

# The Dutch Standard Classification of Education, SOI 2006

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## Explanation of symbols

.	= data not available
*	= provisional figure
x	= publication prohibited (confidential figure)
–	= nil or less than half of unit concerned
–	= (between two figures) inclusive
0 (0,0)	= less than half of unit concerned
blank	= not applicable
2005-2006	= 2005 to 2006 inclusive
2005/2006	= average of 2005 up to and including 2006
2005/'06	= crop year, financial year, school year etc. beginning in 2005 and ending in 2006
2003/'04–2005/'06	= crop year, financial year, etc. 2003/'04 to 2005/'06 inclusive

Due to rounding, some totals may not correspond with the sum of the separate figures.

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# THE DUTCH STANDARD CLASSIFICATION OF EDUCATION, SOI 2006

## *Summary*

The Dutch standard classification of education was introduced by Statistics Netherlands in 1978. This classification covers all types of programmes by level and field of study and is used for survey coding, statistics or registration. Each programme is assigned an identity code, which facilitates ordering of programmes according to other classifications, such as the ISCED 1997.

## **1. History of the Dutch standard classification of education**

The Dutch standard classification of education, called SOI (short for *Standaard OnderwijsIndeling*), was introduced by Statistics Netherlands in 1978. It was the first Dutch classification to cover all types of education and training programmes by level and field of study. The classification by level was based on the International Standard Classification of Education (ISCED 1976) and fitted the national education system of the Netherlands. The classification by field of study differed from ISCED.

The companion list of education programmes classified according to SOI has been updated yearly since 1997.

Within Statistics Netherlands, the SOI is mainly used to classify the the population by level and field of education (enrolment and attainment) in surveys and very recently in registers. Though designed for usage by Statistics Netherlands, the SOI is widely used by other institutions both in surveys and in registrations of staff, vacancies and job seekers. The SOI also serves as a criterion for Statistics Netherlands' standard classification of occupations: level and sector of an occupation are in most cases based on the level and the field of study of the most appropriate programme in terms of the SOI.

## *Revisions of SOI*

The level classification was revised in 1998 and 2003, the field classification in 2006. The 1998 revision comprised the division of level 4 *education at the second level, second stage* into three sub-levels. There were a number of reasons for this

modification. The number of programmes at this level had dramatically increased, the programmes at this level showed a substantial disparity in duration and, moreover, the proportion of the labour force that scored level 4 in terms of educational attainment had risen to almost 50%. In other words, level 4 had lost the required discriminatory power. Last but not least, the impact of a radical reform of the national system of vocational education and training affecting level 4 and the top end of level 3 made revision inevitable.

The second revision in 2003 concerned the adjoining levels 3 and 5. Level 3 *education at the second level, first stage* was revised because of the introduction of lower secondary pre-vocational education featuring 4 different programme types, which were allocated to the intermediate and highest sublevel within level 3. The lowest sublevel was reserved for programmes requiring basic education as entry level, but not giving access to level 4 programmes.

At the same time, level 5 *education at the third level, first stage* was broken down into 3 sublevels with the introduction of the bachelor-master structure and the associate degree in higher education. The associate degree was ranked in the lowest sublevel, the intermediate and highest sublevels were designed for non-university and university bachelor programmes respectively. Master programmes were ranged with the traditional “one cycle” university programmes in level 6.

The most recent revision of 2006 involved the classification of educational fields, which had remained virtually unchanged since its introduction in 1978. A gradual shift of emphasis towards programmes in information sciences, media and communication, management, logistics, leisure, and environmental studies and a steady increase in the number of multidisciplinary programmes emphasised the urgency of a revision. A growing number of programmes proved hard to fit into the grid of SOI 1978. The 2006 revision resulted in a more detailed distribution of fields and more fields with special distinctions to accommodate multidisciplinary programmes. This revision also provided an opportunity to establish a direct link between SOI and ISCED. Therefore, a major goal in designing the classification into fields was to achieve that all programmes in a minor group of the SOI should be allotted to the same ISCED field.

## **2. Classification structure**

### *Code system*

The present SOI 2006 consists of a nomenclature systematised by six-digit *system codes*. The first two digits indicate level (1-7) and sublevel (for levels 3, 4 and 5: sublevels 1-3; the other levels carry a 0 = no sublevel) of a programme. The remaining four digits indicate the fields of study or training, which are hierarchically distributed into 10 sector groups, 44 (sub)sectors, 167 groups and 453 minor groups. Identical fields of study carry the same codes across the different levels and sublevels. This does, however, not imply that all fields should occur in combination

with all levels. The occurring combinations of minor groups of study and levels generate 2,068 different codes in the SOI classification.

Each of the 15,000 programmes in the companion list has a unique *programme identity code*, which is assigned to respondents' answers to questions on enrolment in education and training programmes. The identity coding is computer assisted and takes place during the survey interview. In an ensuing stage, these codes are linked up automatically to a SOI system code or an ISCED code. The identity codes also link up with other programme characteristics, such as the code of required entry level of education, type of educational institution (public/private), dual learning or not, which are used to derive ISCED variables or to make other types of analyses.

The programme identity codes play a key role, because they show exactly which programmes tie in with the system code of the SOI or the ISCED. Even if the classification is revised, the identity codes stay the same, which facilitates the conversion to a new classification and the application of a new classification to already existing data. The only requisite is an updated key between the identity code and the system codes. In some cases, programmes have been assigned new programme identity codes, e.g. in case of erroneous system codes or changes in perception of individual programmes. All changes in programme identity codes since 1993 have been accounted for in a historic key file. This file also serves as an instrument for converting files containing data based on any previous edition of the SOI to the present edition.

#### *Levels of education*

The SOI distinguishes the following levels:

- 1 Education preceding the first level (usually 2 years)
- 2 Education at the first level (6 years)
- 3 Education at the second level, first stage (1-4 years)
  - 3.1 Programmes not giving entry to level 4
  - 3.2 Programmes giving entry to level 4.1
  - 3.3 Programmes giving entry to levels 4.2 and 4.3
- 4 Education at the second level, second stage
  - 4.1 Short programmes (up to 1 year after completion of level 3.3)
  - 4.2 Intermediate programmes (between 1 and 3 years, full-time equivalents, cumulative at level 4)
  - 4.3 Long programmes (3-5 years)
- 5 Education at the third level, first stage:
  - 5.1 Shorter higher professional programmes (1-3 years) accessible to those having completed at least level 4.2 general or 4.3 vocational programmes (e.g. those leading to an associate's degree)

- 5.2 Higher professional programmes (4 years) accessible to those having completed at least level 4.2 general or 4.3 vocational programmes leading to a bachelor's degree
- 5.3 University programmes leading to a bachelor's degree
- 6 Education at the third level, second stage; mainly programmes leading to a master's degree or equivalent
- 7 Education at the third level, third stage; doctorate and other post-level 6 programmes (1-3 years).

As a rule programmes at level  $x+1$  require successful completion of a programme at level  $x$ . However, programmes with a very short duration (in full-time equivalents) which require the successful completion of a certain level  $x$  of education are usually classified at the same level  $x$  and not at level  $x+1$ .

### *Fields of study*

Since the introduction of the SOI, the criterion for the classification of field of study into (sub)sectors has been the *objective* of the programme, in terms of the sector of society or science towards which the programme is oriented. This objective is based on the total range of subjects of a programme. This criterion was chosen for reasons of stability: because of the changing contents of occupations, subject matter contents of education programmes tend to shift more often than the sector the programmes are directed at. With the introduction of SOI 2006, this rule was less strictly applied.

A number of programmes targeted at a specific sector (e.g. the military), some of which being very similar to programmes in other fields, such as mechanics, medical and administrative programmes have been allotted to technical, medical and administrative fields respectively. This facilitated establishing the link between the minor fields of SOI and the fields of education and training of ISCED.

The hierarchical system of sector groups (1 digit) and (sub)sectors (2 digits) of SOI 2006 reads as follows:

- 0 General education programmes
  - 01 general education programmes
- 1 Teachers
  - 11 teachers in general programmes
  - 12 teachers in humanities, social sciences, communication and arts
  - 13 teachers in mathematics, natural sciences and agriculture
  - 14 teachers in technical and transport programmes
  - 15 teachers in economics, commercial, management and administrative programmes

- 16 teachers in health care, social care, sports, etc.
- 17 specialisation courses for teachers
- 2 Humanities, social sciences, communication and arts
  - 21 languages
  - 22 humanities
  - 23 social sciences
  - 24 communication (media), information
  - 25 arts, creative arts
  - 27 multidisciplinary programmes with main focus on humanities, social sciences, communication and arts
- 3 Economics, commercial, management and administrative programmes
  - 31 economics
  - 32 commercial
  - 33 management
  - 34 human resource, personnel
  - 35 administrative, clerical
  - 37 multidisciplinary programmes with main focus on economics, commercial, management and administrative
- 4 Law, public administration, security services
  - 41 law, public administration
  - 42 security services
  - 47 multidisciplinary programmes with main focus on law, public administration
- 5 Mathematics, natural sciences, and information sciences
  - 51 mathematics, natural sciences
  - 52 information sciences
  - 57 multidisciplinary programmes with main focus on mathematics, natural sciences, and information sciences
- 6 Technology
  - 61 general technology
  - 62 electrotechnical
  - 63 construction
  - 64 metalworking, automotive engineering (vehicle construction) and mechanical engineering
  - 65 processing technology

- 66 textiles and leather processing
- 67 multidisciplinary programmes with main focus on technology
- 7 Agriculture and environment
  - 71 agriculture
  - 72 environment
  - 77 multidisciplinary programmes with main focus on agriculture and environment
- 8 Health care, social services and social care
  - 81 health care
  - 82 social care, social services
  - 87 multidisciplinary programmes with main focus on health care, social care, social services
- 9 Hotel, restaurant, catering, tourism, leisure, transport and logistics
  - 91 hotel, restaurant, catering, tourism and leisure
  - 92 transport and logistics
  - 97 multidisciplinary programmes with main focus on hotel, restaurant, catering, tourism, leisure, transport and logistics
  - 98 other programmes
  - 99 programme unknown

### 3. Relationship between SOI and ISCED

ISCED 1997 has a different level structure and incorporates more characteristics of education programmes compared to both ISCED 1976 and the SOI. Statistics Netherlands has drawn up a conversion key<sup>1</sup> between its programme identity codes and the scores on the variables of the ISCED 1997. This made it possible to present statistical results on education by ISCED 1997.

*Relation between levels of SOI 2006 and ISCED 1997*

SOI 2006	ISCED 1997
1	0
2	1
3.1	2, 2A, 2B, 2C
3.2	2B, 2C
3.3	2A, 2B, 3, 3C (short programmes)
4.1	3A, 3C
4.2	3A, 3C

<sup>1</sup> This key was first included in the 1999/2000 edition of the SOI 1998.



4.3	3A, 4B, 4C, 5A (intermediate degree)
5.1	5B
5.2	5A, 5B
5.3	5A
6	5A
7	5A, 6

Until 2006, the classifications SOI and ISCED were not interrelated with respect to field of education. Since the introduction of SOI 2006, the distribution by field (4-digit minor groups) of SOI has been linked to the 3-digit fields of education and training. The conversion from SOI to ISCED by field can be found in Annex 1 of the electronic publication *Standaard Onderwijsindeling SOI 2006, editie 2007/'08*, which is available as a download at

<http://www.cbs.nl/nl-NL/menu/methoden/classificaties/overzicht/soi/2006/2007-pub-soi-0708.htm>.

### **Advantages of the SOI**

The SOI system has the following advantages:

- It includes all types of programmes: general, vocational and recreational, regular, part-time, correspondence and short courses of at least 12 periods (= morning, afternoon or evening).
- It can be used for different purposes: survey coding (personal education, vacancies), statistics on graduates and enrolment, registration of vacancies and job seekers and staff administration.
- The SOI classification by level corresponds to the levels in the national education system, whereas ISCED levels often cover more than one national level.
- The SOI classification of fields of study into sector groups and (sub)sectors clearly distinguishes between programmes directed at a single sector of society or science and those directed at two or more sectors. ISCED does not make such a distinction.
- In 1993, each programme was assigned an identity code. This unique code was linked to a SOI system code and an ISCED system code. This made it possible to trace programmes even after classification changes and to show which programmes belong to which classification group of programmes (identified by the system code).
- The use of programme identity codes also facilitates ordering according to other classifications, such as the ISCED 1997.

- The conversion from SOI to ISCED has been facilitated by the introduction of a direct link between ISCED fields of education and training and minor groups of SOI 2006.