Business correspondence
343 Business finance
340 Business programmes, broad
340 Business studies (broad programmes)
541 Butchering
341 Buying and selling

## C

840 Cabin crew training
543 Cabinet making
211 Calligraphy
213 Camera operating
543 Cane willow and bamboo work
721 Cardiology
723 Care of old people
723 Care of the disabled
762 Career advising
814 Caretaking, housekeeping, homeservice
543 Carpentry (not building)
582 Carpentry and joinery (building)
581 Cartography/Land surveying
811 Catering
582 Cement working
215 Ceramics (craft)
543 Ceramics (industrial)
541 Cheese production
524 Chemical engineering
524 Chemical process engineering
442 Chemistry
761 Child care
761 Children recreation programmes
814 Chimney sweeping
726 Chiropractic
212 Choreography
213 Cinematography
212 Circus
581 City planning
313 Civics
582 Civil engineering
861 Civil security
144 Class teacher training
814 Cleaning

346 Clerical programmes
347 Clients' needs
522 Climate engineering
724 Clinical dentistry
542 Clothing industry
542 Clothing trades programmes
542 Clothing, apparel and textile working
090 Co-operation
525 Coachwork
544 Coal mining
380 Commercial law
840 Communication (air, railway, road etc.)
090 Communication skills
523 Communication systems
321 Communication, mass- (wording and content)
523 Communications equipment installation
523 Communications equipment maintenance
581 Community development
723 Community nursing
581 Community planning
347 Company knowledge
225 Comparative literature
213 Compositing (printing)
212 Composition (music)
213 Composition equipment operating
523 Computer repairing
523 Computer engineering
213 Computer graphics
481 Computer programming
481 Computer science
482 Computer software use
481 Computer system analysis
481 Computer system design
213 Computer type-setting
482 Computer use
212 Conducting (music)
541 Confectionery
852 Conservation and land management
215 Conservation of cultural material
582 Constructing plant operation
582 Construction technolgy
582 Constructional engineering
582 Constructional metalwork (building)
814 Consumer economics
341 Consumer services
523 Control engineering
814 Cooking (home)
811 Cooking (restaurant and hotel-type)
815 Cosmetic services
815 Cosmetology
214 Costume design
762 Counselling
346 Court reporting
215 Craft programmes
215 Crafts, folk arts and artisanry
840 Crane driving

223 Creative writing
380 Criminal justice studies
312 Criminology
762 Crisis support
621 Crop husbandry
811 Culinary arts
312 Cultural geography
225 Cultural history
312 Cultural studies
142 Curriculum development (theory)
814 Custodian/caretaker
542 Custom tailoring
861 Customs programmes
542 Cutting and tailoring
721 Cytology

## D

541 Dairy foods (industrial)
341 Dairy retailing
541 Dairy science
212 Dance
461 Data analysis (mathematics)
346 Data entry
523 Data processing technology
215 Decorative metal crafts
624 Deep sea fishing
863 Defence studies
312 Demography/population studies
582 Demolition
341 Demonstration techniques
724 Dental assisting
724 Dental hygiene
724 Dental laboratory technology
724 Dental nursing
724 Dental science
724 Dental surgery
724 Dental technology
724 Dentistry
721 Dermatology
214 Design
214 Design of industrial products (artistic)
213 Desktop publishing
311 Development and child psychology
090 Development of behavioural capacities
090 Development of mental skills
090 Development of personal organisational capacities
142 Didactics
726 Dietician programmes
523 Digital technology
212 Directing (theatre)
213 Discjockey training
727 Dispensing pharmacy
142 Distance education methodology
541 Distilling
861 Diving (professional)

813 Diving (sport)
582 Dock and harbour engineering
322 Documentation
621 Dog breeding
814 Domestic science
212 Drama
211 Drawing (artistic)
582 Drawing, technical
542 Dressmaking
146 Driver and safety teacher education
146 Driving instructor training
840 Driving programmes
814 Dry-cleaning

## E

143 Early childhood teaching
443 Earth science
851 Ecological technology
422 Ecology
314 Econometrics
314 Economic history
314 Economics
340 Economics, business
142 Education science
140 Education technology
142 Educational assessment, testing and measurement
142 Educational evaluation and research
345 Educational management
723 Elder care
522 Electrical appliances repairing
522 Electrical engineering
522 Electrical fitting
522 Electrical power generation
522 Electrical trades programmes
523 Electronic data processing
523 Electronic engineering
523 Electronic equipment servicing
144 Elementary teacher education
212 Elocution
215 Embroidery (craft)
542 Embroidery and needlework (industrial)
725 Emergency para-medical technologies
345 Employment management
522 Energy programmes
522 Energy studies
520 Engineering (broad programmes)
520 Engineering industry programmes
500 Engineering physics
090 Enhancing personal skills
345 Enterprise training
421 Entomology
850 Environmental conservation
851 Environmental control
850 Environmental protection
851 Environmental protection technology
422 Environmental science

850 Environmental studies
721 Epidemiology
862 Ergonomics (occupational health and safety)
211 Etching (artistic)
226 Ethics
312 Ethnology
582 Excavation engineering

## F

762 Family and marriage counselling
090 Family life development training
621 Farm and ranch management
621 Farm maintenance
621 Farming
214 Fashion design
212 Fashion modelling
215 Fibre, textile and weaving arts
213 Film production
213 Film and TV editing
343 Finance theory
343 Finance, banking, insurance
343 Financial management
211 Fine art printmaking
861 Fire technology
861 Fire-protection (fire fighting)
624 Fish breeding
624 Fish farms
624 Fish husbandry
624 Fishery
624 Fishery science and technology
815 Fitness and weight control
815 Fitness services
146 Flight instructor training
582 Floor and wall tiling
582 Floor covering
622 Floriculture
215 Floristry (flower arranging)
840 Flying and navigation
541 Food and drink processing
811 Food and hospitality services
541 Food handling/hygiene
541 Food preparation
541 Food preservation
541 Food processing industry
541 Food programmes
541 Food science
541 Food science and technology
811 Food serving
541 Food technique
813 Football playing
542 Footwear making
346 Foreign language secretary programmes
721 Forensic medicine
725 Forensic medicine technology
623 Forest keeping
623 Forest product techniques

623 Forest ranging
623 Forestry
840 Fork-lift driving
621 Fruit growing
621 Fruit production
080 Functional literacy
814 Funeral services and mortuary science
542 Fur making
543 Furniture crafts
543 Furniture making
542 Furrier
312 Futurology

## G

853 Garbage disposal
622 Gardening
542 Garment production
522 Gas distribution
312 Gender studies
721 General medicine
010 General programmes with no special subject emphasis
421 Genetics
443 Geodesy
312 Geography (social)
443 Geography (nature)
443 Geography (physical)
443 Geology
461 Geometry
443 Geophysics
443 Geoscience
723 Gerontological services
721 Gerontology
215 Glass arts and craft
543 Glass production
543 Glass working (industrial)
582 Glazing
215 Goldsmithing
621 Goose keeping
621 Grain growing
213 Graphic design
213 Graphic reproduction
622 Greenhouse operations
622 Greenkeeping
812 Ground crew training (airport)
812 Guiding, tour leading
521 Gunsmith
813 Gymnastics
721 Gynaecology

## H

721 Haematology
815 Hairdressing
215 Handicrafts
720 Health (broad programmes)

862 Health and safety in the work place
723 Health care programmes
725 Hearing aid technology
522 Heating trades programmes
525 Helicopter construction
721 Histology
225 History
225 History and philosophy of science and technology
211 History of art
212 History of film and theatre
380 History of law
212 History of music
225 History of science and ideas
814 Home economics
223 Home language
144 Home language teacher training
721 Homeopathic medicine
621 Horse breeding
621 Horse husbandry
622 Horticultural technique
622 Horticulture
811 Hospitality services
811 Hotel receptionist training
811 Hotel services
811 Hotel- and restaurant programmes
$811 \mathrm{Hotel} /$ motel and restaurant services
345 Human resources management
312 Human geography
313 Human rights
220 Humanities (broad programmes)
623 Hunting and trapping
521 Hydraulics
443 Hydrogeology
443 Hydrology
853 Hygiene, community
723 Hygiene, medical
853 Hygienic standards

## I

213 Illustration
721 Immunology
541 Industrial bakery/flour production
214 Industrial design (artistic)
543 Industrial diamond production
851 Industrial discharge control
347 Industrial relations
862 Industrial welfare
723 Infant hygiene (nursing)
481 Informatics (computer science)
321 Information (wording and content)
346 Information processing/data entry
322 Information science
322 Information searching
582 Insulation
343 Insurance
214 Interior architecture

214 Interior decorating
214 Interior design
721 Internal medicine
314 International economics
313 International relations
482 Internet use programmes
222 Interpretation programmes
347 Introductory courses at work
343 Investment analysis
343 Investments and securities
582 Irrigation and drainage (construction)
621 Irrigation techniques

## $J$

215 Jewellery design
215 Jewellery making (craft)
862 Job safety
090 Job-seeking programmes
813 Jockeying
582 Joining and carpentry
321 Journalism
380 Jurisprudence

K
346 Keyboard skills
542 Knitting (industrial)

## $L$

524 Laboratory assistant programmes
524 Laboratory technician programmes
524 Laboratory technology
380 Labour law
862 Labour protection
862 Labour security
862 Labour welfare (safety)
581 Landscape architecture
622 Landscape gardening
223 Language maintenance
222 Languages, dead
222 Languages, foreign
223 Languages, native
215 Lapidary and jewellery
814 Laundry
380 Law
861 Law enforcement
213 Lay-out
542 Leather goods maker
542 Leather goods production
542 Leather processing
542 Leather trades programmes
380 Legal practice
346 Legal secretary programmes
380 Legal studies
812 Leisure and tourism

322 Librarianship training
322 Library programmes
861 Life guarding
090 Life orientation programmes
421 Life sciences
421 Limnology
222 Linguistics, foreign languages
223 Linguistics, native language
080 Literacy
225 Literature history
211 Lithography
345 Local public administration
521 Locksmith and safe repairer
226 Logic
345 Logistic management

## M

314 Macro economics
840 Mail operations
622 Maintaining sports turf
520 Maintenance engineering (broad programmes)
815 Make-up
215 Making of musical instruments (not industrial)
345 Management of education
345 Management science
345 Management skills
346 Management support services
815 Manicure
624 Mariculture
525 Marine construction
443 Marine science
525 Maritime engineering
342 Market research
342 Marketing
582 Mason and tile setting
582 Masonry
321 Mass communication (wording and content)
815 Massage (beauty)
726 Massage (medical)
520 Materials technology
462 Mathematical (theoretical) statistics
461 Mathematics
541 Meat processing
521 Mechanical engineering
521 Mechanical trades programmes
213 Media techniques
725 Medical laboratory technology
721 Medical science
346 Medical secretary programmes
725 Medical technology
721 Medical training
721 Medicine
225 Medieval and renaissance studies
726 Mental health services
342 Merchandising
521 Metal casting and patternmaking

521 Metal fitting, turning and machining
521 Metal trades programmes
521 Metallurgical engineering
521 Metallurgical technology
443 Meteorology
421 Microbiology
521 Micromechanics
723 Midwifery
863 Military science
544 Mineral technology
443 Mineralogy
544 Mining engineering
544 Mining technology
762 Mobbing and maltreatment
421 Molecular biology
226 Morals
223 Mother tongue programmes
723 Mothercraft nursing
525 Motorbike mechanics
525 Motorcycle engineering
213 Multimedia production
225 Museology
322 Museum documentation
212 Music
212 Music and the stage
215 Musical instruments (repairing and tuning)

## $N$

314 National accounts
852 National parks and wildlife management
863 National security
850 Natural resource use programmes
850 Natural resources conservation
852 Nature conservation
721 Naturopathic medicine
840 Nautical science
525 Naval engineering
840 Navigation technologies
215 Needle craft
814 Needlework (home)
481 Network administration
523 Network technology
721 Neurology
321 News reporting
851 Noise pollution control
380 Notary/Notary's practise
725 Nuclear medicine technologies
441 Nuclear physics
522 Nuclear, hydraulic and thermal energy
080 Numeracy
461 Numerical analysis
622 Nursery management (horticulture)
723 Nursing
723 Nursing aide/Orderly
146 Nursing teacher training
726 Nutrition/dietetics

421 Nutrition science
726 Nutrition and dietetics

## 0

721 Obstetrics and gynaecology
862 Occupational health and industrial hygiene
862 Occupational health and safety
726 Occupational therapy
443 Ocean life sciences
443 Oceanography
724 Odontology
346 Office automation
345 Office management
544 Oil and gas extraction
524 Oil refining
524 Oil/gas/petrochemicals processing
621 Olive growing
721 Oncology
481 Operating systems
346 Operation of office machines
461 Operations research
721 Ophthalmics
721 Ophthalmology
725 Optical lens making
725 Optical prosthetics/lenses
725 Optical technology
441 Optics
726 Optometry
621 Orchards construction
442 Organic chemistry
347 Organisation at work
345 Organisational theory and behaviour
421 Ornithology
724 Orthodontics
725 Orthopaedic prosthetics
726 Osteopathy

## P

721 Paediatrics
211 Painting (art)
582 Painting and wall covering
443 Palaeontology
525 Panel beating
543 Paper manufacturing and processing
380 Para-legal studies
421 Parasitology
541 Pastry cooking
721 Pathology
313 Peace and conflict studies
142 Pedagogical sciences (education)
815 Pedicure
542 Pelt worker
343 Pension insurance
345 Performance appraisal
212 Performing arts

090 Personal career planning
090 Personal development
345 Personnel administration
345 Personnel management
442 Petrology
421 Pharmacology
727 Pharmacy
223 Philology (native language)
226 Philosophy
211 Philosophy of art
213 Photo developing
213 Photography
146 Physical education teacher training
813 Physical training (sports)
441 Physics
721 Physiology
726 Physiotherapy
215 Picture framing
621 Pig farming
582 Pipe fitting
441 Planetary sciences
524 Plant and machine operation (processing)
582 Plastering (building)
543 Plastic manufacturing
721 Plastic surgery
582 Plumbing
861 Police work
861 Policing studies
314 Political economy
313 Political history
313 Political science
313 Politics
442 Polymer chemistry
090 Positive thinking
146 Post-school teacher training
840 Postal service
621 Poultry husbandry
522 Power production
522 Powerline installation and maintenance
140 Practical pedagogical courses
143 Pre-primary teacher training
521 Precision mechanics
090 Presentation technique
721 Preventive and social medicine
144 Primary teaching
213 Printing
213 Printing machining
861 Prison work
462 Probability theory
524 Process technology
622 Production of ornamental plants
481 Programming (computer)
481 Programming languages (Visual Basic, C++ etc.)
341 Property sales
725 Prosthetic technology
723 Psychiatric nursing

721 Psychiatry
311 Psychoanalysis
311 Psychology
311 Psychotherapy
345 Public administration
345 Public and institution management
720 Public health programmes
342 Public relations
861 Public security
090 Public speaking
321 Publishing (dissemination of messages)
213 Publishing design
341 Purchasing
341 Purchasing, procurement and contracts

## Q

347 Quality assurance
520 Quality control (technical)
345 Quality management
582 Quantity surveying
544 Quarry supervision

## R

621 Race horse care
213 Radio and TV production
725 Radiography
725 Radiology technology
725 Radiotherapy
840 Railway operations
544 Raw material extraction
341 Real-estate business
346 Receptionist training
213 Recorded music production
812 Recreation and leisure
812 Recreation management
345 Recruitment
851 Recycling
726 Reflexology
522 Refrigeration programmes
853 Refuse collection
853 Refuse/sewage disposal
312 Regional cultures
726 Rehabilitation
221 Religion
221 Religious history
221 Religious studies
341 Retailing
582 Road building
840 Road motor vehicle operations
523 Robotics
582 Roof fixing
543 Rubber processing
581 Rural development
621 Rye and wheat growing

## $S$

221 Sacred books, study of
542 Saddlery
342 Sales and marketing
341 Sales representatives
815 Salon services (beauty therapy)
582 Sanitation (building)
853 Sanitation, community
582 Scaffolding work
211 Sketching (art)
213 Screen printing
211 Sculpture
840 Seamanship
840 Seamen's programmes
222 Second languages
145 Secondary teaching
346 Secretarial programmes
861 Security and loss prevention services
861 Security guarding
443 Seismology
090 Self esteem skills
090 Self-confidence
222 Semantics, foreign languages
223 Semantics, native language
814 Sewing (home)
542 Sewing (industrial)
621 Sheep farming
521 Sheetmetal working
624 Shellfish breeding
840 Ship operation
525 Shipbuilding
542 Shoe production
542 Shoe, boot and leather repairing
542 Shoemaking
346 Shorthand
223 Sign language
213 Silk screen printing
215 Silversmithing
080 Simple literacy
542 Skins and leather production
312 Social anthropology
762 Social care
090 Social competence
312 Social conflict theory
312 Social geography
343 Social insurance
762 Social policy
762 Social practice
310 Social sciences
762 Social theory (applied)
762 Social work (welfare)
312 Sociology
542 Soft furnishings
482 Software for calculating (spreadsheets)
482 Software for data processing
482 Software for desktop publishing

482 Software for word processing
481 Software localisation
481 Software testing
850 Soil and water conservation
621 Soil and water technician programmes
621 Soil fertility
621 Soil science
522 Solar energy
213 Sound and vision
213 Sound technique
441 Space science
144 Special education teaching
145 Special subject teaching
223 Speech and rhetorical studies (native language)
726 Speech pathology and therapy
542 Spinning
813 Sport leadership
813 Sport trainer training
813 Sports
813 Sports coaching
622 Sports grounds maintenance
813 Sports instructor training
214 Stage designing
345 Start your own business-courses
462 Statistics
521 Steel production
346 Stenography
840 Stewardess/steward training (air)
343 Stock-broking
341 Stock-keeping
721 Stomatology
215 Stone carving (craft)
543 Stone cutting
582 Stonemasonry
853 Street cleaning
862 Stress at work
581 Structural architecture
582 Structural engineering
721 Surgery
462 Survey design
462 Survey sampling
581 Surveying
346 Switchboard operating
543 Synthetic fibre manufacturing

## $T$

542 Tailoring
344 Tax accounting
140 Teacher education
140 Teacher training
146 Teacher training in arts and crafts
146 Teacher training in commercial subjects
146 Teacher training in music
146 Teacher training in nursing
146 Teacher training in technical subjects
145 Teacher training, theoretical subjects

146 Teacher training, physical training
146 Teacher training, vocational subjects
090 Teamwork
582 Technical drawing
146 Technical teaching
500 Technology
523 Telecommunication technology
341 Telephone selling
523 Television and radio repairing
542 Textile technique
542 Textile trades programmes
542 Textiles, clothing and footwear
212 Theatre
214 Three dimensional design
543 Timber technology
090 Time management
541 Tobacco processing
521 Tool and die making
581 Topography
812 Tourism
812 Tourist trades programmes
581 Town and country planning
581 Town and regional planning
581 Town planning
421 Toxicology
347 Trade union courses (general)
345 Training management
721 Training of doctors
146 Training of instructors in companies etc.
721 Training of physicians
146 Training of trainers
222 Translation programmes
840 Transport programmes
812 Travel agency services
812 Travel and tourism
812 Travel services
840 Truck driving
622 Turf cultivation
622 Turf management
213 Type-setting
346 Typing

## U

813 Umpires and other sports officials
542 Upholstery
581 Urban planning
581 Urban studies

## $V$

525 Varnishers/sprayers
621 Vegetable plantation
525 Vehicle and motor engineering
525 Vehicle building
525 Vehicle diagnostics
525 Vehicle electricity

525 Vehicle mechanics
525 Vehicle painting
525 Vehicle repairing
525 Vehicle trimming
582 Ventilation (building)
640 Veterinary assisting
640 Veterinary medicine
640 Veterinary science
621 Vineyard construction
421 Virology
621 Viticulture
762 Vocational counselling
762 Vocational guidance
726 Vocational rehabilitation
146 Vocational teacher training
443 Vulcanology

## W

811 Waiting and bar service
863 War theory
341 Ware-housing
521 Watchmaking
851 Water pollution control
853 Water supply (service)
582 Water supply and sewerage engineering
582 Water technology and engineering
215 Weaving (craft)
542 Weaving (industrial)
521 Welding
341 Wholesaling
815 Wig making
852 Wildlife management
852 Wildlife ranger studies
214 Window dressing
621 Wine growing
541 Wine production
541 Wine science
541 Wine storing/maturing
312 Women studies
543 Wood machining and turning
543 Wood technology
215 Woodcarving
543 Woodwork trades programmes
543 Woodworking and carpentry
542 Wool science
347 Work development
862 Work environment
347 Working life

## $X$

725 X-ray technology (medical)

## $Y$

761 Youth recreation programmes

761 Youth services
761 Youth worker programmes

## $Z$

421 Zoology


[^0]:    ${ }^{1}$ A few small changes compared to ISCED 97 in the names of the fields of education has been made in order to try to clarify the content of these fields.
    ${ }^{2}$ CEDEFOP $=$ European Centre for the Development of Vocational Training. EUROSTAT $=$ Statistical office of the European Communities

[^1]:    ${ }^{3}$ Note that Engineering is a much broader concept than Engineer, who works as a professional in Engineering, but many other categories also work in this field and there is no level difference intended between field 52 and 54.

[^2]:    ${ }^{4}$ 'General' in this context refers to 'general' as opposed to 'specialised', and has not the explicit meaning of 'general' as opposed to 'vocational' .
    ${ }^{5}$ This field (and the other fields within brackets) is used in the EUROSTAT and CEDEFOP 'Fields of training' classification system for vocational education and training. Its' sub-division used in the present classification is shown within in the brackets.

[^3]:    ${ }^{6}$ This is applicable only for the fields of education (two-digit fields) that are divided into three or more fields of education and training, and is expected to be used especially under 34 'Business and administration' and 52 'Engineering and engineering trades'

[^4]:    ${ }^{7}$ In the Fields of Training manual both ' 9 ' and ' 0 ' are allowed in the second position. This means that exceptionally a ' 0 ' or a ' 9 ' may be allowed in the second position. The decision depends on the needs of each data collection and should be clearly indicated in the relevant implementation instructions. For example, in the UOE data collection a ' 0 ' or a ' 9 ' in the second position is not allowed.

[^5]:    Basic programmes
    Broad, general programmes
    General programmes with no special subject emphasis

[^6]:    ${ }^{8}$ In some cases it may be difficult to differentiate between field 145 and 146, but it should be pointed out that it is the subject the teacher is trained to teach which decide the field, not the type of school (all subjects in vocational programmes are not vocational subjects).

[^7]:    Bank teller programmes
    Banking and finance
    Finance theory
    Insurance
    Investment analysis
    Investments and securities

[^8]:    Administrative and secretarial services
    Clerical programmes
    Data entry
    Foreign language secretary programmes

[^9]:    ${ }^{9}$ Environmental science is in Fields of training classified together with Environmental protection under field 850, while in this classification Environmental science/Ecology is classified under Life science under field 422. The reason being that this is considered a more correct classification according to the criteria used.

[^10]:    Baking
    Beer brewing
    Butchering
    Confectionery
    Dairy foods
    Food and drink processing
    Food preservation
    Food science and technology
    Meat processing

