

NARIC guide on Higher Education Systems in the European Union

Edition of 1999

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in the European Union

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Austria

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Glossary

Bundesgesetz

Federal act.

Bundesgesetz, mit dem Bestimmungen über die land- und forstwirtschaftlichen Lehranstalten des Bundes getroffen werden (Land- und Forstwirtschaftliches Bundesschulgesetz), BGBl. Nr. 175/1966

Federal act on agricultural and forestry schools.

Bundesgesetz über die Akademie der bildenden Künste in Wien (Akademie-Organisationsgesetz 1988 — AOG), BGBl. Nr. 25/1988

Academy organisation act.

Bundesgesetz über die Errichtung des Universitätszentrums für Weiterbildung mit der Bezeichnung Donau-Universität Krems, BGBl. Nr. 269/1994

Federal act on the establishment of the university centre for further education with the title Danube University at Krems.

Bundesgesetz über die Organisation der Universitäten (Universitäts-Organisationsgesetz — UOG 1993), BGBl. Nr. 508/1993

University organisation act, 1993.

Bundesgesetz über die Organisation der Universitäten (Universitäts-Organisationsgesetz — UOG), BGBl. Nr. 258/1975

University organisation act, 1975.

Bundesgesetz über die Organisation von Kunsthochschulen (Kunsthochschul-Organisationsgesetz), BGBl. Nr. 54/1970

Schools of art and music organisation act.

Bundesgesetz über die Studien an den wissenschaftlichen Hochschulen (Allgemeines Hochschul-Studiengesetz — AHStG), BGBl. Nr. 177/1966

General university studies act.

Bundesgesetz über die Studien an Hochschulen künstlerischer Richtung (Kunsthochschul-Studiengesetz — KHStG), BGBl. Nr. 187/1983

Schools of art and music studies act.

Bundesgesetz über die Schulorganisation (Schulorganisationsgesetz), BGBl. Nr. 242/1962

School organisation act.

Bundesgesetz über Fachhochschul-Studiengänge (FHStG), BGBl. Nr. 340/1993

Federal act on fachhochschul studies.

Bundesgesetzblatt (BGBl.)

Austrian federal law gazette.

Bundesminister(ium) für Land- und Forstwirtschaft

Federal Minister (Ministry) for (of) Agriculture and Forestry.

Bundesminister(ium) für Unterricht und kulturelle Angelegenheiten

Federal Minister (Ministry) for (of) Education and Cultural Affairs.

Bundesminister(ium) für Wissenschaft, Verkehr und Kunst

Federal Minister (Ministry) for (of) Science, Transport, and the Arts.

Bundes-Verfassungsgesetz (B-VG) in der Fassung von 1929, BGBl. Nr. 1/1930

The Federal constitutional act.

Bundesverfassungsgesetz
(Any) federal constitutional act.

Reichsgesetzblatt (RGBl.)
Imperial law gazette.

Staatsgrundgesetz vom 21. Dezember 1867, Reichsgesetzblatt Nr. 142, über die allgemeinen Rechte der Staatsbürger für die im Reichsrat vertretenen Königreiche und Länder
Basic law on the universal rights of citizens.

Zuletzt geändert durch
Most recently amended by.

(Erstes) Zusatzprotokoll zur Konvention zum Schutze der Menschenrechte und Grundfreiheiten vom 20. März 1952, BGBl. Nr. 210/1958
(First) protocol to the Convention for the Protection of Human Rights and Basic Freedoms.

Introduction

In 1993, the new Austrian 'University organisation act' came into force. The act institutes the most significant changes in the organisation of Austrian universities to take place since 1975.

New official positions were created; the terms of reference of those which existed under the university organisation act, 1975, were also fundamentally changed. In addition, the relationship between the federal Ministry of Science, Transport, and the Arts, on the one hand, and the universities, on the other, was reconstituted.

In 1993, the Austrian *Fachhochschul* studies started. This kind of studies forms part of the higher education system, but not part of university education. The studies last three years as a minimum plus one or two practical terms. Every private and public unit which fulfils the prescribed requirements — especially in terms of quality assurance — may offer *Fachhochschul* programmes. There exists an autonomous body — the *Fachhochschulrat* — which gives the licence to offer *Fachhochschul* programmes, and which surveys the quality of education. Ten *Fachhochschul* programmes have been running from the winter term 1994/95, 10 other programmes from the winter term 1995/96. While higher education has been totally public in Austria, this new sector for the first time offers the possibility for private entities to run higher education programmes.

On 1 January 1994, the European Economic Area came into being. Therefore, the directives of the European Community concerning professional recognition came into force in Austria and the other countries of the European Free Trade Association (EFTA).

On 1 January 1995, Austria became a member of the European Union.

I. Higher education system

Universities, schools of art and music, and *Fachhochschul* studies are within the competence of the federal government under the fundamental provisions laid down in the Federal constitutional act. The provinces (*Bundesländer*), which are 'federal States', have no constitutional jurisdiction over these institutions.

The basic law on the universal rights of citizens of 1867 stipulates that teaching, research and practice of the arts shall be free.

Further general constitutional provisions of relevance are Article 18 of the basic law of 1867 ('Everyone shall be free to choose his occupation and to obtain the necessary education and training how and where he wants.'). as well as Article 2 of the first protocol to the Convention for the Protection of Human Rights and Basic Freedoms ('Nobody shall be deprived of the right to education.'). According to section 5 of Article 17 of the basic law of 1867, the Federal Government has the right to direct, manage and supervise the entire school and educational system.

The administrative (executive) power of the federal government in the realm of the school system, which also includes matters relating to the universities, schools of art and music, and *Fachhochschul* studies, is the task of the competent federal minister.

The legal situation is therefore, as follows.

- (i) The Federal Minister for Science, Transport and the Arts is responsible for matters concerning the universities, schools of art and music, and *Fachhochschul* studies ('matters relating to sciences, in particular to scientific research and teaching').
- (ii) The Federal Minister for Education and Cultural Affairs is responsible for all other school systems, i.e. other fields of tertiary education which do not come under the above heading and to which the school organisation act is applicable.
- (iii) The Federal Minister for Education and Cultural Affairs, and the Federal Minister for Agriculture and Forestry are both responsible for school systems for which the Federal act on agricultural and forestry schools applies.

I.1. The institutions of higher education

I.1.1. Universities

There are at present 13 universities controlled by the university organisation act: the universities of Vienna (province of Vienna), Graz (Styria), Innsbruck (Tyrol), Klagenfurt (Carinthia), Linz (Upper Austria), Salzburg (province of Salzburg), and the technical universities of Vienna and Graz, which are all divided into various faculties; the Leoben University for Mining and Metallurgy (Styria), the Vienna University of Agriculture and Forestry, the Vienna University for Veterinary Medicine, and the Vienna University for Economics, which are all not divided into faculties; and the Danube University at Krems (Lower Austria) which is a newly founded university centre for further education.

I.1.2. Schools of art and music

There are six schools of art and music: the Vienna School of Applied Arts, the Vienna School of Music and Drama, the Salzburg School of Music and Drama (the 'Mozarteum'), the Graz School of Music and Drama, the Linz School of Artistic and Industrial Design, and the Academy of Fine Arts in Vienna.

The Academy of Fine Arts in Vienna is regulated by the academy organisation act, all other schools of art and music by the schools of art and music organisation act.

I.1.3. Fachhochschul studies

The following are responsible for the establishment and running of *Fachhochschul* studies.

Corporations

Societies (Vereine): During 1995 these were: Verein Technikum Vorarlberg, Dornbirn; Verein zur Errichtung und Führung einer wirtschaftlich-technischen Fachhochschule Burgenland, Eisenstadt/Pinkafeld; Trägerverein zur Vorbereitung und Errichtung von Fachhochschulen in Oberösterreich, Wels/Steyr/Hagenberg; Verein zur Förderung eines Fachhochschul-Studienganges Elektronik in Wien, Vienna; Schulverein der Sägewerker Österreichs, Kuchl; Verein zur Errichtung und Führung einer Fachhochschule St. Pölten, St. Pölten; Camillo-Sitte-Lehranstalt, Vienna.

Limited liability companies: Wr. Neustädter Bildungs- und Forschungs Ges.m.b.H., Wiener Neustadt; Internationales Management Center Krems Ges.m.b.H., Krems; Technikum Kärnten, Spittal an der Drau; Techno-Z, Salzburg; Technikum Joanneum Ges.m.b.H., Graz/Kapfenberg/Übelbach; Management Center Innsbruck (MCI), Innsbruck; bfi-Euroteam Fachhochschul-Studiengangsbetriebs Ges.m.b.H., Vienna; FHW Betriebs- und Forschungseinrichtungen der Wiener Wirtschaft Ges.m.b.H., Vienna; WIFI Steiermark, Graz.

Political bodies

Chamber of Commerce Vienna, Vienna.

I.2. Number of students

In the winter semester of 1994/95, some 209 290 students were enrolled at Austrian universities, of whom 22 738 were international students. The comparable figures for the winter semester 1980/81 were 110 348 and 10 234 respectively. Among the Austrian students, 100 848 were men, and 85 704 were women. The figures for 1980/81 were 59 813 and 40 301 respectively. Among the international students, 12 756 were men, and 9 982 were women. The figures for 1980/81 were 7 106 and 3 128, respectively.

In the winter semester of 1994/95, some 6 837 students were enrolled at Austrian schools of art and music, including 2 418 international students. In this semester, 23 242 students matriculated for the first time at Austrian universities, and 928 students at Austrian schools of art and music. The figures for international students were 3 992 and 426, respectively.

Among the 25 156 international students enrolled at Austrian universities and schools of art and music in the winter semester of 1994/95, some 13 344 (53 %) came from the countries of the European Economic Area, Switzerland and Liechtenstein, with the biggest intakes from Italy (5 767) and Germany (5 192).

In the winter semester of 1994/95, 68.9 % of the international students at Austrian universities came from 10 countries: Italy — 5 643 (24.8 %), Germany — 4 392 (19.3 %), Iran — 1 322 (5.8 %), Turkey — 1 236 (5.4 %), Yugoslavia (Serbia and Montenegro) — 702 (3.1 %), Bulgaria — 584 (2.6 %), Poland — 487 (2.1 %), USA — 459 (2.0 %), Hungary — 428 (1.9 %), Croatia — 423 (1.9 %).

As regards the schools of art and music, the Republic of Korea (8.9 %), Japan (6.9 %), Taiwan (4.3 %), Slovenia (2.9 %) and Switzerland (2.2 %) are among the 10 countries sending the most students. The others are: Germany 33.1 %, Hungary 5.6 %, Italy 5.1 %, Croatia 3.3 % and Bulgaria 2.9 %.

I.3. Organisation of studies

I.3.1. Laws on institutions

The university organisation act governs the organisation of the universities; the schools of art and music organisation act and the academy organisation act govern the schools of art and music. The federal act on *Fachhochschul* studies governs the establishment of *Fachhochschul* programmes, but not their organisation (an act on the organisation of *Fachhochschulen* does not exist, as those programmes are offered by institutions still existing).

I.3.2. Study laws

General remarks

In Austria, academic examinations also have the status of State (national) examinations. When a student is awarded an academic degree after having passed all the necessary examinations at a university (or in some cases at a school of art and music), he or she has met the prerequisites for practising a certain profession. This means that the completion of degree studies and the award of an academic degree by an institution are accompanied by an *effectus civilis*; for example, the graduate who is awarded the academic degree of *Diplom-Tierarzt* meets the prerequisites for practising the profession of a veterinary surgeon.

The general university studies act

This act contains the basic regulations concerning the entire system of studies and examinations at universities. In particular, it regulates admission to universities and defines the guiding principles for the organisation of studies as well as the objectives which the studies are to serve. These regulations apply to all study programmes alike.

Diploma studies

As far as the internal organisation of degree studies is concerned, the general university studies act seeks, as a rule, to achieve a basic subdivision of diploma studies into two stages of about equal duration. Only the study of veterinary medicine, and the study of international business administration consist of three stages. Diploma studies last at least eight semesters in the humanities, social and economic sciences as well as jurisprudence, nine semesters in studies leading to the secondary school teaching qualification, and 10 semesters in the natural sciences, in technology, and in theology. They serve the purpose of scientific (scientific-artistic) professional training. Each stage is completed by a diploma examination. The students have to take compulsory subjects (about two thirds of the programme, depending on the field of study), and optional subjects; thus, they can focus mainly on a special area out of the field of study. The prerequisite for the award of an academic degree (diploma degree) is the approval of a diploma thesis and the passing of the diploma examinations at the end of the second stage. In all single examinations (that means that one examiner is acting), the grading scale runs as follows: 1 (very good), 2 (good), 3 (satisfactory), 4 (sufficient), 5 (not sufficient, which means that the examination has not been passed). In the so-called commission examinations, the grading system is: 'excellent', 'pass', 'fail'.

Doctoral studies

Doctoral study generally requires a maximum of four additional semesters beyond diploma studies; its purpose is to increase the student's ability to carry out independent scientific work. The duration of studies is laid down in the relevant special studies act. To be awarded the doctor's degree, the student has to write a dissertation and to pass the doctoral examination (*Rigorosum*).

*Examples of some study programmes
(see the curricula charts in Appendix IV).*

(a) Diploma study in 'French language and literature'

During the first stage (first to fourth semester), students take basic courses (including preparatory seminars) in the following subjects: language skills; linguistics; literature; French culture. This stage is completed by the first diploma exam (no academic degree being awarded). During the second stage (fifth to eighth semester), advanced and special courses (including seminars and similar courses) are taken in the subjects mentioned above; courses involving the study of the subjects in greater depth must also be taken. Finally, the student has to write a thesis on one of the subjects, and when this thesis is approved, the second stage is completed by the second diploma examination; the academic degree of *Magister/Magistra der Philosophie* is then awarded. This degree enables the holder to apply to practise a profession for which the completion of an academic study is a prerequisite. The diploma is accepted under Directive 89/48/EEC.

(b) Doctoral degree

If the holder of the *Magister/Magistra* diploma wants to pursue scientific training, he or she can take the degree of doctor. The phase of the doctoral dissertation is a special study (not a third stage of the diploma study) lasting four semesters, in which the student has to cover certain themes depending on the topic of the doctoral thesis. The study is completed by an oral exam, the *Rigorosum*, of which one part is the public defence of the doctoral dissertation. The academic degree awarded is the *Doktor/Doktorin der Philosophie*. Doctoral studies are conducted in universities only, but in certain cases they are undertaken in conjunction with schools of art and music. The prerequisite for admission to doctoral studies is the completion either of Austrian diploma studies in the same discipline or of equivalent Austrian or foreign qualifications. The successful completion of studies at *Fachhochschulen* also entitles applicants to embark upon doctoral studies at a university under the conditions specified above; but first they are required to follow some preparatory courses at a university.

(c) The study of medicine

The study of medicine is organised in three, not two stages. It is a doctoral study programme offering scientific professional training and forming the prerequisites for the doctoral degree. Each of the three stages is completed with a doctoral examination (*Rigorosum*). The academic degree of *Doktor/Doktorin der gesamten Heilkunde* is based upon the completion of a dissertation or upon intensified scientific training in a specific discipline.

Special kinds of studies

In addition to the study programmes (diploma studies) specified and regulated by the special studies acts, the general university studies act also makes provision for the approval of individually organised diploma studies.

(a) The universities may permit a student to pursue a diploma study organised by the student him- or herself, i.e. the university may approve the combination of study fields regulated by different study acts or ministerial study regulations, as *studium irregulare*. The university's decision has to specify the study plan and the academic degree (diploma degree) to be awarded.

(b) In addition, the federal minister may, by a ministerial study regulation (*Studienordnung*), institute diploma studies which are not regulated by a special studies act as a 'study experiment' (*Studienversuch*) for a limited period of time.

Other studies

Other degree studies as provided by the general university studies act are short-study programmes (*Kurzstudien*), supplementary study programmes (*Erweiterungsstudien*), continuation study programmes (*Aufbaustudien*), the international study programmes as well as complementary study programmes (*Ergänzungsstudien*) for graduates from foreign universities.

- (a) *Kurzstudien* (short-study programmes) serve the task of independent professional training. Their duration and requirements correspond to the first stage of diploma studies. The special studies act may provide for the awarding of a professional title.
- (b) *Erweiterungsstudien* (supplementary study programmes) serve the purpose of supplementing completed diploma courses by pursuing studies in a different subject of the same study programme or by taking subjects of a related study programme (a related study field), or they serve the task of supplementing completed short studies by related diploma studies.
- (c) *Aufbaustudien* (continuation study programmes) are studies going beyond diploma studies and serve the task of further developing competence in additional specialised fields. Their duration corresponds to the first stage of diploma studies, the requirements correspond to the second stage. A diploma degree or professional title can be awarded.
- (d) *Ergänzungsstudien* (complementary study programmes) for graduates from foreign universities may be instituted by the federal minister by means of a ministerial study regulation. The graduate is awarded the academic degree of 'International Master of...' with a supplement specifying the study programme.

International study programmes

The Federal Minister for Science, Transport and the Arts may by regulation set up international study programmes as regular degree studies (as diploma studies, short-study programmes, supplementary or continuation study programmes). This is based on a joint study programme between an Austrian university and a foreign one. The international study programme consists of an Austrian stage, and a stage pursued abroad. The regulation (ministerial study regulation) has to specify the academic degree (diploma degree) or the professional title to be awarded.

Non-degree study programmes

Besides regular degree studies, the general university studies act provides for *Allgemeine Hochschulkurse und Hochschullehrgänge* (general university extension courses and programmes), *Hochschulkurse und Hochschullehrgänge zur Fortbildung* (university extension courses and programmes for further education) as well as *Hochschulkurse und Hochschullehrgänge für höhere Studien* (university extension courses and programmes for higher studies). These kinds of courses are not ordinary studies. Therefore, an academic degree is not awarded. On the successful completion of these courses students can, however, receive a professional title.

The schools of art and music studies act

This act regulates studies in the fields of art and music. The speciality of those fields, e.g. intensive instruction in the so-called central artistic subjects, requires regulations which differ in some respects from studies at universities.

The most important characteristics of studies in the fields of art and music are: an entrance examination which tests the artistic capacity of the applicant; intensive instruction courses in central artistic subjects; length of study between four and eight years; the award of the academic degree *Magister/Magistra der Künste*.

The different studies are to be arranged more precisely by academic study regulations (*Studienpläne*).

In the schools of art and music, doctoral studies exist only in those fields where there is an institutionalised collaboration with universities, i.e. in the fields of architecture, musicology, history of art, drama, and in the studies for teachers of artistic subjects at secondary schools.

The federal act on *Fachhochschul* studies

This act covers the courses at *Fachhochschul* level, which are going to be established now and which may be offered by various institutions (see above).

The instruction in the 'first generation' of *Fachhochschul* programmes started in October 1994 with the following courses: assembly automation (Dornbirn, Vorarlberg), 43 students in 1994/95; automatic processing technology (Wels, Upper Austria), 105 students; business consulting (Wiener Neustadt, Lower Austria), 120 students; electronics (Vienna), 75 students; international business (Eisenstadt, Burgenland), 90 students; building technology (Pinkafeld, Burgenland), 45 students; precision, system and information technology (Wiener Neustadt, Lower Austria), 55 students; software engineering (Hagenberg, Upper Austria), 64 students; tourism and leisure industry (Krems, Lower Austria), 45 students; tourism (Vienna), 53 students.

The special studies acts

In addition to the general university studies act (see above), there are special studies acts (*besondere Studiengesetze*) which stipulate the requirements and contain the basic stipulations for the single study programmes (*Studienrichtungen*). This means that the special studies acts contain the detailed provisions taking the specific requirements into account. The general university studies act and the special studies acts complement each other.

The ministerial study regulations

The Federal Minister for Science, Transport and the Arts issues ministerial study regulations (*Studienordnungen*) for the study programmes and doctoral studies, based on the special studies acts. These regulations give the framework to the curricula at the single institutions of higher education. In particular, they point out the subjects to be taken, and their extent. In the case of studies leading to the secondary school teaching qualification, the relevant ministerial study regulation is prepared and issued after having consulted the Federal Minister for Education and Cultural Affairs.

The ministerial study regulations relating to study experiments (*Studienversuche*), international study programmes, as well as to complementary study programmes for graduates from foreign universities are based directly on the general university studies act; the relevant special studies acts have to be taken into account.

In the ministerial study regulations, the Federal Minister for Science, Transport and the Arts specifies the universities (faculties) which are responsible for the conduct of degree studies, and the number of hours of compulsory and optional subjects being offered. In addition to the courses devised for the individual study fields and their ancillary sciences, the ministerial study regulations also provide for courses designed to offer the students theoretical and philosophical insights into the study fields as well as, depending on the nature of the study programme, courses dealing with the history, the history of science, or the sociology of the study fields. Furthermore, where it is feasible, courses must be designed to teach the fundamentals of scientific work and scientific documentation, and to provide information about the respective disciplines.

The academic study regulations/curricula

The competent study commission of the university or school of art and music at which study programmes are offered has to issue a curriculum (*Studienplan*) for each study programme on the basis of the general university studies act, the special studies acts, and the ministerial study regulations. The curriculum specifies the courses relating to the compulsory and optional subjects. It must be submitted to the Federal Minister for Science, Transport and the Arts within one month of its adoption. It takes legal effect unless the minister prohibits its implementation within two months of receiving it. As regards the provisions in the curriculum concerning studies leading to the secondary school teaching qualification and the pedagogical training of future secondary school teachers, the Federal Minister for Science, Transport and the Arts has to seek agreement with the Federal Minister for Education and Cultural Affairs within the specified time period. The curricula are published in the official gazette of the relevant institution of higher education, and in special student manuals.

II. Qualifications and diplomas

II.1. Qualifications for admission to higher education

The right to education — which includes the right to higher education — is guaranteed in the Austrian Constitution. The relevant acts have been adapted to the requirements of European integration.

II.1.1. Scope of application

The general university studies act is applicable to all university studies and, in addition, to specific studies pursued at schools of art and music (academic-artistic studies leading to the teaching qualification and the study programme of architecture).

The schools of art and music studies act covers all other studies pursued at the schools of art and music.

With regards to the act on *Fachhochschul* studies, see above.

II.1.2. Admission to studies

Students are admitted to Austrian universities and schools of art and music as degree students, i.e. persons seeking to undertake regular degree studies, by way of matriculation (*Immatrikulation*). If an applicant combines various study programmes (fields of studies), the admission requirements have to be met for each of them. If a student transfers to a different study programme, the admission requirements have to be reconsidered.

The admission to *Fachhochschul* studies is also course-specific; all the admission requirements have to be reconsidered whenever the student changes his or her studies.

General university qualification

The general university qualification is understood to be the student's ability to embark upon university studies on the basis of the education level achieved. It is acquired as a result of the qualifications enumerated in Appendix I.

In the following, the term 'secondary school leaving certificate' will be used to denote any of the certificates which offer evidence of the applicant's ability to study for a general university qualification. At the schools of art and music the general university qualification is relevant only in the case of those few study programmes for which a secondary school leaving certificate is one of the admission requirements.

Secondary school leaving certificates can be acquired at various types of academic secondary schools (in the following, only the most important differences in syllabus will be mentioned).

Lower cycle (forms 1 to 4)

Forms 1 and 2

Syllabuses of all types are equal; one modern foreign language (first to eighth forms).

Forms 3 and 4

Gymnasium (early-Latin type): Latin;

Realgymnasium (standard type): geometrical drawing, more mathematics, physics, handicraft (technological or textile).

Wirtschaftskundliches Realgymnasium (home-economics type): more chemistry, handicraft (technological or textile).

Upper cycle (forms 5 to 8)

Gymnasium (early-Latin type): Latin (continuation); in addition, from the fifth form on, Greek or a second modern foreign language.

Realgymnasium (standard type): more mathematics; in addition, from the fifth form on, Latin (with the possibility of continuing the Latin instruction started in the lower cycle of *Gymnasium*) or a second modern foreign language; furthermore descriptive geometry or more biology and environmental sciences, chemistry, physics.

Wirtschaftskundliches Realgymnasium (home-economics type): from the fifth form on, a second modern foreign language or Latin. In addition: home economics and nutrition; more geography and economics, biology, philosophy (including practical course).

Oberstufenrealgymnasium (separate upper-cycle type): in addition to the eight-year types of academic secondary school, there is a separate upper-cycle type (partly with transition stage), with admission after the fourth schooling year (fifth to eighth forms). From the fifth form a second modern foreign language or Latin. Furthermore, instrumental music or fine arts or handicraft, or descriptive geometry, or more biology and environmental sciences, chemistry, physics, mathematics.

For all types

In the sixth to eighth forms, alternative compulsory subjects must be chosen amounting to 8 (*Gymnasium*, *Oberstufenrealgymnasium*), 10 (*Realgymnasium*) or 12 (*Wirtschaftskundliches Realgymnasium*) periods per week.

Special types

Allgemeinbildende höhere Schulen (academic secondary schools) with particular emphasis on art or sports training (starting with first or fifth forms; for specialisation in music: fifth to ninth forms); aptitude test.

Aufbaugymnasium (language-oriented type) and *Aufbaurealgymnasium* (science-oriented type) — partly with transition stage (fifth to eighth forms): admission possible without age limit.

Gymnasium, *Realgymnasium*, and *Wirtschaftskundliches Realgymnasium für Berufstätige* (sciences, mathematics, or home economics type for employed persons): evening classes with a duration of nine semesters. Admission possible after age of 17; students may be assigned to higher semesters or may skip grades if they can prove that they have the required knowledge.

Realgymnasium mit Ausbildung in Metallurgie (special branch offering training in metallurgy), fifth to ninth forms: located at Reutte, Tyrol.

Gymnasium with additional third modern language (sixth to eighth forms): Theresianum, Vienna.

Bundsgymnasium für Slowenen (early-Latin type for Slovenes with Slovenian as language of instruction): located at Klagenfurt, Carinthia (*Gymnasium and Realgymnasium*).

Werkschulheim (craft type): academic secondary school offering training in a craft, at present for carpenters, locksmiths and radio mechanics (with ninth form); located at Ebenau, Salzburg.

Special university qualification

The special university qualification is understood to be the student's ability to embark immediately upon studies in a certain study programme. In order to be admitted to a certain study programme at Austrian universities, it is necessary for the applicant to have met all the requirements prescribed in the State issuing the secondary school leaving certificate. In Austria, to be admitted to certain disciplines, examinations in relevant subjects in addition to the secondary school leaving certificate must be taken, e.g. an examination in descriptive geometry for admission to technical studies. In some cases, the applicant has to pass an ability test, e.g. for studies in sports, music or interpretation. If all these requirements are met, the holder of the Austrian secondary school leaving certificate (*Reifezeugnis*) has achieved the special university qualification.

The special qualification for schools of art and music is acquired by the applicant if he or she passes the entrance examination and meets any possible further special admission requirements.

In principle, the admission to *Fachhochschul* studies is granted on the basis of the general university qualification, which means that an additional special qualification is not required. Additional examinations may be prescribed, if necessary, for the courses of study chosen by persons who apply for admission not on the basis of a secondary school leaving certificate but on the basis of relevant professional qualifications. If the number of applicants exceeds the number of study places, the authority of the *Fachhochschul* study can prescribe additional selection mechanisms for all kinds of applicants.

II.2. Intermediate qualifications in higher education

In the Austrian higher education system, there are no intermediate qualifications. As laid down above, the first stage of a diploma study is completed by the first diploma examination. This examination gives the right to enter the second stage of study, but is not an independent intermediate qualification.

II.3. Final qualifications in higher education

Everybody who has completed his or her diploma or doctoral studies is awarded an academic degree by the relevant institution of higher education. The degree entitles the holder to use the title in one of the prescribed versions, to be admitted to further studies, and to apply for an academic profession. Foreign qualifications are recognised (*Nostrifizierung*) if they are equivalent in terms of level, content, and extent of the studies completed and if the awarding institution is recognised as an institution of higher education in the State of origin.

As a rule, Austrian academic degrees exist in a German version, a Latin version, and an abbreviated version. Some of them exist only in two versions. A distinction is made between the male and the female wording. A list of all academic degrees is given in Appendix II.

II.4. Regulated professions under directives of the European Community

Appendix III contains a list of regulated academic professions in Austria falling under the first general directive (89/48/EEC) or under sectorial directives.

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Appendix I

General university qualification

Qualification

Reifezeugnis einer österreichischen höheren Schule

Leaving certificate from an Austrian secondary school.

Reifezeugnis einer Bildungsanstalt für Kindergartenpädagogik oder einer Bildungsanstalt für Erzieher

Leaving certificate from a school for early years education or a teacher training college.

Zeugnis über die Studienberechtigungsprüfung [fachgebunden] bzw. zusätzlich mit Abschluß eines Diplomstudiums [allgemein]

Certificate of the *Studienberechtigungsprüfung* (course-specific), with or without a diploma degree (*allgemein*).

Urkunde über den Abschluß eines Fachhochschul-Studiums, sofern die Zulassung nicht aufgrund eines Reifezeugnisses erfolgt war [fachgebunden]

Document providing evidence of the completion of a *Fachhochschul* study, insofar as admission was granted on the basis of a preparatory course (course-oriented).

Ausländisches Reifezeugnis, das vom Bundesminister für Unterricht und Kunst nostrifiziert wurde

Foreign school-leaving certificate recognised by the Federal Minister for Education and Cultural Affairs.

Ausländisches Reifezeugnis, das aufgrund einer multilateralen oder bilateralen Vereinbarung einem österreichischen Reifezeugnis gleichwertig ist

Foreign school-leaving certificate which is equivalent to an Austrian one on the basis of a multilateral or bilateral agreement.

Ausländisches Reifezeugnis, das vom Rektor einem österreichischen Reifezeugnis für gleichwertig erklärt wurde

Foreign school-leaving certificate recognised by the rector as being equivalent to an Austrian one.

Einschlägige berufliche Qualifikation

Relevant professional qualification.

U = Universities;

A = Schools of art and music;

F = *Fachhochschul* studies.

Appendix II

Academic degrees

Diploma degrees

Magister(-tra) der Theologie/Magister(-tra) theologiae/Mag.theol.

[katholisch]

Magister(-tra) der Philosophie der Theologischen Fakultät/Magister(-tra) philosophiae facultatis theologiae/Mag.phil.fac.theol.

Magister(-tra) der Theologie/Magister(-tra) theologiae/Mag.theol.

[evangelisch]

Magister(-tra) der Rechtswissenschaften/Magister(-tra) iuris/Mag.iur.

Magister(-tra) der Sozial- und Wirtschaftswissenschaften/Magister(-tra) rerum socialium oeconomicarumque/Mag.rer.soc.oec.

Magister(-tra) der Philosophie/Magister(-tra) philosophiae/Mag.phil.

Magister(-tra) der Naturwissenschaften/Magister(-tra) rerum naturalium/Mag.rer.nat.

Magister(-tra) der Pharmazie/Magister(-tra) pharmaciae/Mag.pharm.

Diplom-Ingenieur(in)/Dipl.-Ing.

Magister(-tra) der Architektur/Magister(-tra) architecturae/Mag.arch.

Diplom-Tierarzt(-ärztin)/Magister(-tra) medicinae veterinariae/Mag. med.vet.

Magister(-tra) der Künste/Magister(-tra) artium/Mag.art.

Special diploma degree

Internationales Magisterium der Betriebswirtschaftslehre

Doctoral degrees

Doktor(in) der Theologie/Doctor theologiae/Dr.theol. [katholisch]

Doktor(in) der Philosophie der Theologischen Fakultät/Doctor philosophiae facultatis theologiae/Dr.phil.fac.theol.

Doktor(in) der Theologie/Doctor theologiae/Dr.theol. [evangelisch]

Doktor(in) der Rechtswissenschaften/Doctor iuris/Dr.iur.

Doktor(in) der Sozial- und Wirtschaftswissenschaften/Doctor rerum socialium oeconomicarumque/Dr.rer.soc.oec.

Doktor(in) der Philosophie/Doctor philosophiae/Dr.phil.

Doktor(in) der Naturwissenschaften/Doctor rerum naturalium/Dr.rer.nat.

Doktor(in) der gesamten Heilkunde/Doctor medicinae universae/ Dr.med.univ.

Doktor(in) der technischen Wissenschaften/Doctor technicae/Dr.techn.

Doctor architecturae/Dr.arch.

Doktor(in) der montanistischen Wissenschaften/Doctor rerum montanarum/Dr.mont.

Doktor(in) der Bodenkultur/Doctor rerum naturalium technicarum/

Dr.nat.techn.

Doktor(in) der Veterinärmedizin/Doctor medicinae veterinariae/

Dr.med.vet.

Academic degrees in *Fachhochschul* studies

Diplombetriebswirt(in) für Internationale Wirtschaftsbeziehungen (FH)

Diplom-Designer (FH)

Dipl.Ing. (FH)

Dipl.-Ing. für Bauplanung und Baumanagement (FH)

Dipl.-Ing. für industrielle Elektronik (FH)

Dipl.-Ing. für Industriegewerbe (FH)

Mag. (FH)

Magister(-tra)

der

Tourismuswirtschaft

(FH)

Appendix III

Regulated professions

Apotheker/Pharmacist (*)
Arzt/Medical doctor (*)
Architekt/Architect (*)
Außerordentlicher Universitätsprofessor/Associate professor
Beamter im höheren Dienst/Graduate civil servant
Beeideter Wirtschaftsprüfer und Steuerberater/Certified public accountant
Diplomierter Diätassistent und ernährungsmedizinischer Berater/Dietician and nutrition consultant
Diplomierter Ergotherapeut/Occupational therapist
Diplomierter Logopäde/Speech therapist and logopedist
Diplomierter Orthoptist/Orthoptist
Diplomierter Physiotherapeut/Physiotherapist
Diplomierter medizinisch-technischer Analytiker/Laboratory technologist
Diplomierter radiologisch-technischer Assistent/Radiological technologist
Forstassistent/Graduate forestry assistant
Forstwirt/Graduate forester
Gesundheitspsychologe/Health psychologist
Hersteller von Arzneimitteln und Großhandel mit Arzneimitteln/Production of pharmaceuticals and wholesale in pharmaceuticals
Hersteller von Giften und Großhandel mit Giften/Production of poisons and wholesale in poisons
Klinischer Psychologe/Clinical psychologist
Land- und Forstwirtschaftlicher Berater/Agricultural and forestry consultant
Lebens- und Sozialberater/Human affairs counsellor and social welfare adviser
Lehrer an Akademien/Teacher at colleges
Lehrer an höheren Schulen und Berufsschulen/Teacher at secondary and vocational schools
Lehrer an Musikschulen/Teacher at schools of music
Lehrer an Universitäten und Hochschulen künstlerischer Richtung/Teacher at universities and schools of art and music
Optometrist/Optommetrist
Ordentlicher Universitätsprofessor; Ordentlicher Hochschulprofessor/Full professor
Patentanwalt/Patent attorney
Priester/Priest
Psychologe/Psychologist
Psychotherapeut/Psychotherapist
Rechtsanwalt/Lawyer
Steuerberater/Tax adviser
Tierarzt/Veterinary surgeon (*)
Universitätsassistent; Hochschulassistent/Assistant professor
Universitätsdozent/Associate professor
Unternehmensberater/Management consultant
Vertragsbediensteter in höherer Verwendung/Graduate contractual agent
Wissenschaftlicher Beamter/Scientific civil servant
Zahnarzt/Dentist (*)
Zivilingenieur/Graduate engineer in civil engineering

(*) These professions are regulated by a sectoral directive.

Appendix IV

Curricula charts

The following pages give examples of the structure of diploma studies, showing:

- the group of studies, the name of the field of study, and its specialisation;
- the relevant ministerial study regulation;
- the minimum length of study;
- the academic degree;
- the total number of hours;
- the compulsory and optional subjects, and the number of hours to be taken per subject.

The number of hours means the absolute number, i.e. 15 times the number of hours per week.

Examples are given for studies in:

- (1) veterinary medicine;
- (2) telematics;
- (3) business administration, and
- (4) history (for secondary school teaching qualification).

Chart 1

GRUPPE: Veterinärmedizin
STUDIENRICHTUNG: **Veterinärmedizin**
STUDIENZWEIG: ---

Studienordnung: BGBI. Nr. 458/1994
Studiendauer: 10 Semester
Akademischer Grad: Diplom-Tierarzt (Magister medicinae veterinariae, Mag.med.vet.)
Gesamtstundenzahl: In den Pflicht- und Wahlfächern: 3750-4050
In den Freifächern: ---

Pflicht- und Wahlfächer:

(a) Medizinische Physik	45-90
(b) Systematische Anatomie	165-225
(c) Medizinische Biochemie	135-195
(d) Histologie und Embryologie	120-180
(e) Topographische Anatomie	90-150
(f) Tierzucht und Genetik	75-135
(g) Physiologie	165-225
(h) Botanik	30-60
(i) Ernährung	60-120
(j) Parasitologie	45-105
(k) Pharmakologie	75-135
(l) Bakteriologie und Hygiene	45-105
(m) Virologie	45-105
(n) Tierhaltung und Tierschutz	30-60
(o) Allgemeine Pathologie	60-120
(p) Bildgebende Diagnostik	45-90
(q) Chirurgie und Augenheilkunde	150-210
(r) Geburtshilfe, Gynäkologie und Andrologie	120-180
(s) Interne Medizin und Klinische Seuchenlehre für Kleintiere und Einhufer	105-165
(t) Geflügelkrankheiten	30-60
(u) Interne Medizin und Klinische Seuchenlehre für Klautiere	120-180
(v) Orthopädie	45-90
(w) Lebensmittelhygiene einschließlich Milch- und Fleischhygiene	105-180
(x) Spezielle Pathologie	105-165
(y) Gerichtliche Veterinärmedizin	15-30
(z) Veterinärwesen	15-30
(aa) Wahlfächer	570-690
(bb) Vorprüfungsfächer der ersten Diplomprüfung:	150-180
(1) Zoologie	
(2) Haustierkunde	
(3) Grundlagen der Medizinischen Physik	
(4) Grundlagen der Medizinischen Biochemie	
(cc) Klinische Propädeutik und Klinische Übungen	495
(dd) Praktikum (6 Monate):	---
(1) Lebensmittelüberwachung (2 Monate, davon 1 Monat in einem Schlachthof)	
(2) Kliniken der Veterinärmedizinischen Universität Wien oder vergleichbare Einrichtungen nach Wahl (2-4 Monate)	
(3) nach Wahl an theoretischen Instituten der	

Chart 2

GRUPPE: Technische Studienrichtungen
STUDIENRICHTUNG: **Telematik**
STUDIENZWEIG: ---

Studienordnung: BGBl. Nr. 246/1991
Studiendauer: 10 Semester
Akademischer Grad: Diplom-Ingenieur (Dipl.-Ing.)
Gesamtstundenzahl: 2400 — 3150

Pflicht- und Wahlfächer:

(a) Mathematik	450
(b) Physik	90
(c) Elektrotechnik	255
(d) Elektronik	90
(e) Informationsverarbeitung	330
(f) Nachrichten- und Übertragungstechnik	
(g) Regelungstechnik	
(h) Gebundene Wahlfächer: Elektrotechnik, Elektronik, Nachrichten- und Übertragungstechnik, Informations- verarbeitung, Wirtschaftswissenschaften, Mathematik, Statistik, Biomedizinische Technik, Toningenieurwesen, Technologiefolgenabschätzung	
(i) Freie Wahlfächer	225

Chart 3

GRUPPE: Sozial- und wirtschaftswissenschaftliche Studienrichtungen
STUDIENRICHTUNG: **Betriebswirtschaft**
STUDIENZWEIG: **Angewandte Betriebswirtschaft**

Studienordnung: BGBl. Nr. 173/1984
Studiendauer: 9 Semester
Akademischer Grad: Magister der Sozial- und Wirtschaftswissenschaften (Magister rerum socialium oeconomicarumque,
Mag.rer.soc.oec.)
Gesamtstundenzahl: In den Pflicht- und Wahlfächern: 2445
In den Freifächern: ---

Pflicht- und Wahlfächer:

(a) Grundzüge der Betriebswirtschaftslehre	210-270
(b) Grundzüge der Informatik	120
(c) Relevante Teilbereiche der Volkswirtschaftstheorie und Volkswirtschaftspolitik	180-270
(d) Relevante Teilbereiche des Privatrechts und des öffentlichen Rechts	90-120
(e) Englische Wirtschaftssprache	240

(f) Eine zweite Fremdsprache	150-180
(g) Einführung in das Studium der Sozial- und Wirtschaftswissenschaften	30
(h) Vorprüfungsfächer der ersten Diplomprüfung:	
(1) Arbeits- und Betriebssoziologie	60
(2) Arbeits- und Betriebspsychologie	60
(3) Angewandte Mathematik und Statistik	90-120
(i) Allgemeine Betriebswirtschaftslehre	180-240
(j) Zwei besondere Betriebswirtschaftslehren nach Wahl (einschließlich EDV-gestützter Betrieblicher Informationssysteme), insbesondere: Betriebliches Finanz- und Steuerwesen, Betriebsinformatik, Controlling, Fertigungswirtschaft, Fremdenverkehr, Marketing und Internationales Management, Organisations-, Personal- und Managemententwicklung	

Chart 4

GRUPPE:	Geistes- und naturwissenschaftliche Studienrichtungen	
STUDIENRICHTUNG:	Geschichte	
STUDIENZWEIG:	Geschichte und Sozialkunde (Lehramt an höheren Schulen)	
Studienordnung:	BGBl. Nr. 76/1993	
Studiendauer:	9 Semester	
	Kombination mit einer zweiten Studienrichtung für das Lehramt	
Akademischer Grad:	Magister der Philosophie (Magister philosophiae, Mag.phil.)	
Gesamtstundenzahl:	In den Pflicht- und Wahlfächern:	930-1080
	In den Freifächern:	---

Pflicht- und Wahlfächer:

(a) Alte Geschichte	30-60
(b) Mittelalterliche Geschichte	30-60
(c) Neuere Geschichte	30-60
(d) Zeitgeschichte	30-60
(e) Österreichische Geschichte	30-60
(f) Wahlfächer zur Vertiefung	120-150
(g) Sonstige Wahlfächer	120-210
(h) Sozialkunde	120-150
(i) Fachdidaktik	90-150
(j) Fach der Diplomarbeit	30-60
(k) Vorprüfungsfach der ersten Diplomprüfung: Einführung in die Theorien, Methoden und Arbeitstechniken der Geschichtswissenschaft	120-180
(l) Vorprüfungsfächer der zweiten Diplomprüfung:	
(1) Einführung in das Verfassungs- und Rechtsleben	30
(2) Fach zur wissenschaftstheoretischen und philosophischen Vertiefung	30

Belgium
(French-speaking Community)

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Glossary

Agrégé(e) de l'enseignement secondaire inférieur
(Qualification to teach in lower secondary education)

Higher education degree (short-course education) conferring on the holder the right to teach one or more subjects in lower secondary education (12 to 15 years).

Agrégé(e) de l'enseignement secondaire supérieur
(Qualification to teach in higher secondary education)

Higher education degree (university and long-course higher) awarded after the degree and conferring on the holder the right to teach one or more subjects in higher secondary education (15 to 18 years) and in short-course higher education.

Agrégé(e) de l'enseignement supérieur
(Qualification to teach in higher education)

The highest university degree. This is generally awarded after the doctorate and confers on the holder the right to teach in university.

Candidate

First degree in university education or long-course education obtained after two or three years of studies depending on the disciplines.

Doctor

- (i) Doctorate without thesis: second-cycle university degree in medicine or veterinary medicine after four or three years of studies respectively and following the candidate's diploma.
- (ii) Doctorate with thesis: third-cycle university degree in all disciplines. This degree is awarded after several years (generally five years) of research after the second-cycle diploma. It requires the public presentation and defence of a thesis.

Grades légaux (Legal degrees)

Degrees sanctioning studies for which the conditions of access, period of studies, content of exams and change from one cycle of studies to another are determined by law. These degrees must be validated by the validation board, an independent commission whose members are appointed by the ministry responsible for higher education. The legal degrees are organised by the faculties of agronomy, applied sciences, law, medicine, philosophy and the arts, and sciences, and are required for the exercising of professions in the Belgian public sector, or of regulated professions (doctor of medicine, doctor of veterinary medicine, pharmacist, dentist, teacher, etc.).

Grades scientifiques (Scientific degrees)

Degrees sanctioning studies which are not subject to the legal prescriptions and whose curriculum is set freely by the university or which replace the legal degrees when not all the legal conditions of access have been fulfilled. The holders of a scientific degree awarded for legal curricula are not authorised to exercise the professions for which they have followed a course.

The scientific degrees are organised, among others, by the faculties of psychology and education, the political, social and economic sciences, computer science, etc. as well as for inter-faculty curricula and the colleges and institutes affiliated to those faculties.

NB: The distinction between the two types of university degree, the legal degree and the scientific degree, was abolished in the French Community of Belgium at the start of the new academic year in September 1995. This change of legislation provides, among other things, that all university courses will be sanctioned by a single type of degree: the academic degree. The legal and scientific degrees will, nevertheless, still be attributed to students who began the first year of their course in 1994 at the latest.

Gradué(e)

Non-university higher education diploma which sanctions studies (generally lasting three years) in the various subjects offered by the short-course higher education establishments.

Licencié(e)

Second-cycle degree of university education and long-course education, awarded at the end of a cycle of two or three years of studies after successfully completing the first cycle.

Seminar

Practical exercises under the direction of a member of the teaching body, involving the active participation of the students in the form of a personal piece of work and talks.

The seminar is the equivalent of laboratory work in the field of the exact and technical sciences or of clinical practice in the field of medical sciences.

I. The higher education system

The Belgian Constitution divides Belgium into three Communities: the Flemish, French and German-speaking Communities. The basic principles of the education system are set out in the Constitution. Education is organised on a completely independent basis, i.e. there is no State monopoly in the area of education. In accordance with the fundamental rights and freedoms, each individual has the right to education.

Education is the responsibility of the Communities: equal treatment is thus guaranteed for all educational establishments. The Communities control the organisation, official recognition and funding of educational establishments. They do not, however, hold any power with regard to determining the period of compulsory school attendance, dividing education into separate levels (primary, secondary, higher and university) or the retirement pension system for teaching staff; these matters remain the competence of the federal State.

Questions of a general interest are, to a great extent, settled by means of mutual consultations and agreements concluded between the Communities within the framework of the pursuit of their specific educational policies.

Education is provided in the language of the relevant region: in German in the German-speaking region, French in the Walloon region, Dutch in the Flemish region and in one of those two languages (French or Flemish) in the Brussels region. Students in higher education are free to follow studies in the language of their choice. They can even, in theory, move from one linguistic system to another during their studies, when the organisation of the studies permits this and with the agreement of the universities or higher education establishments.

The German-speaking Community has its own Ministry of Education, which is responsible for legislating at all levels of education (primary, secondary, higher). At higher education level, the German-speaking Community comprises only three higher education establishments (short-course teaching and paramedical higher education). The structure described below concerning the short-course higher education establishments situated in the French Community can, generally, also be applied to establishments situated in the German-speaking Community.

Establishments wishing to issue qualifications and official certificates, and to benefit from grants must satisfy certain legal conditions. Qualifications issued according to these conditions by official establishments or independent grant-aided establishments have the same official value.

The relationship existing between the French Community government and the education establishments varies insofar as the establishment concerned is run by the Community authority, by local authorities (province, commune, French Community Commission) or by a person of private law.

Higher education establishments other than universities generally have a relatively limited level of autonomy compared to their authority of supervision. Universities, on the other hand, have a high level of autonomy compared to the authorities with regard to the organisation of education.

Depending on the supervisory power, it is possible to distinguish between three types of education:

- (1) official education organised by the French Community;
- (2) official grant-aided education organised by the local authorities: communes, provinces, regions;
- (3) independent grant-aided education organised by private organisations based on particular religious, philosophical or teaching convictions.

General higher education policy is defined by the Ministry of Higher Education and Scientific Research, assisted in its role by a number of management and consultative bodies which fulfil particular tasks or roles at administrative or teaching level.

The Ministry of Education, Research and Training

Legislative body on matters of grants, organisation of education, status of the teaching staff and inspection of higher education.

Responsible for the general control in respect in legislative norms.

Responsible for the appointment of the teaching staff and for the Community's official education policy.

Responsible for validating non-university higher education qualifications and university education qualifications sanctioned by legal degrees (see glossary).

Responsible for the recognition of certificates and qualifications from foreign studies.

The permanent higher education council

Plays a consultative role regarding problems relating to two or more categories of higher education.

The higher sectoral councils

For each category (field of studies) of non-university higher education, there is a higher education council with a consultative power (examination of educational reform proposals, curricula content, etc.).

The French-speaking inter-university council (CIUF)

A consultative body for French-speaking universities concerning problems relating to university education. The CIUF also organises consultation between the French-speaking university institutions.

The validation board

Validates university qualifications awarded in disciplines organised at legal degree level (see glossary).

I.1. Higher education establishments

Higher education is divided as follows:

A — non-university higher education, which comes in two forms:

- (i) short-course education (*type court*);
- (ii) long-course education (*type long*);

NB: Long-course higher education is, according to the law, the same as university level. The difference between this type of education and university education, therefore, lies in the status of the establishments: in contrast to universities, long-course higher education establishments have no accreditation in the area of basic research.

B — university higher education;

C — other higher education.

I.1.1. Non-university higher education

Short-course education

Short-course higher education is intended to train middle management capable of carrying out or supervising the execution of highly scientific or technical tasks. The training is practical and directly based on the relevant profession.

Long-course education

Long-course higher education is intended to train senior managers and professionals. This education provides very advanced and scientific technological training in sectors more directly based on practical applications.

Fields of study

Short-course and long-course higher education establishments belong to one of the following seven categories:

- (1) technical
- (2) economic
- (3) agricultural
- (4) paramedical
- (5) social

(6) artistic

- (7) teaching.

Descriptions of education establishments

As far as short-course education establishments are concerned, they are not described in a uniform way and various names are used, including:

Institut d'enseignement supérieur économique de la Communauté française;
École normale libre subventionnée;
Institut supérieur pour les carrières auxiliaires de la médecine;
Institut provincial d'enseignement supérieur social.

With regard to long-course education establishments, a more limited number of descriptions are used, including:

Institut supérieur de commerce;
Institut supérieur industriel;
École d'interprètes internationaux;
Institut supérieur d'architecture;
Institut catholique des hautes études commerciales.

NB: A major plan to reform the structure of non-university higher education was adopted in August 1995 and entered into force during the academic year 1996/97.

The aims of the main changes are, among other things:

to regroup long- and short-course higher education establishments in multi-category complexes whose optimum size would make it possible to combine the necessary resources for their missions;
to increase significantly the autonomy of education establishments and extend their missions which, in addition to initial training, will have to be extended to continued training and applied research;
to organise studies in semesters;
to introduce a system to assess the quality of teaching.

I.1.2. Higher university education

University education is intended to train senior managers and professionals capable of holding responsibilities in the area of basic and applied research and in the area of devising and applying scientific research with a view to the development of new technologies. Considerable importance is attached to theoretical and specialist training as well as to science-based education and training.

Holders of university degrees are employed in a very wide range of senior posts in industry, public bodies, education and in the non-trade sector. A specific university education is not usually based on a particular profession, except for the regulated professions (lawyer, doctor, dentist, pharmacist, etc.). The full universities (*université de Liège, université libre de Bruxelles* (independent), *université catholique de Louvain*) are, by virtue of a decree, authorised to organise training in all the scientific disciplines grouped into three sectors (social sciences, sciences, medical sciences).

In the other university establishments (*université de Mons-Hainaut, faculté universitaire des sciences agronomiques de Gembloux* (Agronomic Sciences), *facultés universitaires Notre-Dame de la Paix à Namur, faculté polytechnique de Mons, facultés universitaires Saint-Louis, facultés universitaires catholique de Mons*), education is limited to a few disciplines relating to the three abovementioned sectors.

It is notable that the universities and university faculties cannot organise university studies in disciplines for which they have not been accredited by virtue of the law or of a decree. (In the rest of this chapter, the term 'university establishment' refers to all university educational establishments.)

A fundamental reform of the organisation of university education entered into force at the start of the new academic year in September 1995. This reform mainly aims to remove the distinction between university qualifications awarded as legal degrees and those awarded as scientific degrees (see glossary). A single type of 'academic' degree will be awarded by the universities. The new decree also grants greater autonomy to the universities, particularly with regard to setting the content of curricula and university cooperation.

University studies are organised into the following 22 fields, grouped into three sectors:

SOCIAL SCIENCES SECTOR:

religious sciences
philosophy
history

languages and arts

arts and archaeology
law
criminology
psychology
education sciences
economic sciences
political sciences
social sciences.

SCIENCES SECTOR:

sciences
applied sciences
agricultural sciences and biological engineering.

MEDICAL SCIENCES SECTOR:

medical sciences

dentistry
veterinary sciences
public health sciences
pharmaceutical sciences
physical education
physiotherapy.

I.1.3. Other higher education establishments

Some establishments offer courses in fields which go beyond the limits of traditional higher education. These establishments, which offer specific types of courses, are the academies, the colleges of visual arts, the institutes of broadcasting arts, the conservatories and other special establishments.

- (i) The academies and colleges of visual arts offer artistic education (graphic design, painting, fine arts) and prepare students for independent careers or careers as curators or restorers of works of art, careers in advertising agencies or in teaching.
- (ii) The institutes of the entertainment and broadcasting arts prepare students for careers in the entertainment field (actor, producer, television-related profession, etc.).
- (iii) The conservatories offer musical education and prepare students for freelance careers, careers as orchestral musicians or teachers.
- (iv) Higher religious education is a form of higher education which prepares students for the administration and teaching of the relevant religion (for pastoral work and religious education in lower secondary education).
- (v) The Royal Military College offers training which prepares cadets for careers as officers in the land, air and naval forces. This type of training can also be used in civilian life.

I.2. Number of students

In 1993/94, higher education establishments had 120 840 students, 22 339 of whom were foreign students.

These students were distributed as follows:

NB: In the German-speaking Community, the total student population in higher education (three short-course higher education establishments) was 174, some 20 of whom came from the Grand Duchy of Luxembourg.

I.3. Organisation of studies

I.3.1. Structure

Higher education is organised by the same law (1970) which categorises the three types of higher education according to the structure and objective of the courses offered. Specific regulations (decrees, departmental orders) structure each type of education, however.

Short-course studies (*type court*)

Studies coming under the heading of short-course education are given in the context of a single academic cycle of specialised training which generally extends over three years (four for certain types of training in higher paramedical education).

Long-course studies (*type long*)

Studies coming under the heading of university-level, long-course education are divided into two academic cycles: the first cycle covers a two-year period, the second, two or three years depending on the discipline.

The first cycle provides general basic theoretical and scientific training; the second one a more specialist scientific training, ending in the submission of a final dissertation and an oral examination.

NB: In the artistic field, various higher education courses are organised in a single academic cycle of four or five years.

These courses are not university level but generally cover a longer period than that of the short courses described above.

Both short and long courses include a theoretical education (lectures), practical training, laboratory work, written projects, a final dissertation and practical training courses.

University education

Studies coming under the heading of university education are divided into three academic cycles.

- (i) The first cycle covers a minimum period of two years (three years in medicine and veterinary medicine). This cycle includes a broad general scientific education which is vital to the continuation of the studies. It is characterised by the general nature of the subjects taught. The first year offers a global education in the various basic sciences of the relevant curriculum, alongside an initial approach to subjects closely linked to the scientific discipline concerned. From the second year on, the students follow a 'common core' of lectures to which a series of options chosen by each student are added, in preparation for the second cycle. The curriculum comprises theoretical lectures, practical exercises and seminars. The number of hours a year varies from 450 for the social sciences to 750 for the exact sciences.
- (ii) The second cycle focuses on specialist scientific instruction in each main subject and in a series of optional lectures and ends with the submission of a dissertation. This cycle lasts two or three years depending on the discipline (four years in medicine). In the second cycle, the role of individual work and group projects (seminars) becomes more important. The second cycle also includes the *agrégation de l'enseignement secondaire supérieur* which accredits the holder with a second-cycle diploma to teach at higher secondary education and short-course higher education level.

The first and second cycles comprise lectures, as well as seminars (social sciences) or laboratory work (sciences).

At the end of the first and second cycles, the students have the possibility of following an additional cycle on top of the first or second cycle, which enables them to obtain an additional certificate (*certificat complémentaire*) extending their education, either in the field of studies in which they are enrolled, or in another field.

(iii) The third cycle comprises specialist training (in-depth or specialisation studies), organised in the form of theoretical lectures and a set of seminars and lasting one or two years (up to six years in medicine). The third cycle also includes the doctorate and the *agrégation de l'enseignement supérieur* (qualification to teach higher education) essentially based on personal research work, which requires at least three to five years.

The legislation determines the minimum period of each cycle for each individual discipline. The student must successfully complete each cycle in order to be allowed to begin the next one.

I.3.2. The examinations

Non-university higher education

Examinations are governed by specific regulations for short and long-course education.

For both types, the following general provisions apply.

All the establishments are obliged to organise two examination sessions per academic year.

No candidate can sit the same examination before an examination board more than four times over a maximum period of two years, unless the candidate has been authorised for the third year by the Ministry of Higher Education.

Candidates are obliged to sit their examinations in the first session, except in the case of *force majeure*.

In order to pass, candidates must obtain at least 50% of the points for each test as well as at least 60% for the overall total of the examinations.

There are four pass grades:

'*Satisfaction*' (= 60% of points)

'*Distinction*' (= 70% of points)

'*Grande distinction*' (= 80% of points)

'*La plus grande distinction*' (= 90% of points).

Candidates who do not pass are either failed, in which case they must recommence the whole year, or referred, in which case they can resit the examinations in the second session.

The final examination consists of tests and assessments covering all the subjects comprising the curriculum of the last year. When the legislation regulating the relevant course requires an oral examination of a dissertation and an oral test, they take place at the end of the first examination session. The subject of the dissertation must relate to the objectives of the discipline or of the option chosen and must have been approved by the establishment's management.

The various tests which constitute the end-of-year examination are oral and/or written. The oral examinations are public.

University education

The academic year begins in September and ends towards the end of June or the first half of July. As a general rule, it comprises 30 weeks of lectures, seminars and practical work and is divided into two semesters. Lectures generally end in May.

The student usually has one or two weeks to prepare for examinations. Generally theoretical and practical, these are intended to check that the student has assimilated the material satisfactorily.

There are two examination sessions: May-June and August-September. Some universities organise examinations at the end of the first semester (January). These relate to all the subjects taught in the first semester.

The student sits a test on each subject separately. Candidates who fail during the first session can resit all the tests or some of them in the second session. A second failure means that they must recommence the year. The results of examinations passed with 70% can generally be carried over from one year to another. In accordance with the principle of university autonomy, there is no requirement relating to the marking system (marks range between 1 and 20). Each student's results are assessed as a whole by the examination board, which consists of all the examiners and whose decision is final. If the student is successful, the board declares that the student is authorised to begin the following year of studies and indicates the marks (which are similar to those applicable in non-university education).

In the event of failure, the board states whether the student has been referred, in which case he or she can resit the examination in a later session, or failed, in which case he or she has to recommence the year. In principle, a given examination (i.e. all tests referring to a year of studies) cannot be resat more than four times over a maximum period of two university years.

Candidates who pass the examination relating to a year of studies obtain a certificate. At the end of an academic cycle, they obtain a diploma and are authorised to begin the following cycle.

Students usually enrol in one of the various courses offered by the relevant university. In some cases, however, it is possible to enrol in individual lectures intended to complete the course in which the student is already enrolled (additional first and second-cycle qualification).

Students are free to enrol in the establishment of their choice.

I.3.3. The examining boards of the French Community

The examining boards of the French Community constitute examination systems organised by the Ministry of Education, Research and Training, which make it possible to obtain one of the qualifications usually awarded by a higher education establishment, without being enrolled in one of those establishments.

These boards are intended for self-taught students and those who have interrupted their studies. Not all qualifications can be obtained in the context of this system.

In short-course education, only qualifications from the paramedical sector can be obtained by this means: *gradué(e)s en logopédie* (speech therapy), *ergothérapie* (occupational therapy), *kinésithérapie* (physiotherapy), *infirmier(e) gradué(e) et spécialisé(e)* (nursing and specialist nursing), *accoucheuse* (midwife).

In long-course education, qualifications in *architecte* (architecture), *ingénieur industriel* (industrial engineering), *ingénieur commercial* (commercial engineering) and *licencié(e) en sciences commerciales* (business studies) can be obtained from the examining board.

A university education examining board of the French Community is formed at each university institution with a view to conferring academic degrees of the first and second basic cycles.

II. Qualifications and degrees

II.1. Qualifications giving access to higher education

Students holding the approved certificate of higher secondary education (CESS), awarded as from the school year 1993/94, either by a fully-fledged or social advancement secondary education establishment, or by an examining board of the French Community for secondary education, have access to higher education.

The certificate is widely valid in nature: whatever the type of secondary studies followed (general, technical or artistic), it enables its holder to gain access to all higher education courses (except for civil engineering studies and certain artistic education studies for which an entrance exam must be taken).

The higher secondary education certificate is awarded after a 12-year study period: six years of primary education and six years of secondary education.

II.1.1. Qualifications giving access to non-university higher education

Short-course education

Students wishing to gain access to short-course education must have obtained either the higher secondary education certificate (CESS) explained in II.1, whatever the year of issue, or a foreign qualification recognised as equivalent.

Specific examinations enable students without the required qualifications to gain access to certain courses.

- (i) An entry examination for social worker studies is organised in all establishments awarding this qualification.
- (ii) A preparatory test for short-course paramedical higher education studies is organised by the examining board of the French Community.
NB: Tests additional to the general conditions can govern access to certain specific studies.
- (iii) Access to courses in the artistic field is often subject to a test designed to assess the student's ability to draw and his/her mastery of working instruments.
- (iv) A medical examination and a test of physical ability are required to gain access to certain studies in the paramedical field as well as courses requiring the practice of sports and physical education.

Long-course education

In order to gain access to studies in the first cycle of long-course education, students must hold:

- (i) the higher secondary education certificate (CESS) accompanied by the qualification of aptitude for access to higher education (DAES) if these qualifications have been awarded by the end of the school year 1992/93 at the latest;
- (ii) or the higher secondary education certificate awarded as from the school year 1993/94, as explained in II.1;
- (iii) or one of the other qualifications required for access to university education and listed under point II.1.2 below.

II.1.2. Qualifications giving access to university education

Qualifications giving access to studies of the first cycle of university education are as follows:

- (i) certificate of approved higher secondary education awarded as from the school year 1993/94 (see II.1);

- (ii) qualification indicating ability to enter higher education (DAES);
- (iii) qualification of short-course, full-time higher education or a corresponding qualification awarded by a social advancement educational establishment;
- (iv) entry examination qualification for civil engineering studies;
 NB: Success in this examination, which is compulsory in order to gain access to civil engineering studies, also gives access to all first-cycle studies. The examination is organised by the university establishments which award the degree of civil engineer.
- (v) Attestation of success in one of the entry examinations organised by the university establishments;
 NB: This attestation gives access only to the studies in the discipline mentioned.
- (vi) foreign qualification or certificate of studies recognised as equivalent to those mentioned in (i), (ii) or (iii).

II.2. Intermediate diplomas in higher education

II.2.1. Intermediate diplomas in non-university higher education

Short-course education

Given that this type of education comprises only one three-year academic cycle (sometimes four-year), no intermediate diploma is awarded.

Short-course higher education leads to the achievement of a final diploma allowing the holder either to enter the job market immediately or to pursue or begin studies at long-course higher education or university education level (see below, under II.3.1).

Long-course education

Long-course higher education is divided into two academic cycles. After a first two-year cycle, the student is awarded the candidate diploma.

There are approximately 700 hours of lectures and practical exercises a year.

The candidate qualification is an intermediary one, which the student must hold in order to be able to begin the second cycle.

The objective of the cycle of lectures sanctioned by the candidate diploma is to offer the student general basic training in various subjects:

Candidat(e):

ingénieur industriel (industrial engineering)

architecte (architecture)

en sciences commerciales (business sciences)

en traduction (translation)

en sciences administratives (management sciences)

en communication appliquée (applied communication).

(Examples of diplomas are provided in the Annex.)

II.2.2. Intermediate diplomas in university education

University education is divided into three academic cycles.

After a first two-year cycle, the student is awarded the qualification of candidate. In medicine and veterinary sciences, this qualification is awarded only after three years of studies.

The non-exhaustive list of intermediate university diplomas given below is divided into two parts:

- (1) a first part showing the disciplines still awarded as a legal degree (see glossary) for students who have begun the first year of their course at the latest during the academic year 1994/95;
- (2) a second part showing the disciplines still awarded as a scientific degree (see glossary) for students who have begun the first year of their course at the latest during the academic year 1994/95.

Candidat(e) (1):

en philosophie (in philosophy)

en histoire (in history)

en philologie classique (in classical philology)

en philologie romane (in Romance philology)

en philologie germanique (in Germanic philology)

en droit (in law)

en sciences — mathématique, physique, chimie, géographie, géologie et minéralogie, biologie (in sciences — mathematics, physics, chemistry, geography, geology and mineralogy, biology)

en sciences pharmaceutiques (in pharmaceutical sciences)

en sciences médicales (in medical sciences)

en sciences vétérinaires (in veterinary sciences)

en science dentaire (in dentistry)

ingénieur civil (in civil engineering)

ingénieur agronome (in agricultural engineering).

Candidat(e) (2):

en psychologie et sciences de l'éducation (in psychology and educational sciences)

en sciences économiques et sociales (in economic and social sciences)

en sciences politiques et administratives (in political and management sciences)

en sciences économiques (in economic sciences)

en sciences religieuses (in theology)

en informatique (in computer science)

en éducation physique (in physical education)

en kinésithérapie (in physiotherapy)

etc.

II.2.3. Effects of intermediate diplomas on the continuation of studies

Students holding a diploma from the first academic cycle of long-course education and university education can continue their studies in the same discipline and obtain the final diploma or, in certain cases and under certain conditions, continue their second-cycle studies in a different discipline.

The change from one discipline to another involves the student sitting a series of examinations to bring him/her up to the same standard. However, this procedure is subject to the approval of the university authorities with regard to university education and of the Ministry of Higher Education and Scientific Research with regard to long-course education.

In accordance with the general legislation relating to dispensations in non-university higher education, students have the possibility of continuing their course by requesting a dispensation for lectures successfully completed with 12 marks out of 20 and included in a year of successful studies.

Dispensation requests must be sent by the educational establishment to the Ministry of Education. They are then submitted for the approval of the Higher Education Authority and each dispensation request is considered individually.

II.3. Final qualifications in higher education

II.3.1. Final qualifications in non-university higher education

Short-course education

These courses are organised in a single academic cycle covering three years, or even four for some courses in paramedical higher education, and lead to the achievement of a final diploma enabling the holder either to enter immediately the job market, or to continue his/her studies in long-course higher education or university education.

The wide variety of qualifications which can be obtained include:

gradué(e) in a specific subject

infirmier(e) gradué(e) (nursing diploma)

infirmier(e) gradué(e) spécialisé(e) (specialist nursing diploma)

assistant(e) social(e) (social worker)

conseiller(e) social(e) (welfare adviser)

bibliothécaire-documentaliste gradué(e) (librarian's diploma)

assistant(e) d'ingénieur (engineering assistant)
institutrice(maternel(le)) (nursery school teacher)
institutrice(ce) primaire (primary school teacher)
éducateur(trice) spécialisé(e)
agrégé(e) de l'enseignement secondaire inférieur (qualified lower secondary school teacher).

Long-course education

After successfully completing the first academic cycle, the candidate can be admitted to the second cycle. This second cycle, which lasts two or three years depending on the discipline, leads to the achievement of the final degree.

The final examination of the second cycle is completed by a final dissertation on a subject relating to one of the main subjects of the chosen specialisation.

The qualifications which can be obtained include the following:

architecte (architect)
ingénieur industriel (industrial engineer)
ingénieur commercial (commercial engineer)
agrégé(e) de l'enseignement secondaire supérieur pour les sciences commerciales (qualified higher secondary education teacher for business studies)
licencié(e) (degree graduate (in the same subjects as those mentioned in point II.2.1)).

(A detailed list of qualifications awarded by non-university higher education establishments and examples of degrees are given in the Annex.)

II.3.2. Final qualifications in university education

Before the reform of university studies (decree of 5 September 1994), the law distinguished between university courses sanctioned by a legal degree and university courses sanctioned by a scientific degree.

- (i) University courses leading to the achievement of a legal degree are defined by law and include the traditional university disciplines: philosophy, history, law, literature, sciences, medicine, pharmacy, agronomy, veterinary medicine, dentistry and applied sciences.

On the basis of legislative texts, the academic authorities defined the subjects which must be included in these curricula. These legal texts are enforced by the validation board, consisting of qualified magistrates and members of the Royal Academies of Medicine, the Sciences, French Language and Literature, the Arts and the Fine Arts.

- (ii) University courses leading to the achievement of a scientific degree are defined by the universities themselves and comprise, among others, the following disciplines: history of art, political and social sciences, economic sciences, psychology and educational sciences, religious sciences, physical education, etc.**

The universities guarantee the same standard of quality in the organisation of these studies with regard to the duration of the course, the number of lectures and the content of the studies.

From a strictly academic point of view (content, length and quality of lectures), there is no difference between the legal degrees and the scientific degrees.

The difference lies in the level of access to the professions, which, when they are regulated, currently require the possession of the legal qualification when it exists.

This 'legal degree'/'scientific degree' distinction was removed by the decree of 5 September 1994 relating to the system of university studies and academic degrees, which entered into force during the academic year 1995/96.

Students who began their studies before the academic year 1995/96 will, however, continue their studies under the old system and will be awarded qualifications either as a legal degree or as a scientific degree.

University studies are divided into three academic cycles.

- (i) The first cycle (see above II.1.2)
- (ii) The second cycle, intended to give the student a scientific knowledge of the subject, comprises almost exclusively specialist subjects which tackle the main problems relating to the scientific discipline of the main branch chosen.

For the various main subjects, lectures are also given on a number of connected subjects in each scientific field.

In the second cycle, the number of options is generally greater than in the first. The final examination of the second cycle is completed by a final dissertation on a subject relating to one of the main subjects of the chosen specialisation.

There is no dissertation in law, dentistry, pharmacy, medicine or veterinary medicine.

The second cycle (two, three or four years) leads to the achievement of the following qualifications:

licencié(e) (four to five years of study depending on the discipline) qualification awarded at the end of the second cycle;

maître (five years of study) second-cycle qualification awarded in three disciplines only: computer science, the economic sciences and applied economic sciences;

pharmacien (pharmacist) (five years of study) awarded at the end of the second cycle of pharmaceutical sciences — it does not require the submission of a final dissertation but a six-month practical training course in an approved pharmacy is compulsory;

ingénieur (engineer) (five years of study) awarded at the end of the second cycle of civil engineering studies (applied sciences), agricultural engineering (agronomy) studies, chemical and agricultural industries engineering studies;

docteur en médecine (Doctor of medicine) (seven years of studies) awarded at the end of the second cycle of medical studies;

docteur en médecine vétérinaire (doctor of veterinary medicine) (six years of study) awarded at the end of the second cycle of veterinary medicine studies.

NB: The doctors' degrees awarded in these two disciplines are second-cycle degrees which do not require the submission of a thesis, in contrast to the doctors' degrees awarded in the third cycle.

The second cycle also includes the *agrégation de l'enseignement secondaire supérieur* (qualification to teach in higher secondary education) which may be awarded one year after the second-cycle diploma; holders of this diploma are authorised to teach in secondary schools and in short-course higher education establishments.

- (iii) The third cycle

Various specialist training courses extending over a period of one to two years, or even six in medicine, are organised in the third cycle. Before the university studies' reform, these specialist courses were generally called 'special degrees' and, more rarely, additional certificates, additional diploma, special diploma courses, etc.

The abovementioned university studies' reform standardised the description of these third-cycle studies (apart from the doctorate).

The proposed degrees are: *diplôme d'études spécialisées* (DES) (specialist studies diploma) or *diplôme d'études approfondies* (DEA) (advanced studies diploma), depending on whether these studies are based solely on the specialisation in a specific discipline (DES) or on research, possibly in preparation for a doctorate (DEA).

The minimum duration of these courses is one year. The old qualifications will continue to be awarded to students who began their third-cycle studies under the old system.

Second-cycle qualification holders can also continue studies, in the third cycle, based on research, and obtain the following degrees:

Docteur (doctor) (with thesis), *agrégé de l'enseignement secondaire supérieur*.

The doctorate is accessible only to candidates deemed capable of producing independent and scientific research work. It requires an average of three to five years (or more) of work after obtaining the second-cycle diploma in the same discipline. Admission to doctoral studies is subject to the approval of the competent committee of the faculty, which decides whether the student has the necessary qualifications and the ability to undertake this type of study.

During the doctorate, the candidate is obliged to produce independent research work which contributes to scientific progress. The final examination consists of the defence of an original thesis and, where relevant, of one or more annexed theses during a public oral examination. The publication of all or part of the thesis is often required, either before this public examination or before the qualification is granted.

The *agrégation de l'enseignement supérieur* (qualification to teach in higher education) is the highest third-cycle university degree. Holders of this qualification are authorised to teach in university.

The doctorate and higher education qualification can be prepared in all the faculties offering full study curricula (first and second cycle).

The diploma qualification is always followed by the name of the faculty.

(Examples of diplomas are given in the Annex.)

II.3.3. Effects of final qualifications on the continuation of studies

Short-course education diplomas

Holders of a short-course education diploma (a single cycle of studies) can immediately enter the job market or, if they so wish, continue their studies in long-course education or university education.

In this case, they may, if they continue studies in the same discipline, benefit from 'bridging courses' possibly enabling them to enter the second cycle.

Diplomas awarded at the end of course cycles including a bridging course have the same value as those awarded at the end of a normal cycle.

Should the student continue studies in a different discipline, he or she will probably have to recommence the whole cycle of studies but may be able to benefit from dispensations for examinations he or she has already sat during the course of a successful year in short-course higher education.

Long-course education degrees

The opportunities to continue university studies described above are also valid for holders of a long-course higher education degree.

Students holding a long-course degree may, in addition, continue specialisation studies, advanced studies or a doctorate at university.

University education degrees

Holders of a university degree who wish to obtain another degree in a connected discipline (same field of studies) are exempted from examinations for subjects for which they have already sat an examination. The examination board determines the subjects for which a dispensation may be granted.

Holders of a second-cycle qualification may also continue third-cycle studies.

III. Specific types of final qualifications in higher education

III.1. Royal Military Academy

The Royal Military Academy is responsible to the Ministry of Defence.

This school trains career officers for the Belgian and foreign armed forces and police force. It includes a 'polytechnic', applied sciences section, and an 'all-services', social sciences, aeronautical and naval section.

Armed forces candidates are admitted by the National Defence Ministry, and police force candidates by the Chief of Police, according to the results of a competitive entry examination.

The diplomas awarded by the Royal Military Academy are equivalent to and have the same validity as the corresponding university degrees.

Polytechnic section

The curriculum of the competitive examination for entry to this section is similar to that of the entry examination for civil engineering university studies (see II.1.2).

Students who have successfully followed the course of the first cycle (two years) obtain a diploma in civil engineering from an *École polytechnique*.

After successfully completing studies in the second cycle (three years), the sub-lieutenant cadets obtain the degree of civil engineer from an *École polytechnique*.

All-services section

The subject of the competitive examination for entry to this section broadly corresponds to that of the last two years of general secondary education.

After successfully completing the first cycle (two years), the students obtain a diploma in social and military sciences. The course curriculum for the second cycle (two years) depends on the armed force to which the career officer candidates belong. The titles awarded are:

licencié(e) in:

- social and military sciences (for the land forces or medical service);
- aeronautical and military sciences (for the air force);
- naval and military sciences (for the navy).

After obtaining the title of *candidate* in social and military sciences, the officer-cadets of the police force leave the Royal Military Academy and continue the two degree-course years at Liège University with a view to obtaining the title of *licencié(e)* in criminology.

In both sections, the future officers receive military training in addition to the scientific education.

III.2. Brussels University Faculty of Protestant Theology

This faculty is the only Belgian establishment to offer a university education in French and Dutch. The faculty offers theological training for pastors and teachers of the Protestant religion.

Admission conditions are the same as for the university.

The following qualifications can be obtained:

- licencié(e)* in Protestant religious studies (in five years);
- licencié(e)* in Protestant theology (in five years);
- doctorate of Protestant theology (in a minimum of one year after obtaining the degree).

III.3. The Luxembourg University Foundation

The objective of this establishment is to encourage and coordinate applied scientific research and certain types of third-cycle courses (particularly in the scientific field) in the province of Luxembourg, in collaboration with the equivalent universities and institutions.

In this context, the foundation offers an additional scientific course for researcher-doctorate students and offers one-year courses leading to the achievement of a diploma in advanced third-cycle studies in environmental sciences, agro-meteorology and water management.

Students can also follow courses leading to the achievement of a doctorate in environmental sciences. The courses leading to the doctorate mainly consist of a piece of research work (in the form of a thesis) on problems of water management, energy management and rural management.

III.4. Higher education in art

Artistic education includes the artistic disciplines taught in the academies and colleges of visual arts, the musical disciplines and applied language arts organised in conservatories, as well as disciplines oriented towards the field of the entertainment arts.

Graphic arts academies and colleges

These establishments offer education in the field of visual and graphic art for holders of a higher secondary education certificate or equivalent qualification, who have passed a test of artistic ability.

After the successful completion of four years of study, the four establishments award the following qualifications:

diplôme du deuxième degré in:

visual and applied arts;
graphic arts and photography.

The colleges of visual arts

The entry conditions are the same as for long-course education (see II.1.1) together with a test of artistic ability.

After the successful completion of five years of study, the two establishments concerned award the title of *diplômé(e) du troisième degré* with reference to the studio, followed, for example, by: photography, industrial design, restoration of works of art, fashion design, etc.

Institutes of the entertainment and broadcasting arts

The entry conditions are the same as above. After the successful completion of four years of studies, the two establishments concerned with this type of teaching award the title of *diplômé(e) des arts du spectacle et technique de diffusion* (entertainment arts and broadcasting techniques) in one of the following specialisations: film, radio, television or theatre.

The conservatories and the Higher Institute of Music

Entry into the three conservatories and the Higher Institute of Music depends on an examination which reveals the intellectual and artistic capabilities of the candidate. Depending on the chosen discipline, some of these establishments also require the candidate to have the certificate of higher secondary education or an equivalent qualification.

The qualifications awarded in the conservatories are:

diplôme de premier prix
diplôme supérieur
diplôme d'aptitude pédagogique à l'enseignement.

These qualifications are completed by the discipline studied.

The Higher Institute of Music awards the qualifications of:

régent en pédagogie musicale
lauréat.

These qualifications are also followed by the name of the discipline studied.

Diagram of the higher education system in Belgium of the francophone community

Communauté française de Belgique

Enseignement supérieur universitaire et non universitaire
1^{er}, 2^e et 3^e cycles

- (1) Les Hautes écoles comprennent huit catégories: agricole, artistique, économique, paramédicale, pédagogique, technique, sociale, traduction-interprétation, auxquelles il y a lieu d'ajouter l'architecture, hors Hautes écoles.
- (2) Les spécialisations en médecine = de trois à six ans.
- (3) Les doctorats avec thèse = de quatre à six ans.
- (4) DES = diplôme d'études spécialisées; DEA = diplôme d'études approfondies.
- (5) Docteur en médecine = sept ans; docteur en médecine vétérinaire = six ans.
- (6) Ingénieur, maître, pharmacien, dentiste, ingénieur agronome, licencié à trois ans.
- (7) Graduat = trois ans, hormis a) spécialisation infirmier(e); b) kinésithérapie = quatre ans.

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Annex

Final qualifications in non-university higher education

(A) Short courses (generally three-year duration)

Wording of the qualification with the number of years if more than three

Higher education in agriculture (three years)

Gradué(e) in:

architecture des jardins et du paysage (landscape gardening)

agronomie (agronomy) (with different options)

Higher education in art (generally three years)

Gradué(e) in:

architecture d'intérieur (interior design)

arts du spectacle et techniques de diffusion (entertainment arts and broadcasting techniques)

arts du tissu (textile arts)

arts plastiques (visual arts)

décoration pour industrie de la céramique, du verre et du livre (decoration for the ceramics, glass and book industry)

dessin d'architecture (architectural design)

esthétique industrielle (industrial design (four years))

Higher education in economics (three years)

Gradué(e) in:

assurances (insurance)

commerce extérieur (foreign trade)

comptabilité (accountancy) (with options)

droit (law)

photographie (photography)

publicité (advertising)

publicité — étalage (advertising — window dressing)

stylisme — modélisme (fashion design)

gestion hôtelière (hotel management) (with options)

gestion des transports et logistique d'entreprise (transport management and business logistics)

informatique (computer science)

marketing (marketing)

relations publiques (public relations)

secrétariat de direction (executive secretarial studies) (with options)

tourisme (tourism) (with options)

Higher education in paramedical studies (generally three years)

Accoucheuse (midwife) (four years)

Assistant(e) de laboratoire clinique (clinical laboratory assistant)

Gradué(e) in:

audiologie (audiology)

biologie médicale (medical biology) (with options)

chimie clinique (clinical chemistry)

diététique (dietetics)

ergothérapie (occupational therapy)

kinésithérapie (physiotherapy)

logopédie (speech therapy)

infirmier(ère) gradué(e) (nursing diploma)

infirmier(ère) gradué(e) spécialisé(e) (specialist nursing diploma) (four years)

Higher education in teaching (three years)

Agrégé(e) de l'enseignement secondaire inférieur (qualification to teach lower secondary education)

Éducateur(trice) spécialisé(e) (teacher of children with special educational needs)

Instituteur(trice) maternel(le) (nursery school teacher)

Instituteur(trice) primaire (primary school teacher)

Higher education in social studies (three years)

Assistant(e) en psychologie (assistant in psychology) (with options)

Assistant(e) social(e) (social worker)

Conseiller(e) social(e) (welfare adviser)

Éducateur(trice) gradué(e) en éducation physique (qualified teacher of physical education)

Bibliothécaire-documentatiste gradué(e) (qualified librarian)

Gradué(e) in:

communication (communication)

gestion des ressources humaines (human resources management)

Higher education in technical studies (three years)

Assistant(e) d'ingénieur (engineering assistant)

Gradué(e) in:

biochimie (biochemistry) (with options)

bureau de dessin et organisation en construction (drafting and organisation in the construction industry)
chimie (chemistry)
construction (construction)
électromécanique (electromechanics)
électronique appliquée (applied electronics)
électronique médicale (medical electronics)
industries graphiques (graphic industries)
informatique industrielle (industrial computer science)
mécanique (mechanics)
moteurs thermiques et expertise automobile (thermal engines and car engineering)
régulation — automation (control — automation)
techniques de la cinématographie (cinematographic techniques)
techniques de la photographie (photographic techniques)
technologie de l'informatique (computer science technology)
techniques d'exploitation des énergies thermiques (thermal energy exploitation techniques)

(B) Long courses (four or five-year period)

Wording of the qualification with the number of years if over four

Higher education in agriculture

Ingénieur industriel agricole (agricultural industrial engineer) (with options)

Higher education in art

Architecte (architect) (five years)

Higher education in economics

Ingénieur commercial (commercial engineer) (five years)

Licencié(e) in:

sciences administratives (management studies)

sciences commerciales et administratives (commercial and management studies)

sciences commerciales et consulaires (commercial and consular studies)

sciences commerciales et financières (commercial and financial studies)

interprétation (interpreting)

traduction (translating)

Higher education in teaching

Agrégé(e) de l'enseignement secondaire supérieur (qualification to teach in higher secondary education) (four to five years plus one year)

Higher education in social studies

Licencié(e) en communication appliquée (in applied communication)

Higher education in technical studies

Ingénieur industriel (industrial engineer) in

chimie (chemistry) (with options)

construction (construction) (with options)

électricité (electricity) (with options)

électronique (electronics)

énergie nucléaire (nuclear energy)

industrie (industry)

mécanique

(mechanics)

Final qualifications in university education

Wording of the qualification with the number of years if over four

LD = legal degree (*grade légal*); SD = scientific degree (*grade scientifique*)

These degrees have been replaced by academic degrees since September 1995 but, nevertheless, will still be attributed for students who began the first year of their course in 1994/95 at the latest.

Agronomy

Ingénieur agronome (agricultural engineer) (LD) (five years)

Ingénieur chimiste et des industries agricoles (chemical and agricultural industries engineer) (LD) (five years)

Law

Licencié(e) in:

criminologie (criminology) (SD) (five years)

droit (law) (LD) (five years)

notariat (notarial profession) (LD) (five years plus one year)

Physical education — physiotherapy

Licencié(e) in:

éducation physique (physical education) (SD)

kinésithérapie (physiotherapy) (SD)

réadaptation et kinésithérapie (rehabilitation and physiotherapy) (SD)

Medicine

Docteur en médecine, chirurgie et accouchements (doctor of medicine, surgery and midwifery) (LD) (seven years)

Docteur en médecine vétérinaire (doctor of veterinary medicine) (LD) (six years)

Licencié(e) in:

biologie médicale appliquée (applied medical biology) (SD)

nutrition humaine (human nutrition) (SD)

science dentaire (dentistry) (SD) (five years)

sciences hospitalières (hospital sciences) (SD)

sciences socio-médicales et hospitalières (socio-medical and hospital sciences) (SD)

sciences sanitaires (health sciences) (SD)

technologie biomédicale (biomedical technology) (SD)

Pharmacien (pharmacist) (LD) (five years)

Philosophy and the arts

Licencié(e) in:

philosophie (philosophy) (LD)

assistance morale laïque (ethical assistance in State education) (SD)

histoire (history) (LD)

histoire de l'art et archéologie (history of art and archeology) (SD)

sciences historiques (historical sciences) (SD)

langues et linguistique (languages and linguistics) (SD)

linguistique (linguistics) (SD)

philologie classique (classical philology) (LD)

lettres classiques (classical arts) (SD)

philologie et histoire orientale (philology and oriental history) (SD)

slavistique (Slavic studies) (SD)

philologie germanique (Germanic philology) (LD)

lettres (germaniques...) (the arts (Germanic...)) (SD)

philologie romane (Romance philology) (LD)

lettres (romanes...) (the arts (Romance...)) (SD)
langue et littérature françaises (French language and literature) (SD)
études théâtrales (theatre studies) (SD)

Sciences

Licencié(e) in:

sciences botaniques (botanical sciences) (LD)
sciences chimiques (chemical sciences) (LD)
sciences géographiques (geographical sciences) (LD)
sciences géologiques et minéralogiques (geological and mineralogical sciences) (LD)
sciences mathématiques (mathematical sciences) (LD)
sciences physiques (physical sciences) (LD)
sciences zoologiques (zoological sciences) (LD)
biochimie (biochemistry) (SD)
informatique (computer science) (SD)

Applied sciences

Ingénieur civil (civil engineering) (five years)

architecte (architect) (LD)
chimiste (chemist) (LD)
des constructions (construction engineer) (LD)
électricien (electrician) (LD)
géologue (geologist) (SD)
en informatique (computer science) (SD)
en informatique et gestion (computer science and management) (SD)
en mathématiques appliquées (applied mathematics) (SD)
mécanicien (mechanical engineer) (LD)
mécanicien et électricien (mechanical engineer and electrician) (LD)
métallurgiste (metallurgist) (LD)
des mines (mining) (LD)
physicien (physicist) (SD)

Educational studies — psychology

Licencié(e) in:

logopédie (speech therapy) (SD) (five years)
psychologie (psychology) (SD) (five years)
sciences de l'éducation (educational studies) (SD) (five years)
sciences psychologiques et pédagogiques (psychological and educational sciences) (SD) (five years)
psychopédagogie (educational psychology) (SD) (five years)
sciences psychopédagogiques (educational psychology sciences) (SD) (five years)
politiques et pratiques de formation (educational policies and practice) (SD)
sciences de la famille et de la sexualité (sciences of the family and sexuality) (SD)
sciences et techniques de la formation continue (sciences and techniques of continuing education) (SD)

Religious studies

Licencié(e) in:

philologie biblique (biblical philology) (SD)

***sciences religieuses* (religious studies)**

science religieuse protestante (Protestant religious studies) (SD) (five years)
théologie protestante (Protestant theology) (SD) (five years)

Social, political, economic sciences

Administration and management

Ingénieur commercial (commercial engineer) (SD) (five years)

Licencié(e) in:

- administration des affaires* (business administration) (SD)
- administration et gestion* (administration and management) (SD)
- affaires publiques et internationales* (public and international affairs) (SD)
- sciences économiques appliquées* (applied economic sciences) (SD)

Economic sciences

Licencié(e) in:

- sciences économiques* (economic sciences) (SD)
- sciences économiques et sociales* (economic and social sciences) (SD)

Political sciences

Licencié(e) in

- sciences politiques* (political sciences) (SD)
- sciences politique et administration publique* (political science and public administration) (SD)
- politique économique et sociale* (economic and social policy) (SD)
- sciences politiques et administratives* (political and administrative sciences) (SD)

Social sciences

Licencié(e) in

- arts et sciences de la communication* (communication arts and sciences) (SD)
- communication* (communication) (SD)
- informatique et sciences humaines* (computer science and human sciences) (SD)
- journalisme et communication* (journalism and communication) (SD)
- sciences du travail* (labour sciences) (SD)
- sciences sociales* (social sciences) (SD)
- sociologie* (sociology) (SD)
- travail social* (social work) (SD)

For all the abovementioned courses it is also possible to obtain the following qualifications:

Agrégation de l'enseignement secondaire supérieur (qualification to teach in higher secondary education): one year (during or after the second degree)

Doctorat (doctorate): in general five years (at least one year after the second degree)

Agrégation de l'enseignement supérieur (qualification to teach in higher education): after the doctorate

NB: This list does not mention the various possibilities of third-cycle specialisations or studies offered by various French-speaking universities in Belgium.

The reform of the organisation of university education which came into force in September 1995 divided the studies into three sectors and 22 fields. This new distribution will lead to a modification of qualification titles which is not yet known.

Curriculum — Long-course education

Institut supérieur de commerce

Candidat(e) en sciences commerciales (Diploma in Business Sciences) (two years of studies)

A year of studies comprises 30 weeks of lectures with an average of 24 hours of lectures a week. The figures given in brackets in the list of lectures indicate the number of hours of lectures a week.

Compulsory lectures of first year:

English (minimum two h) plus two languages chosen from Dutch, German, Spanish, Italian, Portuguese and Japanese (minimum

two h for each language);

mathematics (minimum two h);

philosophy, psychology, sociology (three h);

finance and accounting (three h);

general and industrial economics, macroeconomics (four h);

European law and constitutional law, private law (three h).

Compulsory lectures of second year:

English (minimum two h) plus the continuation of two languages chosen in the first year (minimum two h for each language);

mathematics, probability, statistics (minimum three h);

personnel management (one h);

computer science (two h);

analytical accounting (one h);

marketing (one h);

microeconomics, introduction to the public economy (three h);

business law (two h);

logistics and production (one h);

Summary work assessed at two hours a week which relates to a theoretical or applied subject. This work is carried out by a team of two students and is completed by the writing and defence of a report of a dozen pages. The objective of this is to reveal the student's capacity to express his or her thoughts orally and in writing, and their ability to summarise a variety of subjects and to work as a team.

Licencié(e) en sciences commerciales et financières (degree in commercial and financial studies)

Finance option (two years of studies)

One year of studies comprises 30 weeks of lectures with an average 26 hours of lectures a week. The figures given in brackets in the list of lectures indicate the number of hours of lectures a week.

Compulsory lectures of first year:

English (minimum two h) plus the continuation of the languages studied in the diploma (chosen from Dutch, German, Spanish, Italian, Portuguese and Japanese (minimum two h for each language);
financial mathematics, data analysis, optimisation (three h);
organisational theory and practice (one h);
human resources management (one h);
databases, computer management systems analysis (two h);
management accounting, company accounting (two h);
market research (one h);
economic policy (one h);
tax legislation, company law (three h);
business interaction (one h).

Five optional lectures to be chosen from a list of some 20 lectures specifically oriented towards finance (five h).

Compulsory lectures of second year:

English (minimum two h) plus continuation of two previously chosen languages (minimum two h for each language);
design of information systems, business financing (two h);
financial economy (one h);
business strategy, preparation for the role of manager (seminars) (three h);
strategic marketing management (one h);
training courses in companies (five h);
dissertation

This final project is a personal contribution to the study of a management problem within a private business, public body or an international organisation. The dissertation is directly linked to the subject matter chosen and to the training course in the company at the beginning of the second degree. The dissertation represents a personal piece of work assessed at 120 hours for the year.

Curriculum — Short-course education

Accoucheuse (midwife) (four years of studies)

Degree of the government of the French Community relating to the conditions of conferment of the midwifery qualification.

One year of studies comprises 30 weeks of lectures with, on average, 32 hours of activities a week. In order to be admitted to the final examination, the student must produce a training course record in which it is noted that he or she has successfully completed a minimum of 1 980 hours of training courses. The study curriculum must comprise at least 1 980 hours of theoretical lectures. The figures given in brackets in the list of lectures indicate the total number of hours of lectures out of the whole course.

Theoretical and technical lessons:

nursing sciences (330 h): ethics, nursing care in the area of general and specialist medicine, paediatrics, hygiene, health education;
obstetrical sciences (330 h): anatomy and physiology, embryology, pregnancy, pathology, obstetrical equipment, analgesia, anaesthetics and resuscitation;
biomedical sciences (615 h): anatomy and physiology, pathology, bacteriology, virology, immunology, biochemistry and radiology, dietetics, hygiene, pharmacology;
social sciences (465 h): sociology, psychology, pedagogy, health and social legislation, deontology, sex education, legal aspect of the profession.

Lectures left to the choice of the establishment:
optional lessons (240 h).

Professional practice:

training courses (1 980 h) pre and post-natal guidance, ward, labour ward, care of the mother and newborn, neonatology;
technical experience provided for in the EU directives: 40 births, 100 prenatal examinations, care of 40 mothers showing signs of risk and care of 100 mothers and newborn babies.

Examples

Example of intermediate long-course higher education qualification

Diplôme de candidat traducteur (diploma in translating) (duration: two years)

Example of long-course higher education qualification

Diplôme d'architecte (architectural qualification) (duration: five years)

Example of short-course higher education qualification

Diplôme de gradué(e) en marketing (marketing graduate qualification) (duration: three years)

Example of university higher education qualification

Diplôme de docteur en médecine, chirurgie et accouchements (qualification as doctor of medicine, surgery and midwifery)
(duration: seven years).

Addendum

Higher education reforms

Higher education has recently been the subject of extensive reform, to which reference is made in Section I.1.2 of this document. Apart from what is added here, the document was drawn up at a time when the reforms had been ratified by formal decree but not yet applied in the case of higher education and were no more than a project in the case of non-university higher education.

Now that these dual reforms are in force, there is a need to present them in more depth than in the aforementioned pages, despite the fact that new implementing decrees are still to be passed and the difficulties raised by some of those already passed are likely to bring amendments in the near future.

I — Decree of 5 September 1994 on university studies and academic degrees

This decree, which entered into force at the beginning of the 1995/96 academic year, essentially replaces the coordinated laws of 31 December 1949 on the conferment of academic degrees.

The new measures have the effect of:

increasing the autonomy of the institutions,
taking better account of the needs and interests of the student,
simplification at two levels:

- (a) in the statutory status of the degrees awarded
- (b) in the names of the various diplomas.

(1) Measures introducing greater autonomy

The decree of 5 September 1994 is not the first piece of legislation to grant more autonomy to universities, or even the only one in this period, as a decree of 10 April 1995, for example, confers greater responsibility upon universities in appointing teaching and scientific personnel.

As regards our own field of interest, the academic authorities receive new responsibilities in two main areas:

they themselves determine the content of courses, provided they include at least the study of the principal subject matter of the discipline which determines the degree together with subject matter ensuring the general education of students;
they are competent in the area of the equivalence of foreign diplomas in all cases where the request is for academic purposes alone (the continuation of studies), and for higher secondary education teaching diplomas and third-cycle diplomas (see also the implementing decree of 28 August 1996).

(2) Measures introducing greater flexibility for students

- (a) The diploma of aptitude for higher education (DAES) having been abolished from the end of 1993, the certificate of advanced secondary education (CESS) now permits access to any form of higher education (except for university studies in applied science, for which a special admission examination still applies), provided:

it was obtained after the 1992/93 academic year;
certain strands of professional secondary education have not been taken.

Candidates for higher education who do not satisfy these conditions can still be awarded the DAES by a jury of the French-speaking Community (foreign nationals seeking to study in Belgium are often required to pass through this channel).

- (b) For candidates who do not satisfy the normal conditions for access to higher education, the principle of admission examinations is now of general application (the programme was determined by the decree of 29 May 1996).
- (c) As regards access to the second cycle, although the now long-planned system of bridges between various types of education is not yet in place, universities can enrol students who have not completed their *candidat* (first two years of university) on the basis of professional experience or personal abilities.
- (d) There are two possibilities open to students seeking to spread one year of study over an extended period, subject to the conditions laid down by the university authorities:

general case: one year of study spread over several years;

special case: one year of study spread over two years for a student who enrolls for the first time and decides to change course during the year or concludes that he or she will not be able to pass the first year all at once.

- (e) Although universities have more scope for refusing to enrol a student, insofar as the provisions concerning university financing have become more restrictive (see below, on the subject of the *Hautes écoles*), students also have a means of appeal.

(3) *Simplifying measures*

- (a) As already pointed out, there are no longer legal degrees and scientific degrees but simply academic degrees, thereby eliminating the differences in terms of professional consequences which the former distinction could create.
- (b) As we have also seen, university studies cover 22 areas, divided into three sectors (human and social sciences, sciences, health sciences) leading to the basic diplomas according to the list determined by the decree of 20 March 1996. There are 114 designations (including both first and second-cycle diplomas).

The most radical simplification is in the terminology concerning other diplomas which must now all include the generic indication of the category of studies concerned:

additional study diploma in... for additional training in the first cycle (DEC1) or second cycle (DEC2), organised over a period of one year;

specialised study diplomas in... and **advanced study diploma in...** for third-cycle courses preparing either for specialisation (DES) or research (DEA).

II — Decree of 5 August 1995 determining the general organisation of higher education in the *Hautes écoles*

This new decree, which entered into force in September 1996, largely replaces the law of 7 July 1970 on the general structure of higher education.

It reorganises higher education into the *Hautes écoles*, in the interests of rationalisation.

Not only has the system of study in non-university education been profoundly modified, but the institutional infrastructure also. A total of 107 higher education establishments offering long-type or short-type courses are to be regrouped, according to the provisions of the decree, into 30 *Hautes écoles*. In principle, although in practice this is not always the case, they offer long or short courses of higher education in several categories.

Each regrouping is based on an educational, social and cultural project which defines the objectives of the *Haute école* and the means to be implemented in order to achieve them.

The *Hautes écoles* cover three traditional networks (French-speaking Community, funded official, funded free) and are divided into five zones.

Not included are establishments providing exclusively artistic education, which means, among others, the seven schools of architecture to which the former legislation continues to apply.

The creation of the *Hautes écoles* generally and practically promotes a bringing together of the two types of non-university higher education, not only by incorporating them within single units (which was the exception before) but also by separating higher education from secondary education, as no higher educational establishment can also continue to provide secondary education. At the same time, the changes brought by the decree of 5 August 1995 bring an overall convergence in line with the university system, while retaining the specific identity of three kinds of education.

More specifically, the innovations introduced by the decree can be classified into three groups.

(1) *Changes which involve no particular convergence with respect to university education*

These are:

- the creation of a new category: higher education courses in translation and interpreting;
- the introduction of a system of quality control for educational activities;
- the setting up of a structure for student participation in the management of the *Hautes écoles*.

(2) *Changes which reduce the previous gap between the various kinds of education*

This includes:

- the creation of specialisation studies leading to a specialisation diploma (DS, one year) in short-type higher education, and higher specialisation courses leading to a higher specialisation diploma (DESS, one or two years) in long-type higher education;
- the widening of the mission of the *Hautes écoles* to include continuous training and applied research;
- awarding the *Hautes écoles* responsibilities in granting dispensation, with the resultant possibility of departing from the minimum hours of study;
- allowing each *Haute école* to draw up its own study regulations;
- the introduction of a system of bridges, the general principles of which are still to be implemented at government level.

(3) *Changes introduced simultaneously in all kinds of education*

These include:

- the redefining of conditions of access, eliminating the former difference between short-type higher education (access on the basis of the CESS) and long-type university higher education (access on the basis of the CESS plus the DASS); plus the possibility of access to a second cycle on the basis of professional experience;
- the possibility for a student to spread a one-year course of study over two or more years in accordance with the provisions as described above in connection with university education;
- the awarding of competence to the *Hautes écoles* to refuse to register a student who cannot be funded (a right of appeal is provided, as is the case for university education).

The details of this last provision are expanded upon in a decree of 2 July 1996, subsequently amended. The main effect is that a student who fails the same year of study on two occasions, irrespective of whatever changes he or she may have made from one academic year to the next in terms of orientation or long- and short-type courses, may be denied the option of enrolling again; the student is given a further chance if at least one of these two failed academic years is a year of university study. Also, from the year 1997/98, the first two years of any course must be successfully completed within a maximum of three years.

Belgium
(Flemish Community)

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Abbreviations

<i>AG</i>	<i>Academische graad</i>		
<i>VLOR</i>	<i>Vlaamse Onderwijsraad</i>		
<i>GGSO</i>	<i>Gehomologeerd Getuigschrift van het secundair onderwijs</i>		
<i>VLIR</i>	<i>Vlaamse</i>	<i>Interuniversitaire</i>	<i>Raad</i>

Glossary

Geaggregeerde voor het lager secundair Onderwijs

Higher education degree entitling the holder to teach one or several subjects in lower secondary education.

Geaggregeerde voor het Onderwijs

Higher education degree awarded by universities either simultaneously with or after the *licentiaat* from *hogescholen* and entitling the holder to teach one or several subjects in upper secondary education.

Doctor

The highest university degree. It is awarded after the presentation of a scientific dissertation (*doctoraat*) and is the degree that entitles the holder to teach at universities and non-university higher education (long-type) institutions.

Kandidaat

First university degree or long-type higher education degree obtained after two or three years of study.

Gegradueerde

Degree in one-cycle non-university higher education awarded upon completion of studies in the various subjects offered by a specific institution.

Licentiaat

Second university degree and final degree of two-cycle non-university higher education. It is awarded at the end of a two or three-year course of study following the *kandidatuur*.

Gediplomeerde

The degree obtained after the additional and specialisation courses at universities and *hogescholen*.

Hogescholen

Non-university

higher

education

institutions.

I. Higher education system in general

The basic principles of the education system are defined in the Constitution.

The Constitution divides Belgium into three Communities, Flemish, French-speaking and German-speaking, which are entirely responsible for education, except for the determination of the compulsory schooling period, the division of education into levels (lower, secondary, higher and university education) and the staff pension system, which remain on the federal level.

In future, educational affairs of common interest will be to a larger extent regulated by mutual consultation and by conventions between the Communities as they pursue their own educational policies.

The organisation of education is entirely open, i.e. there is no State education monopoly. Everyone has the right to education, honouring fundamental rights and freedoms.

Institutions wishing to award recognised diplomas and certificates and wishing to receive subsidies must satisfy the relevant legislative conditions. Diplomas awarded under these conditions, whether by public educational institutions or by free subsidised institutions, have equal official value.

In this way, all education institutions are guaranteed equal treatment.

II. Higher education in the Flemish Community

In the Flemish Community, the influence of the government on education institutions is not as important as in the French- or German-speaking Communities.

Since the reform of 1994 of non-university higher education, the *hogescholen* are either autonomous (i.e. incorporated public institutions) or belong to subsidised education organised by private organisations. In a few cases the provinces still act as establishing body.

As regards universities, whether public or private, Flemish legislation also made them fairly autonomous in 1991.

A number of organisations have been created by the Flemish authorities and they fulfil a particular task or role on an administrative or educational level in higher education.

The Department of Education:

passes legislation in the field of finances, defines the minimum standards of organisation, fields of studies, staff statutes, quality control, admission policy;
determines the minimum and maximum tuition fees;
supervises the compliance with legislative standards (budget control);
evaluates the equivalence of foreign diplomas.

Vlaamse Onderwijsraad (VLOR)

VLOR is a supreme council, which has advisory authority for every type of education, except university education.

Vlaamse interuniversitaire Raad (VLIR)

Consultancy body for the Flemish universities and advisory body for university problems.

II.1. The institutions of higher education

Within higher education the following distinctions are made.

II.1.1. *Hogescholen* (non-university higher education)

A distinction must be made between:

- (a) one-cycle courses (three years);
- (b) two-cycle courses (first cycle of two years; second cycle of two or three years). The two-cycle courses are academic.

Non-university higher education offering one-cycle courses is designed to train middle-level executives capable of performing or supervising tasks with a high scientific and technical content. The training remains concrete in approach and is directly focused on the profession concerned. Each area of training is focused on a small professional field (higher vocational training).

Non-university higher education offering two-cycle courses is designed to train high-level executives and professionals. A strong emphasis is placed on applying scientific knowledge to professional needs. The training is less concrete in approach and is focused on a wider professional field. It is at the same time active in the fields of education at an academic level, of thematic scientific research in collaboration with the universities or third parties, and of social service.

Both types of non-university courses include theoretical teaching (lectures), practical training, laboratory work, dissertation, and work experience or an apprenticeship.

The fields of study at the *hogescholen* are:

1. architecture
2. health care
3. industrial sciences and technology
4. audiovisual and visual arts
5. music and dramatic arts
6. bionics
7. teacher training
8. product development
9. social-agogic work
10. applied linguistics

11. commercial and business studies.

II.1.2. Universities

The mission of each university is threefold:

- to provide academic training courses;
- to conduct research, especially basic research;
- to deliver scientific services to the community: scientific advice and scientific aid.

The characteristic features of university education are well defined in regard to other forms of higher education. University or academic education is higher education that constitutes an integrated entity together with research. Academic education cannot exist without close links to research. It will guide the students towards conducting independent research and/or the application of knowledge proceeding from a scientific methodological attitude.

Universities can organise academic and post-academic or advanced academic training courses. They are classified into 18 fields of study, although interdisciplinary training courses are possible. The Flemish government establishes an authorised list of basic academic training courses.

The 18 fields of study are:

1. philosophy and ethics
2. theology, Roman Catholic religious studies and canonic law
3. language and literature
4. history
5. art history and archaeology
6. law, notarial law and criminology
7. psychology and educational sciences
8. economics and applied economics (management and business studies)
9. political science and social science
10. social health sciences
11. physical education and physiotherapy
12. natural science
13. engineering
14. applied biological sciences
15. medical sciences

16. dentistry
17. veterinary sciences
18. pharmacy.

University institutions, university centres and university faculties can organise study programmes only for the first cycle or only in a limited number of disciplines.

II.2. Statistical information (1992/93)

On the 1 September 1995 the number of non-university higher education institutions (*hogescholen*) was reduced from 150 to 31.

II.3. Organisation of courses of study

In general, the academic year begins around September/October and finishes towards the end of September of the next year.

The duration of an academic school year is laid down: a minimum of 1 500 and a maximum of 1 800 hours per year. This is the number of hours estimated to be required for learning the subject matter. These are the total number of contact hours and seminars and hours of independent study. Each training course, each school year and each subject are quantified in a number of study points.

The universities and *hogescholen* can offer their training courses in the form of contact education or in the form of open education (distance learning). Offering distance courses implies the development of study in form and content. They can offer full-time courses and part-time courses separately in order to obtain an academic degree.

Students take about one or two weeks to prepare for the examinations. At the end of each year, the student's knowledge of the subject matter is assessed by means of examinations, usually both theoretical and practical. There are two examination periods: June-July and September. The student can sit for an early examination at the end of the first semester (January-February).

The regulations outline a minimum period of study for each cycle per discipline. The student must successfully conclude each cycle or period of study, before being allowed to start the next cycle.

(a) *Hogescholen*

(i) Basic training courses

one-cycle courses offered by the *hogescholen* are undertaken within a single cycle of specialised training which takes three years;
two-cycle courses consist of a first cycle, which takes two years and a second cycle, which takes two or three years.

(ii) Advanced training courses linked to the basic training courses:

supplementary courses;
specialisation courses;
teacher training.

(iii) Post-*hogeschool* training

Besides basic and advanced training, the *hogescholen* offer a form of further training courses.

(b) University sector

(i) Basic academic training courses, divided into two cycles: a first cycle of two or three years leading to the intermediate university qualification and a second cycle of two, three or four years leading to the final university qualification.

The first cycle mainly provides a wide general basic training; the second year of the initial cycle provides more and more specific options and choices of courses, in preparation for the second cycle.

The second cycle provides for each main subject a specialised training culminating in a thesis or project paper. The options and main subjects within the same discipline have a common basis.

The first and second cycle include lectures, seminars (humanities) or laboratory work (sciences), practical training and a project paper.

The first year mainly provides formal lectures. During the following years the role of individual work and teamwork (seminars) increases.

- (ii) Advanced academic training courses linked to the basic academic courses:

supplementary courses
specialisation courses
doctorate training courses
teacher training at university level.

- (iii) Post-academic training

The advanced and post-academic training include research work as preparation for a dissertation.

Examinations

Hogescholen

The examinations are subject to a number of administrative and organisational requirements. Among these requirements are the following:

all institutions must hold two examination sessions per academic year;
no candidate may sit the same examination before a college examination board more than four times over a maximum of two academic years;
candidates must sit their examinations at the first session, except when prevented from doing so by circumstances beyond their control;
candidates who obtain at least 50% of the marks awarded for each part of the examination pass the examination;

there are four 'pass' grades: 'satisfactory', 'with distinction', 'with great distinction' and 'with the greatest distinction';

candidates who fail can be either *afgewezen* (refused), in which case they must repeat the entire year, or *uitgesteld* (postponed), in which case they may resit the examination at the second session.

Where the specific course regulations require presentation of a paper or final study project and an oral examination, these come at the end of the first examination session. The subject of the paper or final study project must be relevant to the goals of the department or the option concerned and must be approved by the head of the institution.

The various parts of the examinations are written and/or oral. The oral examinations are public.

The first examination session is usually held between 15th June and 15th July, and the second session after 15th August of the current academic year.

Universities

The student is examined in each subject separately. The practical examinations mostly consist of exercises, individual, independent or team work, periods of work experience and, at the end of the cycle or course, a presentation of a report or dissertation.

Candidates who fail at the first examination session may repeat the examination, entirely or partially, at a second session. Another failure means they must repeat the year entirely or partially. Examination results can be transferred from one year to the next.

The preliminary examinations (*partiële examens*) held during the year (commonly at the end of the first semester) do not normally serve as a basis for eliminating candidates; however, a pass usually exempts the candidate from the end-of-year examination in the subject or part of subject concerned.

Examinations may be either written or oral.

In accordance with the principle of academic freedom, there are no general requirements governing the system of marking (usually on a scale from 1 to 20). The results of each student are assessed in their entirety by the examination board, including the pass grades (these are the same as with the non-university courses). In the case of failure, the board indicates whether the student is 'postponed', in which case he or she can resit the examination at a later session, or 'refused', in which case he or she must repeat the entire year. In principle, a given examination may not be retaken more than four times over a maximum of two academic years.

Candidates who pass an examination, other than at the end of a cycle, are awarded a certificate. At the end of a cycle, they are awarded a diploma (with its accompanying degree title where applicable). Where appropriate, they are authorised to start the subsequent cycle.

Non-regular students

Students normally register for an annual course of study selected from the various courses offered by the establishment concerned. However, in some cases, it is possible to register for individual lectures intended to supplement a main course for which the student is already registered. Permission to do so must be requested from the faculty where the lecture is given.

Students are not awarded a diploma for such individual classes, but may be issued with a certificate confirming attendance and the passing of the examination.

Language teaching

Basic training courses leading to a degree from the first and second cycles must be taught in Dutch, with the exception of those subjects connected to the study of a foreign language, subjects taught by foreign professors and courses organised specifically for foreign students.

Post-graduate courses can be taught in a foreign language.

Almost all universities and some *hogescholen* organise Dutch-language courses during the summer holidays or during the academic year.

The individual institutions can provide all the necessary information.

Examination boards of the Flemish Community (*Examencommissie van de Vlaamse Gemeenschap*)

This is a system of examinations, which offers an alternative way of acquiring a degree of the first and/or second cycle, and also the academic degree of *doctor*. Such examinations are mainly intended for self-taught students and for those who have stopped previous studies. The candidate chooses the university or *hogeschool* where he or she wants to sit such an examination.

III. Qualifications and diplomas

III.1. Qualifications for admission to higher education

III.1.1. Qualifications for admission to courses offered by *hogescholen*

For admission to the first year of basic training courses offered by the *hogescholen* a secondary school leaving certificate, a certificate of higher education or a certificate that has been declared equivalent by law, decree, EU directive or international agreement is required.

For admission to maritime education there is an entrance exam, consisting of:

- theory examination (final examination level of secondary education with a firm basis in mathematics and physics);
- psycho-technical tests;
- physical suitability.

For admission to the arts sector an examination is required as well.

For entrance to advanced courses the *hogeschool* can require a well-defined certificate of higher education and can organise an entrance exam.

III.1.2. Qualifications for admission to courses offered by universities

The general rules for admission are quite clear: the secondary leaving certificate (GGSO). This qualification gives admission to any degree course, with the exception of the degree courses in the field of engineering/architecture.

No specific subject requirements are necessary. The certificate of non-university higher education also gives admission to university degree courses.

The general rules for admission will include an integral application of the European Convention on the equivalence of foreign diplomas leading to admission to universities (1953, No 15 in the European Treaty Series).

Certified students of one-cycle non-university higher education and candidates who passed the examinations of the first cycle of the two-cycle non-university higher education can obtain an academic degree after passing a specific training programme equivalent to at least one year of full-time study.

Holders of a certificate in commercial economics-management studies (*handelswetenschappen*) or of engineer in commercial economics (*kandidaat-handelsingenieur*), both diplomas of the two-cycle non-university higher education, can move directly to the university degree courses of the second cycle in the field of study of economics and applied economics.

The Flemish government prescribes general rules regarding the transfer of the holders of a final certificate of the long-type higher education to university degree courses (bridging courses), e.g. industrial engineer to the degree course of civil engineer or to the degree course of *licentiaat* in chemistry.

Admission conditions to post-academic or advanced academic degree courses

(a) To additional courses and to specialisation courses:

- a final academic degree of the second cycle, e.g. licentiate, engineer;
- a long-type higher education leaving certificate (final degree);
- a foreign qualification of higher education (minimum duration three years) recognised by the university authorities.

Individual universities can decide that passing an entrance examination could be a prerequisite for admission to additional courses or to specialisation courses. Foreign applicants could be asked to take individual proficiency examinations.

(b) To doctorate courses:

a final academic degree of the second cycle;
degree of *licentiaat* in commercial economics or engineer in commercial economics (degree of the long-type higher education);
diploma *Burgerlijk ingenieur polytechnicus* and licentiate of the *Koninklijke Militaire School*;
for foreign qualifications and other degrees of the two-cycle higher education the same rules as mentioned under (a) will be applied.

To obtain a doctorate degree, the candidate must prepare a dissertation or thesis under the direction of a supervisor. The thesis can be presented in Dutch or in an international language, generally English or French. Candidates who wish to begin doctoral studies are advised to contact the appropriate faculty or institute.

III.2. Intermediate qualifications in higher education

III.2.1. Intermediate qualifications — *hogescholen*

(a) One-cycle non-university higher education

Since this form of education only includes one cycle, no intermediate diplomas are awarded.

(b) Two-cycle non-university higher education

This form of education consists of two cycles. After an initial cycle of two years or four semesters, the intermediate degree of *Kandidaat* with further specification is awarded.

The *kandidaat* is a preliminary qualification which the student must have in order to start the second cycle. The purpose of the *kandidaat* is to offer a general basic education in the relevant disciplines.

Intermediate qualifications in two-cycle non-university higher education are:

Kandidaat in:

architectuur
bestuurskunde
handelswetenschappen
nautische wetenschappen
productdesign
productontwikkeling
muziek
beeldende kunst
dramatische kunst
audiovisuele kunst
journalistiek.

Kandidaat:

industrieel ingenieur

handelsingenieur.

III.2.2. Intermediate qualifications — universities

The basic academic (university) courses are structured in two cycles. The first cycle of basic academic training is concluded by the intermediate academic degree of *Kandidaat* with further qualification.

The term *baccalaureus* may be used instead of *kandidaat* in the fields of ‘Philosophy and ethics’ and ‘Theology, Roman Catholic religious studies, and canon law’.

Intermediate qualifications

Kandidaat in de:

Wijsbegeerte en moraalwetenschappen
Godsgeleerdheid, godsdienstwetenschappen en kerkelijk recht
Taal- en letterkunde
Geschiedenis
Archeologie en de kunstwetenschappen
Rechten, notariaat en criminologie
Psychologische en pedagogische wetenschappen
Economische en toegepaste economische wetenschappen
(+ kandidaat-handelsingenieur)
Politieke en sociale wetenschappen
Sociale gezondheidswetenschappen
Lichamelijke opvoeding, motorische revalidatie en kinesitherapie
Wetenschappen.

Kandidaat:

burgerlijk ingenieur
burgerlijk ingenieur-architect
bio-ingenieur
arts
tandarts
dierenarts
apotheker.

III.2.3. Academic recognition of intermediate qualifications for purposes of further study

Individual universities are entitled to recognise intermediate university qualifications and periods of study.

The university mentions the missing subjects and gives the applicant the opportunity to pursue his/her studies at the university and to obtain a final university degree.

The *hogescholen* have no competence for the recognition of intermediate qualifications, but they can allow a reduction of the duration of the studies if the applicant has finished at least one year of higher education.

III.3. Final qualifications in higher education

III.3.1. Final qualifications — *hogescholen*

(a) One-cycle courses

The one-cycle courses lead to the following final qualifications:

gegradueerde in (plus further specification)
gegradueerde architect-assistent
gegradueerde verple(e)g(st)er
gegradueerde assistent in de psychologie
vroedvrouw

***geaggregeerde voor het lager secundair onderwijs* (with further specification)**

kleuterleid(st)er
onderwijzer
maatschappelijk assistent.

(b) Two-cycle courses

After completing the first cycle with the *kandidaat* (see III.2.1) one may be admitted to the second cycle. The second cycle lasts two or three years.

Degree titles are:

licentiaat in (plus further specification)

architect
interieurarchitect
handelsingenieur
industriel ingenieur in (plus further specification)
meester in (plus further specification)
licentiaat-tolk
licentiaat-vertaler.

(c) Advanced training courses

After successful completion of an advanced training course the degree of *gediplomeerde in de voortgezette studie van* (plus further specification) is awarded.

In the study fields ‘commercial and business studies’, ‘audiovisual and visual arts’, and ‘music and dramatic arts’ teacher training can be organised linked to two-cycle basic training courses.

After successful completion of these teacher training courses the degree of *geaggregeerde voor het onderwijs* is awarded.

III.3.2. Final qualifications — universities

University courses are divided into basic academic training courses (divided into two cycles), post-academic or advanced academic training courses and continuing academic education.

1. The first cycle (see above, under III.2.2).
2. The second cycle is intended to give the students a scientific subject knowledge and includes almost exclusively specialist subjects where the relevant problems of the discipline of the chosen main subject are offered. For the various main subjects lectures are also usually given in a limited number of joint subjects in every field. In the second cycle the number of options is usually larger than in the first cycle.

The final examination of the second cycle is rounded off by a final dissertation on a subject relating to one of the main subjects of the specialisation chosen. There is no final dissertation in law, dentistry, pharmacy, medicine and veterinary sciences.

The second cycle of academic training is concluded by the following final academic degrees:

degree of *licentiaat* (licentiate) with further qualification: for instance licentiate in chemistry (*licentiaat in de scheikunde*)
tandarts (dentist)
arts (physician — medical practitioner)
dierenarts (veterinary surgeon)
apotheker (pharmacist)
burgerlijk ingenieur (civil engineer with further qualifications)
burgerlijk ingenieur-architect (civil engineer-architect)
bio-ingenieur (bio-engineer)
handelsingenieur (commercial engineer).

3. Post-academic or advanced academic training courses:

- (a) the additional (supplementary) courses are concluded by the academic degree of *Gediplomeerde in de aanvullende studies van* (GAS) with further qualification (certificate of additional training);

- (b) the specialisation courses are concluded by the academic degree of *Gediplomeerde in de gespecialiseerde studies* (GGS) with further qualification (certificate of specialisation training);
- (c) the doctorate training courses are concluded by the academic degree of *Doctor* after several years of research and the completion of a dissertation;
- (d) the teacher training courses at university level are concluded with the academic degree of *Geaggregeerde voor het onderwijs* (certified teacher);
- (e) continuing academic education will be concluded by an *academisch getuigschrift* (academic certificate).

IV. Special types and forms of qualification in higher education

Certain institutions provide teaching in areas that lie outside the scope of classic higher education. These institutions which train students in specific vocational areas are discussed below.

IV.1. The Royal Military School (*Koninklijke Militaire School*)

This school provides education for a career as an officer in the army, air force or marines. The training is of a type which makes it also valuable in civil life.

The *Koninklijke Militaire School* does not come under the Ministry of Education, but the Ministry of Defence. The college, which trains career officers for the armed forces, comprises a *Polytechnische afdeling* (Polytechnic Division) and an *Afdeling alle wapens* (Joint Services Division).

Admission requirements

Applicants are granted admission by the Minister for Defence on the basis of a competitive entrance examination after secondary education, consisting of:

- medical examination;
- physical suitability tests;
- psycho-technical tests;
- language tests;
- tests in mathematics, history, physics, chemistry and geography.

Admission is granted to a limited number of the highest scoring applicants.

IV.1.1. *Polytechnische afdeling*

Trainee officers who complete the five-year course receive the title *burgerlijk ingenieur*. In both divisions, trainee officers receive military training in addition to scientific training.

IV.1.2. *Alle wapens*

At the end of the four-year course, the following titles are awarded:

- licentiaat in de sociale en militaire wetenschappen* (for the Army or Medical Service)
- licentiaat in militaire en luchtvaartwetenschappen* (for the Air Force)
- licentiaat in de militaire en zeevaartwetenschappen* (for the Navy).

IV.2. Higher religious education

This is a form of higher education which prepares for the administration and instruction of the different religions (for pastoral work and as a religious education teacher in lower secondary education).

This education is offered at the *Universitaire faculteit voor protestantse godgeleerdheid* in Brussels (Brussels University Faculty of Protestant Theology) and the *Evangelische theologische faculteit* (Evangelical Theological Faculty) in Heverlee.

1. Admission requirement:

the secondary leaving certificate.

2. Qualifications:

these faculties offer university courses, leading to the degrees of *licentiaat in de protestantse theologie/theologie* and *doctor in de protestantse godgeleerdheid/godgeleerdheid*.

Diagram of the Flemish education system

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Appendix

1. Final degrees — *hogescholen*

Architecture

one-cycle:

gegradueerde architect-assistent
gegradueerde in: interieurvormgeving
landschaps- en tuinarchitectuur.

two-cycle:

architect
interieurarchitect.

Health care

one-cycle:

gegradueerde in: ergotherapie
kinesitherapie
orthopedie
podologie
logopedie
audiologie
farmaceutische en biologische technieken
medische laboratoriumtechnologie
voedings- en dieetkunde
gegradueerde verple(e)g(st)er
vroedvrouw.

Commercial and business studiesf

one-cycle:

gegradueerde in: bedrijfsbeheer

beheer, toerisme en recreatie

communicatiebeheer
hotelbeheer
secretariaatsbeheer
toegepaste informatica.

two-cycle:

licentiaat in: bestuurskunde
handelswetenschappen
handelsingenieur.

Industrial sciences and technology

one-cycle:

gegradueerde in: audiovisuele techniek
bouw

industrieel ingenieur in landbouw en biotechnologie.

Teacher training

one-cycle:

*geaggregeerde voor het lager secundair onderwijs
algemene vakken
elektriciteit-technisch-technologische opvoeding
handel
huishoudkunde, technisch-technologische opvoeding
kleding-technisch-technologische opvoeding
land- en tuinbouw, technisch-technologische opvoeding
lichamelijke opvoeding
mechanica, technisch-technologische opvoeding
muzikale vorming
nijverheid, technisch-technologische opvoeding
plastische kunsten
schoonheidszorgen
technisch, technologische opvoeding
kleuterleid(st)er
onderwijzer(es).*

Product development

two-cycle:

licentiaat in productontwikkeling.

Social-agogic work

one-cycle:

*gegradueerde in orthopedagogie
gegradueerde assistent in de psychologie
maatschappelijk assistent.*

Applied linguistics

two-cycle:

*licentiaat in journalistiek
licentiaat-tolk
licentiaat-vertaler.*

2. Final degrees — universities

Wijsbegeerte en moraalwetenschappen

*Licentiaat in de: wijsbegeerte
moraalwetenschappen
morele begeleiding.*

Godgeleerdheid, godsdienstwetenschappen en kerkelijk recht

*Licentiaat in de: godgeleerdheid
toegepaste theologie*

*godsdienswetenschappen
kerkelijk recht.*

Taal- en letterkunde

*Licentiaat in de taal- en letterkunde: Romaanse talen
 Germaanse talen
 Latijn en Grieks.*

Geschiedenis

Licentiaat in de: geschiedenis.

Archeologie en kunstwetenschappen

*Licentiaat in de: kunstwetenschappen en archeologie
 archeologie
 kunstwetenschappen
 musicologie.*

Rechten, notariaat en criminologische wetenschappen

*Licentiaat in de: rechten
 notariaat
 criminologische wetenschappen.*

Psychologische en pedagogische wetenschappen

*Licentiaat in de: psychologie
 pedagogische wetenschappen
 sociale en culturele agogiek.*

Economische en toegepaste economische wetenschappen

*Licentiaat in de: economische wetenschappen
 toegepaste economische wetenschappen
 handelsingenieur
 handelsingenieur in de beleidsinformatica.*

Politieke en sociale wetenschappen

*Licentiaat in de: politieke en sociale wetenschappen
 politieke wetenschappen
 communicatiewetenschappen
 sociologie.*

Sociale gezondheidswetenschappen

*Licentiaat in de: medisch-sociale wetenschappen
 logopedie en audiologie
 voedings- en dieetleer
 gerontologie
 familiale en seksuologische wetenschappen.*

Lichamelijke opvoeding, motorische revalidatie en kinesithérapie

Licentiaat in de: lichamelijke opvoeding

motorische revalidatie en kinesitherapie.

Wetenschappen

Licentiaat in de:

- wiskunde*
- informatica*
- toegepaste informatica*
- natuurkunde*
- scheikunde*
- biochemie*
- biologie*
- biotechnologie*
- geologie*
- geografie.*

Toegepaste wetenschappen

Burgerlijk ingenieur-architect
Burgerlijk bouwkundig ingenieur
Burgerlijk mijnbouwkundig ingenieur
Burgerlijk scheepsbouwkundig ingenieur
Burgerlijk scheikundig ingenieur
Burgerlijk natuurkundig ingenieur
Burgerlijk materiaalkundig ingenieur
Burgerlijk textielingenieur
Burgerlijk elektrotechnisch ingenieur
Burgerlijk werktuigkundig elektrotechnisch ingenieur
Burgerlijk ingenieur in de computerwetenschappen.

Toegepaste biologische wetenschappen

Bio-ingenieur in:

- de scheikunde*
- de landbouwkunde*
- het land- en bosbeheer*
- de milieutechnologie*
- cel- en de genbiotechnologie.*

Geneeskunde

Arts

Tandheelkunde

Tandarts

Diergeneeskunde

Dierenarts

Farmaceutische wetenschappen

Apotheker

Taal- en letterkunde/geschiedenis

Licentiaat in de: *Oosterse talen en culturen*

Oosterse studies: oude nabije Oosten
Oosterse studies: bijbelse wetenschappen
Arabistiek en Islamkunde
Sinologie
Japanologie
Oost-Europese talen en culturen
Afrikaanse talen en culturen.

Taal- en letterkunde/geschiedenis/archeologie en kunstwetenschappen

Licentiaat in de: vergelijkende cultuurwetenschap.

Wetenschappen-geneeskunde

Licentiaat in de: biomedische wetenschappen.

Denmark

Abbreviations

<i>AAA</i>	<i>Arkitektskolen i Aarhus</i>	
<i>AU</i>	<i>Aarhus Universitet</i>	
<i>AAU</i>	<i>Aalborg Universitet</i>	
<i>DFH</i>	<i>Danmarks Farmaceutiske Højskole</i>	
<i>DJM</i>	<i>Det Jyske Musikkonservatorium</i>	
<i>DKDM</i>	<i>Det Kgl. Danske Musikkonservatorium</i>	
<i>DLH</i>	<i>Danmarks Lærerhøjskole</i>	
<i>DTU</i>	<i>Danmarks Tekniske Universitet</i>	
<i>HHK</i>	<i>Handelshøjskolen i København</i>	
<i>HHS</i>	<i>Handelshøjskole Syd</i>	
<i>HHÅ</i>	<i>Handelshøjskolen i Århus</i>	
<i>KAA</i>	<i>Det Kgl. Danske Kunstakademi — Arkitektskolen</i>	
<i>KAB</i>	<i>Det Kgl. Danske Kunstakademi — Billedkunstskolerne</i>	
<i>KU</i>	<i>Københavns Universitet</i>	
<i>KVL</i>	<i>Den Kgl. Veterinær- og Landbohøjskole</i>	
<i>OU</i>	<i>Odense Universitet</i>	
<i>RUC</i>	<i>Roskilde Universitet</i>	
<i>DB</i>	<i>Danmarks Biblioteksskole</i>	
<i>DJH</i>	<i>Danmarks</i>	<i>Journalisthøjskole</i>

Glossary

Adgangsbegrænsning

Numerus clausus.

Admission is limited for many courses of study in Denmark.

Adgangsbetingelser

Admission/entrance requirements.

Adjunkt

Assistant professor.

Limited tenure — normally three years.

Afgangsbevis

Leaving certificate.

Anerkendelse

Recognition.

Afhandling

Thesis, dissertation.

Arkitektskole

School of architecture.

BA/BS

Danish Bachelor's degrees — the programmes last three years.

Basisuddannelse

Basic study programme.

A one- or two-year interdisciplinary study programme (offered at the universities of Aalborg and Roskilde).

Biblioteksskole

School of librarianship.

Dekan

Dean.

Designskole

Design school.

Doktorgrad

Doctoral degree.

The traditional highest Danish doctoral degree. Awarded to mature researchers upon their public defence of a thesis based on a minimum of five to eight years of individual and original research.

Eksamensbevis

Certificate, diploma.

Ergoterapeutiskole

School of occupational therapy.

Ernærings- og husholdningsøkonomseminarium

College of nutrition and home economics.

Fakultet

Faculty.

Farmaceutisk højskole

School of pharmacy.

Folkeskole

The Danish primary and lower secondary school comprising a voluntary pre-school class and 10 years of comprehensive basic education. Education is compulsory for nine years.

Folkeskolens afgangsprøve

Leaving examination of the primary and lower secondary school.

Can be passed on a subject-by-subject basis after the eighth, ninth and 10th grades.

Folkeskolens udvidede afgangsprøve

Advanced leaving examination of the primary and lower secondary school.

Can be passed on a subject-by-subject basis after the 10th grade.

Fysioterapeutskole

School of physiotherapy.

Grad

Degree.

Grafisk højskole

Graphic college.

Gymnasium

Upper secondary school.

Handelshøjskole

Business school.

Handelsskole

Commercial school.

Hospitalslaborantskole

School for medical laboratory technologists.

Højere forberedelseksamen (HF)

Higher preparatory examination.

A two-year upper secondary course. Admission requirements are 10 years of primary and lower secondary education.

Qualifies for admission to higher education.

Højere handelseksamen (HHX)

Higher commercial examination.

A three-year commercially oriented upper secondary course. Admission requirements are nine years of primary and lower secondary education. Qualifies for admission to higher education.

Højere teknisk eksamen (HTX)

Higher technical examination.

A three-year technically oriented upper secondary course. Admission requirements are nine years of primary and lower secondary education. Qualifies for admission to higher education.

Højere uddannelsesinstitution
Institution of higher education.

Højskole for legemsøvelser
Institute of physical education.

Håndarbejdsseminarium
College for art, crafts, textile and fashion design.

Ingeniørhøjskole
College of engineering.

Institut
Department, institute.

Institutbestyrer
Head of department.

Jordmoderskole
Midwifery school.

Journalisthøjskole
School of journalism.

Kandidatgrad, candidatus (... field of study)
Danish Master's degrees — the programmes normally last two years after the Bachelor's degree.
In pharmacy, veterinary medicine and medicine there are no Bachelor's programmes. The *candidatus* degree programmes last five years (pharmacy and veterinary medicine) or six and a half years (medicine).

Karakter
Mark, grade.

Karakterudskrift
Transcript of records.

Konservatorium
Academy of music.

Konservatorskole
School of conservation.

Konsistorium
The senate.

Koordineret tilmelding
Coordinated enrolment system.

Kortere videregående uddannelse
Short-cycle higher education.
One to two years.

Kunstakademi
Academy of fine arts.

Kursus
Course of study.

Lang videregående uddannelse
Long-cycle higher education.
Four to eight years.

Lektor
Associate professor.

Licentiatgrad
Postgraduate research degree, now called PhD degree.

Lærerhøjskole
School of educational studies.

Lærerseminarium
College of education.

Magistergrad, mag.art.
A degree based on a six-year research-oriented degree programme in one subject.

Mellemlang videregående uddannelse
Medium-cycle higher education.
Three to four years.

Merit
Credit.

PhD-Grad
PhD degree.
The programme lasts three years after the *candidatus* or an equivalent degree.

Professor
Full professor.

Prorektor
Vice-rector.

Prøve
Test, examination.

Pædagogseminarium
College of educator training.

Rektor
Rector (vice-chancellor).

Semester
Semester.

The Danish semesters run from August/September until 31 December and from February until May/June, January and June being examination months.

Social højskole
School

of

social

work.

Speciale

Thesis.

The *candidatus* degree programme normally includes half a year's work on a thesis (*speciale*).

Statens uddannelsesstøtte (SU)

Danish State education grant and loan scheme.

Studentereksamen

Upper secondary school leaving examination.

A three-year course which qualifies for admission to higher education.

Studenterråd

Students' council.

Studieleder

Director of studies.

Studienævn

Study committee.

Studieordning

Curriculum.

Studiestartbetingelser

Course requirements.

Sygeplejeskole

School of nursing.

Teaterskole

Theatre school.

Teknikum

College of engineering.

Teknisk skole

Technical school.

Teknisk universitet

Technical university.

Universitet

University.

Universitetscenter

University.

Veterinær- og landbohøjskole

Veterinary

and

agricultural

university.

I. Higher education system

I.1. The institutions of higher education

I.1.1. Regulation and management

The overall responsibility for the higher education sector rests with the State. The majority of higher education institutions come under the control of the Ministry of Education; a few, however, come under the auspices of other ministries, for example the Ministry of Cultural Affairs (schools of architecture, academies of music, the Royal Danish Academy of Fine Art, the Royal School of Librarianship).

Higher education institutions in Denmark have a long tradition of academic freedom and autonomy. A new act on the universities from 1992 has strengthened the autonomy of these institutions.

The minister responsible lays down the overall regulations for all higher education institutions. These include regulations concerning admission of students, awarding of degrees and appointment of academic staff.

The individual institutions draw up and update the study programmes, indicating aims, scope and duration, form and content of the courses.

I.1.2. Finance

Higher education is primarily financed by the State. The cost to the Danish State of a graduate from a higher education institution averages from DKK 255 000 (social sciences) to DKK 690 000 (medicine). In 1994, a new financing system was introduced in higher education. The main principles of the new system are that the institutions are awarded a lump sum and that they are free to make their own priorities among the different departments and between education and research.

The parameter for calculation of the lump sum ensures the same initial amount for each institution and a 'taximeter' grant per active student (10 different taximeter levels are used).

I.1.3. Structure

The Danish higher education system offers a great variety of choice. More than 130 institutions offer courses and study programmes of varying length and level.

These institutions can be divided into two groups:

- the university sector, with five multifaculty universities, nine universities specialising in fields such as engineering, veterinary science, pharmacy, art, architecture and business studies, and two academies of music; and
- the college sector, with more than 100 specialised colleges of higher education, normally offering short and medium-length professional courses (two to four years) in, for example, teacher training, social work, physiotherapy, nursing and engineering.

The university sector

The university sector proper only comprises institutions offering both undergraduate and postgraduate courses up to the highest academic level, including doctorates. All teaching at these institutions must be research-based.

The multifaculty universities are the:

University of Copenhagen
University of Aarhus
Odense University
Roskilde University
Aalborg University.

The specialised universities include the:

Technical University of Denmark
Royal Veterinary and Agricultural University
Royal Danish School of Pharmacy
Copenhagen Business School
Aarhus School of Business
Southern Denmark Business School
Royal Danish School of Educational Studies
Royal Danish Academy of Fine Art
Schools of Architecture and Visual Art
Aarhus School of Architecture
Royal Danish Academy of Music
Royal Academy of Music, Aarhus.

The Royal School of Librarianship, the Danish School of Journalism and the Danish State Institute of Physical Education do not belong to the university sector proper as they do not offer doctoral programmes, but they award degrees both at Bachelor and Master levels. This gives them a status between the university and the college sector.

The college sector

As well as the universities, over 100 colleges across the country offer higher education courses. Most are rather small, specialised institutions (400 to 600 students) offering only one or a few study programmes in a particular professional field. Some of these courses qualify students at the same level as the Bachelor's or comparable degrees, for example those offered by engineering colleges, colleges of education and regional business schools. In other countries some of these courses are offered by the universities, but in Denmark they have traditionally been offered by the specialised colleges. Some of the courses include practical training.

Most teachers at these colleges have academic degrees. The teachers have no obligation to carry out research as in the university sector. However, very often these institutions are engaged in theoretical and practical developmental work, and many of them participate in international cooperation, for example, through the EC mobility programmes.

The general admission requirements to these institutions are normally the same as for the universities, i.e. the Danish *studentereksamen* (upper secondary school leaving certificate) or an equivalent national or foreign qualification.

The college sector is mainly State-financed.

The college sector includes the following institutions among others:

Colleges of education (*lærerseminarier*)
Colleges for art, crafts, textile and fashion design (*håndarbejds- og sløjdskoler*)
Colleges of educator training (*pædagogseminarier*)
Schools of social work (*sociale højskoler*)
Colleges of engineering (*teknika/ingeniørhøjskoler*)
Regional business schools (*handelshøjskoleafdelinger*)

Schools of occupational therapy (*ergoterapeutiskoler*)
Schools of physiotherapy (*fysioterapeutiskoler*)
Schools of nursing (*sygeplejerskoler*)
The Danish Midwifery School (*danmarks Jordmoderskole*)

Schools for medical laboratory technicians (*hospitalslaborantskoler*)

Colleges of nutrition and home economics (*ernærings- og husholdningsøkonomseminarier*)
Schools for film and theatre (*film- og teaterskoler*)
Denmark's Design School (*Danmarks Designskole*).

There is also a wide range of college-level vocational training institutions.

I.2. Number of students

1992/93

Total number of students in higher education	166 053
Total number of foreign regular students	7 637
Total number of foreign exchange (guest) students	2 093

Total number of foreign regular students from:

Africa	140
North America	289
South America	78
Asia	1 507
Europe	2 899
Former USSR	14
Oceania	19
Not specified	2 691

Total number of students from EU member countries and EEA countries:

Belgium	12
Finland	52
France	78
Germany	573
Greece	17
Iceland	412
Ireland	21
Italy	42
Luxembourg	1
Netherlands	78
Norway	654
Portugal	11
Spain	26
Sweden	265
United Kingdom	314

I.3. Organisation of courses of study

The university sector

The academic year at the universities is divided into two semesters: the autumn semester from September to December and the spring semester from February to May/June, January and June being examination periods. Students have a week's holiday in October, at Christmas and at Easter.

The multifaculty and the specialised universities offer undergraduate and postgraduate degree courses. Certain institutions offer a few shorter intermediate courses, each of which constitutes the first stage of a degree course. For a more detailed description see II.2.2 and II.2.3.

Danish higher education leaves students free to exercise their own initiative. Besides attending traditional lectures, they study in small groups where they are expected to contribute actively. Part of their studies consists of independent project and research work.

The college sector

The teaching periods at the colleges normally run from the middle of August until Christmas and from the beginning of January until June, examinations taking place in December/January and May/June.

The organisation of the academic year is, however, up to the individual institution and may vary from course to course.

The form of instruction, the structure of the study programme and the examinations required also vary from one course to another. Project work, written assignments and practical training form part of many of these courses.

Marks and examinations

Generally, marks are given on a 13-point scale indicating the performance of the student:

13	=	exceptionally independent and excellent performance
11	=	independent and excellent performance
10	=	excellent, but not particularly independent performance
9	=	good performance, a little above average
8	=	average performance
7	=	mediocre performance, slightly below average
6	=	just acceptable performance
5	=	hesitant and unsatisfactory performance
3	=	very hesitant, very insufficient and unsatisfactory performance

0 = completely unacceptable performance.

The student must obtain at least a 6.0 average in order to pass (see Appendix I).

Some examinations only use pass or fail.

Students in Danish higher education are normally not assessed during the term to the same extent as in some other countries.

However, before graduation, the student must pass a number of oral and written examinations. These normally take place twice a year, in January and in May/June. The number of examinations and the format varies from course to course.

Nearly all examinations — oral and written — are conducted with the participation of external examiners.

II. Qualifications and diplomas

II.1. Qualifications for admission to higher education

General admission requirements

The general admission requirements for courses at Danish universities and colleges of higher education are the same, i.e. one of the following four upper secondary school leaving examinations:

general upper secondary examinations:

studentereksamen — upper secondary school leaving examination;
højere forberedelseksamen (HF) — higher preparatory examination;

vocationally oriented upper secondary examinations:

højere handelseksamen (HHX) — higher commercial examination;
højere teknisk eksamen (HTX) — higher technical examination.

Upper secondary school leaving examination course

The course lasts three years and is offered in two different lines, a linguistic and a mathematics line. The curricula comprise compulsory core subjects and optional subjects at up to three different levels. Students also have to write a major assignment on a subject chosen by themselves.

Applicants must have completed 9 or 10 years of basic education, including English from the fourth form and a second foreign language from the seventh form (German or French). They are admitted to the *gymnasium* on the basis of a statement, issued by their previous school, that they are qualified, and the pupil must have passed the leaving examination of the *folkeskole* with satisfactory results in Danish and mathematics — applicants for the linguistic line in English and German or French as well and applicants for the mathematics line in science.

A total of 10 oral and written examinations must be passed for a complete *studentereksamen*. Up to three may be passed after the first and second years.

Examinations are conducted in attendance of and under the control of the teacher and an external examiner.

Students are given marks for the year's work as well as for their achievements in the examinations according to the 13-point scale (see Appendix I). The average of the two sets of marks is the student's examination result. In order to pass, the student must have a minimum average of 6.0.

Higher preparatory examination course

The higher preparatory examination course (*højere forberedelseksamen (HF)*) is directed at young people and adults. The examination may be taken as a full examination after a full-time two-year course comprising a nucleus of common core subjects, three optional subjects and a major written assignment. It may also be taken subject by subject after day or evening courses, mainly for adults. For admission to a full-time two-year course directly after basic school, students must have completed 10 years of basic education.

A full *HF* examination requires oral and/or written examination in every subject studied.

Higher commercial examination course

The higher commercial examination course (*højere handelseksamen (HHX)*) lasts three years. The first year is common to all the vocational education courses in commercial schools. Two thirds of the subjects are obligatory, the rest are optional.

The *HHX* qualifies students for admission to higher education and for work in business administration and management. Accountancy, electronic data processing, financial decision-making and foreign languages form part of the curriculum.

Higher technical examination course

The higher technical examination course (*højere teknisk eksamen (HTX)*) is primarily directed at young people interested in science and technology. Courses are offered by the technical schools. They last three years and comprise common core and optional subjects, for example, in technology, natural sciences and foreign languages.

To pass a full *HHX* or an *HTX* examination the student must sit for a minimum of 10 to a maximum of 12 oral and written examinations.

Vocational education proper comprises vocationally oriented three- to four-year sandwich courses which are aimed at preparing the students for the labour market as skilled workers. Many of the courses also qualify for higher education.

Course requirements

Fulfilling the general admission requirements is not always enough to be admitted to a given course. For many courses specific course requirements will have to be met, for instance a given combination of subjects or a minimum score in certain subjects.

Admission restrictions

Each institution decides how many places are available for most disciplines. The Ministry of Education regulates admission in such fields as medicine, and teacher and educator training. In 1995, about 60 000 students applied for admission, and about 40 000 were admitted. When there are more qualified applicants than places available, the applicants are normally admitted according to the following system.

- (a) The available places are divided into two quota systems. Places in the first quota are distributed to applicants with Danish qualifying examinations based on the average mark obtained in their final examination at the upper secondary level. Places in the second quota are given on the basis of an individual assessment of the student by the institution. Applicants with an international or foreign qualifying examination are also admitted through this quota.
- (b) Some institutions, including the Royal Academy of Fine Art, the music academies and the Danish School of Journalism, have their own aptitude tests.

II.1.1. Qualifications for admission to non-university higher education

The general admission qualifications to the colleges of higher education are normally the same as for universities, i.e. the Danish *studentereksamen* or an equivalent national or foreign qualification. Specific course requirements may have to be fulfilled for someone to be considered qualified for a given course. For some courses practical experience is required before admission, for instance to the schools of physiotherapy and occupational therapy.

For colleges of engineering there is the possibility of a special entrance examination for applicants who do not have what corresponds to an upper secondary school leaving examination in the mathematics line. All colleges of engineering (*ingeniørhøjskoler*) provide a one-year course to prepare for the entrance examination, comprising the following subjects: Danish and the history of ideas, English, German, mathematics, physics and chemistry.

II.1.2. Qualifications for admission to university

The *studentereksamen*, the *HF*, the *HHX*, the *HTX* and equivalent qualifications will, as a rule, satisfy the general admission requirements of the universities. Certain courses, however, have special requirements concerning specific subjects, grades, etc. Thus, for example, examinations in mathematics and/or physics at the A level of the upper secondary school leaving examination, mathematics line, are required for admission to a large number of technical and science courses and courses in the social sciences.

A few institutions have entrance examinations, for example the Danish School of Journalism, the academies of music and the schools of architecture.

II.2. Intermediate qualifications in higher education

II.2.1. Intermediate qualifications in non-university higher education

The majority of the non-university courses consist of an integral study period. There are no intermediate qualifications.

II.2.2. Intermediate university qualifications

***Basisuddannelser* (basic courses) at the universities of Roskilde and Aalborg**

Roskilde University offers three basic courses, each of two years' duration, in the natural sciences, the humanities and the social sciences.

Aalborg University offers two basic courses, each lasting one year, in technology and science and the social sciences.

The basic courses are interdisciplinary and project-oriented. They require students to take part in project work, courses and seminars. The project work takes place in two or more project periods. It is normally carried out in groups, but students may also choose to work individually. At least one project, however, must take the form of group work.

Throughout the course, the performance of the project groups and the individual students is assessed continuously. At the end of the course, students hand in a written report on their final project, and the student is assessed on the basis of this report and an oral examination by one or more internal examiners and one external examiner.

II.2.3. Academic recognition of intermediate qualifications for purposes of further study

It is possible to change to courses at other universities, but, depending on subject areas, it may be difficult to get full credit for a course taken at another institution. Between non-university institutions and from non-university to university studies it is more difficult, but credit transfer is a possibility in disciplines which are common to a particular course.

The common part of the courses at the engineering colleges qualifies students to go on to the specialised stages at all the engineering colleges.

The basic courses at Roskilde University and Aalborg University qualify students for admission to all further study programmes at the respective university.

Until 1998, the first stage of the course in pharmacy qualified a student for work as a pharmacist's assistant and also for admission to the second stage courses. The first stage of the museum curator's course qualifies a student for work as a conservation technician and also for admission to second stage courses.

II.3. Final qualifications in higher education

With the exception of a small number of courses, higher education courses in Denmark are examination-oriented. Courses are not made up of study weeks or points. To achieve the final qualification, students must complete a large number of examinations/tests, projects, etc. Not all students complete their studies within the prescribed study period. This is partly due to employment and family responsibilities. It is possible for students to take leave from their courses.

II.3.1. Final qualifications in non-university higher education

Colleges offer a wide range of different courses, including social science courses and three or four courses qualifying students for teaching, social work, paramedical and technological professions, etc.

Students take examinations in a wide range of disciplines relevant to the course. Major written assignments and project work may also be required. All courses include practical training. A government notice covers each study programme and contains stipulations regarding the objectives and the structure of the course, its content and details of assessment.

The forms of examination and assessment vary from course to course, but in all cases the knowledge gained in the course will be assessed by means of oral and written tests. These tests may be internal or external. Internal tests are assessed either by internal examiners or by a combination of internal and external examiners appointed by the educational institution. External tests are assessed by internal examiners and one or more external examiners who must not be connected with the educational institution. External examiners are appointed by the Ministry of Education on the recommendation of the institution. At least one third of the courses must be tested by means of external examiners.

As a rule, marks are expressed in terms of the 13-point scale (see I.3) or assessments as passed/failed. Exceptions are the kindergarten teacher training course, the leisure-time teacher training course and the socio-pedagogic course where the following scale was used until 1994:

- A = excellent
- B = satisfactory
- C = acceptable
- E = unacceptable.

On completion of the course, a certificate/diploma is issued, on which the results of the examinations taken are stated:

‘(eksamens)bevis for gennemført ...-uddannelse’

The certificate states the title awarded.

II.3.2. Final university qualifications

Degree studies

In recent years Denmark has adopted a somewhat Anglo-American structure by introducing the Bachelor's and PhD degrees.

Thus, a university course will normally consist of a three-year Bachelor's degree course in one or two subject fields which may be followed by a two-year course leading to a *candidatus* degree (Master's degree). The study programmes for the Bachelor's degree include project work corresponding to a minimum of two months' full-time work. Certain programmes may be extended by a six-month professionally oriented module and thus last three and a half years. The programmes for the *candidatus* degree nearly always include six months to one year's work on a thesis. Within a few disciplines (i.e. medicine, pharmacy and veterinary medicine) there are no Bachelor's degrees but solely the *candidatus* degree after five to six and a half years of study.

The integration of teaching and research is a fundamental principle for all universities. This is meant to ensure high standards in all programmes.

The humanities also offer a special six-year degree course (*mag.art.*) concentrated in one subject.

The Bachelor's degree and the *candidatus* programmes offered by the universities in Aalborg and Roskilde begin with a one- or two-year basic course in either humanities, social, technical or natural sciences. The studies at these universities are characterised by an interdisciplinary, problem-oriented approach.

PhD studies

Three years of supervised postgraduate studies after the *candidatus* degree lead to a PhD degree. A PhD degree is awarded in recognition of the fact that the recipient has successfully completed a PhD programme and by means of a dissertation has demonstrated a capacity to carry out a scientific project involving independent application of the scientific methodology of the field in question, thereby contributing to research at a level corresponding to the international standards of a PhD degree in that field.

Danish PhD studies were restructured in 1993. The government lays down the overall framework of the PhD studies to ensure a general measure of quality but it is left to the Danish universities to design their own specific PhD programmes, matching the special competences, needs and traditions of the universities.

Thus, each university has outlined its own specific PhD programmes which again may be divided into a number of PhD study programmes that may all have their own particular requirements as to enrolment and course of study. The typical programme now consists of three years of studies following a five-year *candidatus* degree or an equivalent degree.

Individual PhD programmes must include:

- a scientific project (i.e. the PhD thesis) involving independent application of the scientific methodology of the relevant field;
- participation in research courses and seminars corresponding to approximately six months' work;
- mobility to ensure integration in two or more active research groups or networks. Mobility abroad is given high priority;
- experience in teaching or other kinds of communication of research results;
- defence in public of the PhD thesis.

Before 1988, the name of the PhD degree was the *licentiat* degree.

For mature researchers, it is possible to obtain the traditional, higher Danish doctoral degree (*dr.phil.*, *dr.scient.*, etc.) after a minimum of five to eight years' individual and original research.

II.3.3. Academic recognition of final qualifications in higher education for purposes of further study

Some higher education qualifications from the non-university sector qualify for admission to postgraduate university studies in similar subjects.

Thus the *folkeskole* teacher training course qualifies for admission to the degree courses at the Royal Danish School of Educational Studies. Diploma engineers can, through a special study arrangement, undergo further training on the *candidatus* engineering courses at the Technical University of Denmark and Aalborg University.

All Bachelor's degrees qualify for admission to *candidatus* programmes and all *candidatus* degrees qualify for admission to PhD studies and for studies for the higher doctoral degree within the same or related subject fields.

III. Special types and forms of final qualifications in higher education

Qualifications for practical pursuit of specific professions

Some professions are regulated by law and require an official authorisation and eventually additional training specific to the profession on top of the higher education course of study.

Authorisation and appointment

Occupational therapists and physiotherapists: After completion of the course, the school issues a certificate of authorisation on behalf of the National Board of Health.

Midwives: After completion of the course, students receive authorisation from the National Board of Health and are able to work as midwives.

Doctors: Authorisation to work independently as a doctor is granted by the National Board of Health to persons who have been employed for a total of 18 months as a registrar in registrar positions approved for this purpose by the National Board of Health. The employment must include six months' surgery, six months' internal medicine and six months' employment as an assistant to a general practitioner. In special cases the latter can be replaced by employment at a clinical hospital ward.

Dentists: In order to gain authorisation from the National Board of Health, dentistry graduates must have completed a one-year period of assistantship in an authorised dentist's practice or the municipal dental service.

Lawyers: Appointment as a lawyer requires a law degree and a three-year period of employment as a solicitor's clerk or similar. This three-year period is a practical law training period where graduates will be dealing with actual legal problems.

Chartered surveyors: For appointment as a chartered surveyor by the Danish Commerce and Companies Agency, the candidate must have passed a Danish surveyor's examination followed by at least three years' general registry duties in the employment of a practising chartered surveyor or similar work.

Chartered accountants: Appointment by the Danish Commerce and Companies Agency as a chartered accountant requires that the candidate has successfully undergone the following education and training: (1) an *HA* course, an *HD* course or the *cand.oecon.* course, all of them in specific subjects; (2) the *cand.merc.aud.* course (within the last eight years); (3) at least three years' employment in the practice of a chartered accountant; (4) the chartered accountants' examination.

Translators and interpreters: The Danish Commerce and Companies Agency appoints sworn translators and interpreters upon successful examination from the Copenhagen Business School in those languages where no *cand.ling.merc.* courses are offered. The *cand.ling.merc.* and *cand.interpret.* degrees in the major languages fulfil the educational conditions for being appointed sworn translators and interpreters.

Veterinary surgeons: Authorisation to work independently as a veterinary surgeon is granted by the Danish veterinary service to persons who have completed the Danish *cand.med.vet.* degree or a similar foreign degree.

Professional postgraduate teacher training for upper secondary schools, commercial and technical colleges, etc.

The professional five-month postgraduate teacher training programme (*Pædagogikum*) for upper secondary schools and *HF* takes place within the first two years of employment after the award of a *candidatus* degree. It is composed of a practical and a theoretical course, each of which must be passed individually. The practical course takes place at an upper secondary school or a similar institute, where the candidate teaches under the supervision of permanent staff members.

The professional postgraduate teacher training for commercial colleges is, to a large extent, dependent on self-study. Support courses are, however, available from the State Institute for the Educational Training of Vocational Teachers (*Statens Erhvervspædagogiske Læreruddannelse* — *SEL*). The course is divided into three stages: (1) teaching subjects; (2) social economy and business studies; (3) educational, theoretical and practical teaching skills.

The professional postgraduate teacher training programme for technical colleges normally takes 600 hours within 12 to 14 months and is organised by the *SEL*. It consists of a theoretical and a practical part and two examinations must be passed accordingly.

Further education for specialisation

General practitioner course: This course involves employment in a range of medical specialisations as well as a six-month period towards the end of the course as an assistant in the practice of an approved general practitioner. In addition, candidates follow a course of about 200 hours in general medicine. The course is planned to last three and a half years following employment as a registrar.

Advanced medical specialist course: This four to seven and a half years course involves further specialisation. The name of the specialisation is added to the title of medical specialist.

Specialisation course in veterinary science: A two-year course aimed at a specific area in domestic animal veterinary medicine.

Advanced clinical dietitian course: A one-year postgraduate course for catering officers and home economics teachers at the University of Aarhus. The course is partly theoretical and partly practical.

Advanced social education course: A one-year advanced course at the Institute for the Advanced Training of Social Pedagogues for social workers, kindergarten teachers, etc., who have been involved with social educational work for a minimum of three years.

Advanced dental specialist course: This course, which includes the fields of orthodontics and hospital orthodontics, lasts for five to six years.

IV. Recognition of foreign degrees and study periods in Denmark

Academic recognition and credit transfer

Students wishing to continue their higher education studies in Denmark on the basis of a foreign academic degree or study periods at an education institution outside Denmark must apply for admission as well as for recognition and credit transfer of their previous studies directly to the institution where they want to pursue their studies. The relevant *studienævn* (study committee) at the institution concerned decides the eligibility of the student and evaluates the student's degree of study attainments.

Denmark has signed the Council of Europe and Unesco conventions concerning recognition of diplomas leading to admission to universities as well as conventions concerning the equivalence of periods of university study/university qualifications, and a convention from 1975 regarding recognition of study attainments in the Nordic countries.

Professional recognition

Non-regulated professions

Except for a few regulated professions (see below), persons with foreign credentials may obtain jobs in Denmark on equal terms with Danes on the basis of their foreign diplomas. The potential employer evaluates the applicant's credentials for the job. Applicants with credentials which may not be well known in Denmark are recommended to include a comprehensive description of their educational background in their application. However, the level of a foreign degree can be evaluated by a Danish authority if necessary. This may be requested in writing either directly to a higher education institution which offers comparable degrees or through the Secretariat of the Danish Rectors' Conference. Degrees in architecture and engineering, however, are evaluated by the appropriate professional organisations.

Regulated professions

Diplomas from EU and EFTA countries

A general system concerning mutual recognition of higher education diplomas for regulated professions in the EU and EFTA countries has been implemented through Directive 89/48/EEC (mutual recognition of higher education diplomas awarded on completion of professional education and training of at least three years' duration).

Denmark has designated the *Erhvervs- og Selskabsstyrelsen* (the Danish Commerce and Companies Agency) as coordinating agency for the implementation of the directive. Further information on the procedures concerning recognition in accordance with this directive can be obtained from the above agency and applications for recognition should also be forwarded to the agency (see Appendix IV).

For professions for which separate directives concerning recognition apply (e.g. medical doctors, dentists, veterinary surgeons, midwives and architects), applications must be forwarded directly to the competent authority (see Appendix IV).

Diplomas from other countries

Applications for recognition of diplomas for regulated professions from countries outside the Nordic and EU countries must also be forwarded directly to the competent authority (see Appendix IV).

**Diagram
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The European student's guide — Information tips and tricks for studying in the European Union, 1995, 229 pp.. Ortelius, Via dell' Agnolo, 87, I-50122 Florence.

Further information material in English on the various institutions of higher education and study possibilities for foreign students is available directly from the institutions or through their websites.

General information material on education in Denmark is available from:

Ministry of Education
International Relations Division
Frederiksholms Kanal 25 D
DK-1220 Copenhagen K

and information is also accessible on the Internet through the website of the Ministry of Education, International Relations Division (www.uvm.dk/eng.htm).

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Appendix I

The marking system

The 13-point scale (as defined by the Ministry of Education)

The use of the marking system in primary and lower secondary education

Marks are awarded on a 13-point scale and are divided into three main groups: excellent, average and hesitant (00 lies below these and is very rarely awarded).

13 is given for an exceptionally independent and excellent performance.

11 is given for an independent and excellent performance.

10 is given for an excellent but not particularly independent performance.

9 is given for a good performance, a little above average.

8 is given for an average performance.

7 is given for a mediocre performance, slightly below average.

6 is given for a somewhat hesitant but more or less satisfactory performance.

5 is given for a hesitant and unsatisfactory performance.

03 is given for a very hesitant, very insufficient and unsatisfactory performance.

00 is given for a completely unacceptable performance.

The leaving examinations of the *folkeskole* (*folkeskolens afgangsprøve* or *folkeskolens udvidede afgangsprøve*) are voluntary and may be taken in a number of subjects. No particular mark is required to pass them.

The 13-point system is intended to ensure uniformity in the evaluation of achievement at the institutions where it is used. Generally, marks awarded in the *folkeskole* and in lower secondary education reflect pupils' achievements in relation to the aims laid down for the subjects in question.

The use of the marking system in upper secondary higher education

To pass the *studentereksamen* (upper secondary school leaving examination) or the *højere forberedelseseksamen (HF)* (higher preparatory examination) students must obtain a minimum average of 6.0 in the marks for both the year's work and the examination.

At institutions of higher education, either a total average of 6 or in other cases a mark of at least 6 in each subject is required to pass. Marks awarded at these institutions reflect students' achievements in terms of standards set by the institutions.

Further information about the requirements of any particular institution can be obtained from that institution.

Appendix II

Danish non-university higher education and university qualifications

Non-university higher education institutions and qualifications

(The title of the qualification which appears on the diploma (*eksamensbevis*) from non-university higher education institutions is normally the same as the professional title.)

<i>In Danish</i>	<i>In English</i>	<i>Duration</i>
Danmarks Journalisthøjskole	The Danish School of Journalism	
<i>Journalist</i>	Journalist	four years
<i>Billedjournalist</i>	Photojournalist	four years
Danmarks Biblioteksskole	The Royal School of Librarianship	
<i>Bibliotekar D.B.</i>	Librarian RSL	four years
Lærerseminarier	Colleges of education	
<i>Folkeskolelærer</i>	Primary and lower secondary school teacher	four years
Pædagogseminarier	Colleges of educator training	
<i>Pædagog</i>	Pre-school, recreation centre teacher and social pedagogue	three and a half years
Håndarbejdsseminarier	Colleges for art, crafts, textile and fashion design	
<i>Håndarbejds lærer</i>	Needlework teacher	three years
Sociale Højskoler	Schools of social work	
<i>Socialrådgiver</i>	Social worker	three years
Ingeniørhøjskoler, Teknika	Colleges of engineering	
<i>Eksportingeniør</i>	Export engineer	five years
<i>Diplomingeniør, BSc</i> (also offered at some universities)	Bachelor of Science in Engineering	three and a half years

<i>Ergoterapeutiskoler</i>	Schools of occupational therapy		
<i>Ergoterapeut</i>	Occupational therapist	three years	
<i>Fysioterapeutiskoler</i>	Schools of physiotherapy		
<i>Fysioterapeut</i>	Physiotherapist	three years	
<i>Sygeplejerskoler</i>	Schools of nursing		
<i>Sygeplejerske</i>	Nurse	three and three quarter years	
<i>Danmarks Jordmoderskole</i>	The Danish Midwifery School		
<i>Jordemoder</i>	Midwife	three years	
<i>Hospitalslaborantskoler</i>	Schools for medical laboratory technologists		
<i>Hospitalslaborant</i>	Medical laboratory technologist	three and a half years	
<i>Ernærings- og husholdningsøkonomseminarier</i>	Colleges of nutrition and home economics		
<i>Ernærings- og husholdningsøkonom</i>	BSc in Nutrition and Home Economics	three and a half years	
<i>Danmarks Designskole</i>	Denmark's Design School		
<i>Designer</i>	Designer	three and a half to five years	
<i>Den Grafiske Højskole</i>	Graphic College of Denmark		
<i>Grafonom (GTØ)</i>	(Specialist in printing technology)	two years	
<i>Grafonom (GK)</i>	(Specialist in graphic communication)	two years	
<i>Specialkursus i Husholdning ved Aarhus Universitet</i>	Department of Nutrition and Home Economics at the University of Aarhus		
<i>Klinisk diætist</i>	Clinical dietitian	one year	
<i>Tekniske skoler</i>	Technical schools		
<i>Byggetekniker</i>	Building system technician	one and a half years	
<i>Byggekonstruktør</i>	(Constructing architect)	<i>Bygge-tekniker</i> plus two years	
<i>Handelsskoler</i>	Commercial schools		
<i>Markedsøkonom</i>	Market economist	two years	
<i>Radiografiskoler</i>	Radiographic schools		
<i>Radiograf</i>	Radiographer	three years	

Økonomaskolen	The Danish School of Dietitians	
<i>Økonoma</i>	Hospital-trained dietitian	two years

University qualifications

Medium cycle university degrees		Duration
<i>BA</i>	Bachelor of Arts	three years
<i>BS</i>	Bachelor of Science	three years
<i>Diplomingeniør, BS</i> (also offered at some non-university higher education institutions)	Bachelor of Science in Engineering	three and a half years
<i>Exam.art. (until 1995)</i>	<i>Examinatus(a) artium</i>	two years
<i>HA (BA)</i>	Bachelor of Arts in Economics and Business Administration	three to three and a half years
<i>HD (Civiløkonom)</i>	Holder of Diploma in Economics	four years part-time
<i>Musiklærer, AM</i>	Music teacher	four years
<i>Musiklærer, EM</i>	Music teacher	four years
<i>Tegnsprogstolk</i>	Sign language interpreter	two years
Long cycle university degrees		Duration
<i>Billedkunstner</i>	<i>Artist</i>	six years
<i>Cand.act. (aktuar)</i>	<i>Candidatus(a) actuariæ</i>	BSc plus two years
<i>Cand.agro. (agronom)</i>	<i>Candidatus(a) agronomiæ</i>	BSc plus two years
<i>Cand.arch. (arkitekt)</i>	<i>Candidatus(a) architecturæ</i>	five years
<i>Cand.comm.</i>	<i>Candidatus(a) communications</i>	BA plus two years
<i>Cand.cur.</i>	<i>Candidatus(a) curationis</i>	Nurse plus two and a half years
<i>Cand.geom (landinspektør)</i>	<i>Candidatus(a) geometriæ</i>	five years
<i>Cand.hort. (hortonom)</i>	<i>Candidatus(a) hortonomiæ</i>	BSc plus two years
<i>Cand.hort.arch. (landskabsarkitekt)</i>	<i>Candidatus(a) hortonomiæ architecturæ</i>	BSc plus two years
<i>Cand.jur.</i>	<i>Candidatus(a) juris</i>	BA plus two years
<i>Cand.lact.</i>	<i>Candidatus(a) lactonomiæ</i>	five years
<i>Cand.ling.merc.</i>	<i>Candidatus(a) linguæ mercantilis</i>	BA plus two years
<i>Cand.mag.</i>	<i>Candidatus(a) magisterii</i>	BA plus two or two and a half years

<i>Cand.med.</i>	<i>Candidatus(a) medicinae</i>	six and a half years
<i>Cand.med.vetr.</i> (<i>veterinær</i>)	<i>Candidatus(a) medicinae veterinariae</i>	five and a half years
<i>Cand.merc.</i>	<i>Candidatus(a) mercaturae</i>	BA plus two years
<i>Cand.merc.aud.</i>	<i>Candidatus(a) mercaturae et auditoris</i>	BA plus two years
<i>Cand.merc.dat.</i>	<i>Candidatus(a) mercaturae</i>	BA plus two years
<i>Cand.merc.int.</i>	<i>Candidatus(a) mercaturae internationalis</i>	BA plus two years
<i>Cand.merc.mat.</i>	<i>Candidatus(a) mercaturae</i>	BA plus two years
<i>Cand.merc.oecon.</i>	<i>Candidatus(a) mercaturae oeconomices</i>	BA plus two years
<i>Cand.negot.</i>	<i>Candidatus(a) negotiandi</i>	BA plus two years
<i>Cand.odont.</i>	<i>Candidatus(a) odontologiae</i>	five years
<i>Cand.oecon.</i>	<i>Candidatus(a) oeconomices</i>	BA plus two years
<i>Cand.oecon./cand.polit.</i>	<i>Candidatus(a) oeconomices/ Candidatus(a) politices</i>	BA plus two years
<i>Cand.pharm.</i> (<i>farmaceut</i>)	<i>Candidatus(a) pharmaciae</i>	five years
<i>Cand.phil.</i>	<i>Candidatus(a) philosophiae</i>	BA plus one year
<i>Cand.polit.</i>	<i>Candidatus(a) politices</i>	BA plus two years
<i>Cand.polyt.</i> (<i>civilingeniør</i>)	<i>Candidatus(a) polytechnices</i>	five years
<i>Cand.psych. (psykolog)</i>	<i>Candidatus(a) psychologiae</i>	BA plus two years
<i>Cand.pæd.</i>	<i>Candidatus(a) paedagogiae</i>	<i>Folkeskolelærer</i> plus three years
<i>Cand.pæd.psych.</i>	<i>Candidatus(a) paedagogiae psychologiae</i>	<i>Folkeskolelærer</i> plus three years
<i>Cand.scient.</i>	<i>Candidatus(a) scientiarum</i>	BSc plus two years
<i>Cand.scient.adm.</i>	<i>Candidatus(a) scientiarum administrationis</i>	BA plus two years
<i>Cand.scient.anth.</i>	<i>Candidatus(a) scientiarum anthropologicarum</i>	BA plus two years
<i>Cand.scient.bibl.</i>	<i>Candidatus(a) scientiarum</i>	<i>Bibliotekar</i> plus two years
<i>Cand.scient.oecon.</i>	<i>Candidatus(a) scientiarum oeconomices</i>	BSc plus two years
<i>Cand.scient.pol.</i>	<i>Candidatus(a) scientiarum politicarum</i>	BA plus two years
<i>Cand.scient.soc.</i>	<i>Candidatus(a) scientiarum socialium</i>	BA plus two years
<i>Cand.silv.</i> (<i>forstkandidat</i>)	<i>Candidatus(a) silvinomiae</i>	BSc plus two years

Appendix III

Samples of study programmes

***Folkeskolelærer* (primary and lower secondary school teacher)**

The Danish *lærerseminarier* (colleges of education) are the only institutions authorised to provide study programmes which qualify students for posts in the Danish *folkeskole* (primary and lower secondary school, 1st to 10th form).

All the colleges are under the supervision of the Ministry of Education and the quality of the examinations is controlled by external examiners appointed by the Ministry.

The study programme lasts four years and consists of two parts, each of two years' duration.

The programme includes teaching practice periods of 20 weeks, the organisation of which is decided by the institution.

Part I includes:

Subjects/subject areas	Workload
(percentages indicate the workload of a full-time student during each of the two parts of the study programme)	

Danish (including knowledge of Norwegian and Swedish)

Handwriting

Rhetoric

Religious education

History/social studies

Total

approx. 32%

Arithmetic/mathematics

Natural science

Total

approx. 18%

Theory of education

Psychology

Total

approx. 20%

Two of the following three subjects:

Music

Physical education

Visual art/design

Total

approx. 20%

Teaching practice

approx. 10%

Part II includes:

First main subject chosen freely from among all the subjects of the *folkeskole*

approx. 30%

Second main subject chosen freely from among all the subjects of the <i>folkeskole</i>	approx.30%
General didactics and educational specialisation	approx.25%
Teaching practice	approx.15%

The subject areas must be completed by examinations which may be oral, written, practical or a combination.

Diplomingeniør, BS

Diplomingeniør degree courses are offered at the Technical University of Denmark, at Aalborg University and at seven engineering colleges (*ingeniørhøjskoler*).

They are three-and-a-half-year degree courses giving the qualification *diplomingeniør* or BSc. All courses offered are based on the same State regulations.

There are several fields of study: civil and constructional engineering, electronic engineering with computer science, electrical engineering, mechanical engineering, production engineering, naval architecture, chemical engineering, food science technology and export engineering (five years), and students normally enrol in a specific course from the beginning.

The aim of the courses is to provide students with both the theoretical and the practical knowledge required to practise as professional engineers.

Having obtained the *diplomingeniør* degree, it is possible to continue studying for a further two years to obtain the *civilingeniør (cand.polyt.)* degree. This degree is also obtainable through separate five-year degree courses at the Technical University of Denmark and Aalborg University.

The *diplomingeniør* degree courses at the Technical University of Denmark have a modular structure. For the first four semesters, modules are compulsory as is the practical training period. The latter lasts half a year and is usually taken during the fifth semester.

Class-oriented teaching for groups of 25 to 35 students and laboratory project work in small groups form the pedagogical concept. In the final semester students prepare their final project, individually or in small groups.

The first year of the *diplomingeniør* degree course at Aalborg University is common, after which students choose their branch of specialisation. The course includes practical training and one semester's work on the final project. Studies at Aalborg University are problem-centred and organised around projects.

Curricula at the seven engineering colleges offering the *diplomingeniør* degree course have a modular structure. Due to physical and geographical differences, curricula and pedagogical approaches are not identical at the various colleges. The first four semesters are common and based on classroom teaching and they comprise basic subjects for the chosen branch of specialisation including mathematics, physics and computer science. Half a year is spent on practical training during the fifth and sixth semesters. A final project is produced during the seventh semester. At some engineering colleges modules are combined and shared by groups of students who do their project work in the groups. Up to 50% of the entire curriculum may be project-centred, thus emphasising the integration of theory and practice.

Oral and written examinations are held throughout the course. Most examinations have external examiners.

The *HA* degree programmes (Bachelor of Arts in Economics and Business Administration)

The *HA* degree is awarded after successful completion of a three-year study programme at a business school or at the universities in Odense, Aalborg or Roskilde. The student may choose from among various specialisations, for instance *HA* — BA in Economics and Business Administration, *HA (dat.)* — BA in Business Administration and Computer Science, *HA (jur.)* — BA in Business Administration and Commercial Law and *HA (mat.)* — BA in Business Administration and Management Science.

The *HA* degree programmes at the Copenhagen Business School give students all-round theoretical and practical competence in economics and management. This enables them to fill most functions in business enterprises, irrespective of industry or size. Students learn how to access and analyse complex problems in the business environment.

The programmes consist of three blocks:

Economics

Students view companies in a broad social perspective. Among specific subjects taught are the balance of payments, public sector finance, the interest rate level, inflation, unemployment and other related topics. The block comprises:

- economics
- descriptive economics.

Business economics

Students learn the skills and methods used by companies:

- business economics
- accounting
- finance
- marketing and management
- corporate strategy and the environment
- organisational behaviour.

Supplementary block

This consists of the skills which give the necessary background for the other courses:

- theoretical statistics
- data processing
- commercial law
- mathematics
- theory of science
- methodology.

A wide range of optional courses is also available in connection with each of the three blocks. Alongside the final project, which integrates several subjects, the optional courses help make the degree programmes broader and provide candidates with their individual, business-economic profile.

The programmes comprise lectures, course work and written assignments. Almost all programmes include considerable amounts of project work which requires flexibility, adaptability and the ability to cooperate.

All courses are evaluated. Examinations may be oral or written and are often based upon project work supplemented by a presentation and an oral examination. Evaluations are mainly carried out by professors and external examiners appointed by the Ministry of Education.

The *HA* degree qualifies students for business jobs as well as for corresponding (or related) two-year *candidatus* (Master's) programmes.

Cand.scient. study programmes

The *candidatus(a) scientiarum (cand.scient.)* degree is awarded by the universities of Copenhagen, Aarhus, Odense, Roskilde and Aalborg. It is a degree in the natural science subject areas and it consists of a three-year BSc degree and a two to two-and-a-half-year *candidatus* degree.

The organisation of the study programmes varies among the different universities. The most usual is to combine two subjects (one major and one minor) from the following subject areas: mathematics, computer science, statistics, physics, astronomy, geophysics, biophysics, chemistry, biochemistry, biology, geology and geography.

The BSc programme of the University of Copenhagen primarily consists of compulsory courses in the chosen subjects for the first two years and optional courses and a compulsory project lasting one sixth of a year's work for the last year.

In Copenhagen and Aarhus it is possible in the first year to combine mathematics with two other subjects, typically physics, chemistry or computer science. In the second year, the student concentrates on two of the three subjects chosen in the first year. It is also possible to combine a natural science subject with a subject from a different faculty, for instance music, philosophy, etc. In Copenhagen it is also possible to focus on just one subject.

The *cand.scient.* programme at the University of Copenhagen consists of one to one and a half years' course work in one of the subjects chosen for the BSc degree and six months' to a year's work for the thesis. There are no compulsory courses, but there are restrictions as to the combination of courses followed and the course work must amount to one to one and a half years' full-time workload.

The majority of the examinations are assessed by two persons: the professor and an external examiner appointed by the Ministry of Education.

Appendix IV

Recognition of foreign diplomas

General information on

academic recognition

DK-NARIC

(National Academic Recognition
Information Centre)

Rektorkollegiets Sekretariat

(The Secretariat of the Danish
Rectors' Conference)

H.C. Andersens Boulevard 45

DK-1553 Copenhagen V

Tel. (45) 33 92 54 06

Contact point and coordinator concerning professional recognition of regulated professions in accordance with EC Directives 89/48/EEC and 92/51/EEC

Erhvervs- og Selskabsstyrelsen

(Danish Commerce and
Companies Agency)

Kampmannsgade 1

DK-1604 Copenhagen V

Tel. (45) 33 30 77 00

Architects

Arkitekternes Landsforbund

(The Federation of Danish Architects)

Bredgade 66

DK-1260 Copenhagen K

Tel. (45)

32

83

59

00

Chartered accountants, sworn interpreters

Erhvervs- og Selskabsstyrelsen
Danish Commerce and Companies Agency
Kampmannsgade 1
DK-1604 Copenhagen V
Tel. (45) 33 30 77 00

Engineers

Ingeniørforeningen i Danmark
(The Society of Danish Engineers)
Vester Farimagsgade 29
DK-1780 Copenhagen V
Tel. (45) 33 15 65 65

Legal professions

Justitsministeriet
(Ministry of Justice)
Slotsholmsgade 10
DK-1216 Copenhagen K
Tel. (45) 33 92 33 40

Medical and paramedical professions

Sundhedsstyrelsen
(National Board of Health)
Amaliegade 13
Postbox 2020
DK-1012 Copenhagen K
Tel. (45) 33 91 16 01

Psychologists

Psykolognævnet
(The Danish Supervisory Board
of Psychological Practice)
Socialministeriet
Holmens Kanal 22,
DK-1016 Copenhagen K
Tel. (45) 33 33 33 33

33

92

45

23

Teachers for the Danish *folkeskole*

(primary and lower secondary education)

Undervisningsministeriet
Universitetsafdelingen
(Ministry of Education)
Department of Higher Education
H.C. Andersens Boulevard 40
DK-1553 Copenhagen V
Tel. (45) 33 92 53 00

Teachers for Danish upper secondary education

Undervisningsministeriet
Gymnasieafdelingen
(Ministry of Education)
Department of Upper Secondary Education)
Frederiksholms Kanal 25
DK-1220 Copenhagen K
Tel. (45) 33 92 56 00

Veterinary surgeons

Veterinærdirektoratet
(Danish Veterinary Service)
Rolighedsvej 25
DK-1958 Frederiksberg C
Tel. (45) 31 35 81 00

Applicants should contact the relevant authority/organisation for information on the documentation needed for recognition.

Finland

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Glossary

Alempi korkeakoulututkinto/lägre högskoleexamen (1)

The first university degree (Bachelor's level), i.e. the lower academic degree, requires three years (minimum) of full-time study.

Ammatillinen korkea-aste/yrkesutbildning på högre nivå

The highest level of education at vocational institutions; vocational higher education. Most education of this level has already been upgraded to the AMK system. The qualifications are called *Ammatillisen korkea-asteen tutkinto/yrkesexamen på högre nivå*, e.g. *insinööri, merikapteeni*.

Ammatillinen perustutkinto/yrkesinriktad grundexamen

Basic, initial vocational qualification, requires two to three years of education and training; entry requirement: comprehensive school.

Ammattikorkeakoulu/yrkeshögskola, amk/yh

The new institute of professional higher education, in English 'AMK institution', also called 'polytechnic'. Non-university higher education. The non-university sector of higher education will be completed by the end of this decade, when all vocational higher education has been upgraded to AMK institutions. The degrees are called *Ammattikorkeakoulututkinto/yrkeshögskoleexamen (amk/yh)*.

Ammattioppilaitos/yrkesläroanstalt

Institution of vocational education. At present, institutions provide both upper secondary and higher education.

Jatkotutkinnot/påbyggnadsexamina

At universities, the postgraduate, doctoral degrees, *lisensiaatti* (optional) and *tohtori*.

Kandidaatti/kandidat

1. The new lower university degree (Bachelor's level), e.g. *humanististen tieteiden kandidaatti/kandidat i humanistiska vetenskaper* and *kasvatustieteen kandidaatti/pedagogie kandidat*; 2. In law, the higher degree (Master's level) in both the old and the new system, i.e. *oikeustieteen kandidaatti/juris kandidat*. 3. In the old degree system the higher (Master's level) university degree, e.g. *filosofian kandidaatti/filosofie kandidat* and *kasvatustieteidens kandidaatti/pedagogie kandidat*.

Lisensiaatti/licentiat

At universities: 1. The optional pre-doctoral postgraduate degree, e.g. *filosofian lisensiaatti/filosofie licentiat*. It requires approximately two years of full-time study, including a licentiate thesis which is called *Lisensiaatintutkimus/licentiatavhandling*. 2. In the fields of medicine, dentistry and veterinary medicine the first, Master's level degree (i.e. *ylempi korkeakoulututkinto*), e.g. *lääketieteen lisensiaatti/medicine licentiat*.

Lukio/gymnasiet

Three-year general upper secondary school, which ends in the national matriculation examination (*ylioppilastutkinto*). Entry requirements: comprehensive school (nine years). The upper secondary school leaving certificate is called *Lukion päästötodistus/gymnasiets avgångsbetyg*.

Maisteri/magister

1. The new higher university degree (Master's level), e.g. *filosofian maisteri/filosofie magister* and *kasvatustieteen maisteri/pedagogie magister*. 2. In the old system, a title that in many fields of study was conferred on a holder of *kandidaatti* degree (Master's level) on application without any further studies.

Opintoviikko/studievecka

Literally 'study week'. Credit unit. One credit represents approximately 40 hours of work (e.g. lectures and other forms of instruction, exercises, independent work at home or in the library). The credit system is in use at universities and AMK institutions, as well as in vocational institutions.

Opistoaste/institutnivå

Post-secondary level (also called 'college/institute level') of the vocational education. Vocational higher education; most of the education will be gradually upgraded to AMK institutions. The qualifications are called *Opistotutkinto/examen på institutnivå*.

Tiede- ja taidekorkeakoulut/vetenskaps- och konsthögskolor

Institutions in the university sector; literally 'scientific and art universities'.

Tohtori/doktor

Doctor's degree, the highest degree awarded by the universities. The studies for *tohtori/doktor* include a doctoral thesis, or *tohtorinväitöskirja/doktorsavhandling*, which is published and must be defended in a public debate. It is possible to take the degree in four years.

Tutkielma/avhandling

The thesis required for university degrees, e.g. *kandidaatintutkielma/ kandidataavhandling* for the new lower *kandidaatti*, and *maisterintutkielma/magisteravhandling* (also called *pro gradu*) for the higher *maisteri*.

Ylempi korkeakoulututkinto/högre högskoleexamen

The second university degree, the higher academic degree (Master's level). Requires five years (minimum) of full-time study, or two years after a lower degree.

Yliopisto/universitet

University; the university sector comprises multifaculty universities, specialised institutions and art academies, i.e. *tiede- ja taidekorkeakoulut*.

Ylioppilastutkinto/studentexamen

Matriculation examination taken during the second half of the three-year general upper secondary school (*lukio*). Students who pass this national examination are eligible for university education. The certificate given is called *ylioppilastutkintotodistus/studentexamensbetyg*.

I. Higher education system

In Finland, the overall framework of educational policy is decided by Parliament. Parliament passes legislation concerning all levels of education, and decides on funds for education from the State budget. The implementation of the decisions is the responsibility of the Council of State (government) and the Ministry of Education. There has been a recent move to reduce centralised control over educational institutions. The role of the government is to decide the framework for quantitative and qualitative development of the education system, but decision-making is increasingly being handed to local authorities, schools, and institutions of higher education.

Nearly all publicly funded education, from primary education to higher education, is subordinate to or supervised by the Ministry of Education. Training relating to national defence, order, and some training in communication and transport are administered by other, relevant ministries. Most existing private institutions are in the vocational sector, but they, too, rely heavily on public funding, and the education they provide is subject to public supervision. The universities are State institutions and funded directly from the budget; the State and local authorities provide most of the funds for the other educational institutions.

The Ministry of Education (*opetusministeriö/undervisningsministeriet* ⁽¹⁾) is responsible for the overall development and planning of education and research. The ministry prepares educational legislation and drafts relevant resolutions for the government.

The National Board of Education (*opetushallitus/utbildningsstyrelsen*), subordinate to the Ministry of Education, is an office responsible for developing and evaluating general, vocational and adult education; it develops and confirms the qualifications and the core curricula for schools, and provides certain supporting services for them.

The Higher Education Evaluation Council (*Korkeakoulujen arviointineuvosto/Rådet för utvärdering av högskolorna*) was established in January 1996 to advise the Ministry of Education and to assist universities and *ammattikorkeakoulut* (AMK institutions, institutes of professional higher education, also called polytechnics) in self-evaluation. The council proposes initiatives regarding the institutions and their development, and promotes research on and international cooperation in evaluation. It assesses applications for the accreditation of AMK institutions and plans new experimental AMKs. The council comprises 12 experts appointed for a four-year term. The majority of its members are teachers at universities and AMK institutions, but students as well as business and industry are also represented.

The Council of Finnish University Rectors (*Suomen korkeakoulujen rehtorien neuvosto/Finska högskolerektorernas råd*) is a board promoting cooperation between the universities. It makes recommendations and declarations in matters concerning university education.

The Council of Presidents of Finnish Institutes of Professional Higher Education (*ARENE — Ammattikorkeakoulujen rehtorineuvosto/Rådet för yrkeshögskolornas rektorer*) is a board promoting cooperation between the AMK institutions. The board discusses matters relating to the planning and development of AMK education and makes recommendations and policy statements. It may also perform special tasks at the request of the institutions or the authorities.

The universities are under the direct supervision of the Ministry of Education, where the department for higher education and research deals with matters pertaining to university education and research. Even though they are State institutions, they have considerable autonomy in internal affairs, including teaching and research.

The annual negotiations between the Ministry of Education and the universities lead to agreements on performance (for the next four years), in which the overall goals as well as funds for the universities are agreed. The universities have recently transferred to budgeting by results and some resources are allocated to universities on the basis of their achievements.

As for the legislation, each university is governed by a separate act and decree concerning its administration. There is a reform taking place aiming to replace the separate acts by one law governing all universities. Other provisions are included in legislation concerning teacher education and in decrees pertaining to degrees in different fields of education. The latter decrees define the objectives, extent and overall structure of the degrees, but the institutions themselves issue more explicit directions for the content and structure of the degrees.

The Ministry of Education is responsible for the planning, supervising and evaluation of the current experimentation in vocational higher education, i.e. the *ammattikorkeakoulu* reform. Permission to establish a permanent *AMK* institution, to start an experimental institution or to broaden the scope of an experimentation is granted by the government. An *AMK* institution can be run by a local authority, joint municipal board or registered Finnish foundation or association. A State institution can also be established for special educational reasons. The steering of permanent *AMK* institutions is similar to that of universities; it is based on the government plan for the development of education and consultations on objectives and target outcomes between the ministry and the institutions. The *AMK* institutions are financed from State and municipal funds. The government can grant additional funds to institutions as a reward for good results or for development projects.

The *AMK* degrees, their extent and structure are governed by legislation. The institutions themselves design and develop their degree programmes and decide on the curricula. The degree programmes and professional titles must be approved by the Ministry of Education.

The majority of vocational institutions are run by municipalities or joint municipal boards; they can also be private or State institutions. The vocational curricula are based on the national core curricula, which are issued and approved by the National Board of Education. The curricula are planned in cooperation with experts representing educational institutions, relevant lines of business, industry or services, and research institutes. The institutions make their own annual working plans.

Finland is a bilingual country and education is provided in Finnish and Swedish at all levels, and to a lesser extent also in the Saami language (the language spoken by a small ethnic minority living in Northern Finland). In bilingual municipalities the local school board, which directs and supervises the local education system, is divided into Finnish and Swedish-speaking sections. There are Swedish comprehensive schools, upper secondary schools and vocational institutions. There are two Swedish universities and some of the other universities provide education in both languages. Of the *AMK* institutions, three are Swedish-speaking and four other institutions offer both Finnish and Swedish-speaking programmes. Courses and programmes in English are increasingly offered at all levels of education. In universities and *AMKs* it is even possible to take certain degrees in English.

I.1. Institutions of higher education

Today, higher education is provided by university and non-university higher education institutions.

University institutions

The university institutions may be sub-divided into two categories:

1. ten general, multi-faculty universities, most often called *yliopisto/universitet*:
Helsingin yliopisto/Helsingfors universitet, Joensuun yliopisto, Jyväskylän yliopisto, Kuopion yliopisto, Lapin yliopisto, Oulun yliopisto, Tampereen yliopisto, Turun yliopisto, Vaasan yliopisto, Åbo Akademi (Swedish)
2. ten specialised institutions, often called *korkeakoulu/högskola*:
three in economics and business administration (*Helsingin kauppakorkeakoulu, Svenska handelshögskolan* (Swedish), *Turun kauppakorkeakoulu*);
three in engineering and architecture (*Lappeenrannan teknillinen korkeakoulu, Tampereen teknillinen korkeakoulu, Teknillinen korkeakoulu/Tekniska högskolan*);
four art academies (*Kuvataideakatemia/Bildkonstakademin* (fine arts), *Sibelius-Akatemia/Sibeliuss-Akademien* (music), *Taideteollinen korkeakoulu/Konstindustriella högskolan* (art and design). *Teatterikorkeakoulu/Teaterhögskolan* (theatre, drama and dance).

Kuvataideakatemia (the Academy of Fine Arts) gained university status in 1993, and has awarded university degrees from the academic year 1993/94 onwards. *Eläinlääketieteellinen korkeakoulu/Veterinärmedicinska högskolan* (College of Veterinary Medicine), previously an independent university, was annexed as a faculty to the University of Helsinki in autumn 1995.

All these 20 universities undertake research, provide postgraduate education and confer doctorates. Scientific research is an essential function of the universities; all university tuition is based on the principle of the unity of teaching and research — teaching is based on research and there is a research element in all degrees.

The number of faculties in multi-field universities varies from four to nine. The faculties are further divided into departments. The institutions sometimes offer degree programmes beyond their field of specialisation, e.g. *Lappeenranta teknillinen korkeakoulu* — one of the technical universities — has a degree programme in economics and business administration. In the same way, some multi-field universities provide education in engineering and architecture, economics, the arts, etc.

Other institutions

University-level degrees are also provided by a military institution under the Ministry of Defence, i.e. *Maanpuolustuskorkeakoulu/Försvarshögskolan*.

Non-university higher education

Finland is gradually building up a non-university sector of higher education consisting of institutions known as *ammattikorkeakoulut* (*AMK* institutions, institutes of professional higher education or polytechnics in English). *AMK* institutions are being formed by upgrading the specialised institutions (which offer vocational higher education) and by merging them to form new, multi-field *AMK* institutions. The vocational higher education reform was launched in 1991 with the enactment of legislation on experimental *AMK*s. Twenty-two temporary *AMK* institutions were established under the act throughout the country; the institutions were composed of 85 vocational institutions. Favourable feedback from the experiment prompted rapid action: in March 1995 the parliament approved legislation making the *AMK* system permanent, and the first permanent operating licences were granted to nine institutions. The licences will be granted annually on the basis of quality and performance during the experimental phase. The creation of the non-university sector of higher education will last until the end of this decade, by which time a permanent network of *AMK* institutions will be established.

Along with the *AMK* reform, all vocational education has undergone a structural reform. Until now, the concept of vocational education in Finland covered both secondary and higher vocational education; for example, there were no special institutions for higher education (except for the field of technology). The complicated system made for multiple education; the same institutions offered vocational programmes for comprehensive school leavers and matriculated students at three levels (*kouluaste/skolnivå*, *opistoaste/institutnivå* and *ammattillinen korkea-aste/yrkesutbildning på högre nivå*). A sequential programme structure has recently been introduced to vocational education: students first take a basic vocational qualification and then move on to higher education, i.e. to *AMK* institutions or to post-secondary level programmes in vocational institutions. Implementation of the new structure started in autumn 1995 with initial vocational education, in autumn 1996 it came into use in post-secondary level as well. However, the post-secondary level will be dismantled by the year 2000, and all the non-university higher education will be provided by *AMK* institutions.

***AMK* institutions**

In autumn 1996, the number of *AMK* institutions was 28. When two new institutions joined the system in August 1997, the basic network of *AMK* institutions could be considered complete. The government will grant permanent operating licences until the end of the 1990s: nine of the institutions gained permanent status in autumn 1996, seven others will get it in autumn 1997. At the same time, new vocational institutions will join the existing *AMK*s, and some *AMK*s may merge to form a new larger entity. According to current plans, the number of *AMK* institutions should stabilise at around 25 by the year 2000.

Currently Finland has both temporary (*va./t.*) and permanent *AMK* institutions. However, experimental and permanent *AMKs* have equal status as higher education institutions in the non-university sector, and accordingly, the qualifications they award are equal in scope, standard and value. The quality and standard of institutions were evaluated when institutions applied for an experimental licence; the experimental phase will give them time to 'tune up' their systems before they apply for a permanent operating licence.

Permanent institution as of autumn 1996:

Espoon-Vantaan teknillinen ammattikorkeakoulu, Haaga Instituutin ammattikorkeakoulu, Hämeen ammattikorkeakoulu, Kajaanin ammattikorkeakoulu, Lahden ammattikorkeakoulu, Oulun seudun ammattikorkeakoulu, Pohjois-Karjalan ammattikorkeakoulu, Seinäjoen ammattikorkeakoulu, Tampereen ammattikorkeakoulu.

Permanent institutions as of August 1997:

Helsingin (va.) liiketalouden ja hallinnon ammattikorkeakoulu, Jyväskylän (va.) ammattikorkeakoulu, Kemi-Tornion (va.) ammattikorkeakoulu, Mikkelin (va.) ammattikorkeakoulu, Satakunnan (va.) ammattikorkeakoulu, Svenska (t.) yrkeshögskolan (Swedish), Turun (va.) ammattikorkeakoulu/Åbo (t.) yrkeshögskola (Finnish and Swedish).

In addition, the following six institutions have participated in the experiment since 1991:

Etelä -Karjalan va. ammattikorkeakoulu, Keski-Pohjanmaan va. ammattikorkeakoulu/Mellersta Österbottens t., yrkeshögskola (Finnish and Swedish), Kymenlaakson va. ammattikorkeakoulu, Pohjois-Savon va. ammattikorkeakoulu, Vantaan va. ammattikorkeakoulu, Yrittäjien va. ammattikorkeakoulu.

Six new institutions joined the experiment in autumn 1996:

Helsingin va. ammattikorkeakoulu, Nylands t. svenska yrkeshögskola (Swedish), Rovaniemen va. ammattikorkeakoulu, T. yrkeshögskolan sydväst (Swedish), Vaasan va. ammattikorkeakoulu/Vasa t. yrkeshögskola (Finnish and Swedish), Va. diakonia-ammattikorkeakoulu/T. diakoniyrkeshögskolan (Finnish and Swedish).

The following two joined in autumn 1997:

Espoon-Vantaan va. ammattikorkeakoulu, Pirkanmaan va. ammattikorkeakoulu.

Education at *AMK* institutions emphasises close contacts with business, industry and services, especially on the regional level. The universities being primarily responsible for scientific research, *AMK* institutions undertake some R & D with a distinctly applied and practical emphasis: R & D serves both their own teaching and the development of their sectors, thus stimulating the economy of the region.

Vocational institutions

All higher vocational education will be provided at *AMK* institutions by the end of this decade, and by 1998 all higher education potentially qualifying for the *AMK* system will be within the sphere of the *AMK* experiments. Until then, some higher education, i.e. post-secondary vocational education, is also offered at vocational institutions. Most of these are institutions of one or two fields, e.g. technology, commerce, health care, forestry, handicraft and industrial arts. However, more specialised institutions are merging to form multi-field institutions, which enables them to offer more broadly based curricula.

Most vocational institutions have a unit for adult education and there are separate vocational adult education centres. In them, adults can study for vocational qualifications of all levels, in programmes which are specially planned for adults.

I.2. Number of students

At the end of 1995 the total number of university students was 135 121 and *AMK* institutions had 26 268 students; the number of students in other higher vocational education was approximately 28 000.

In 1995, universities had 2 759 foreign degree students and 1 797 registered non-degree students. The countries of origin of the degree students were as follows:

Austria	13
Belgium	7
Denmark	34
France	37
Germany	152
Greece	11
Iceland	20
Ireland	12
Italy	36
Netherlands	21
Norway	21
Portugal	8
Spain	17
Sweden	215
Switzerland	14

United Kingdom 71

Total number from these 16 countries	698
Other European countries	650
Other countries	1 411

The number of foreign degree students in *AMKs* and vocational institutions (in post-secondary and higher level education) was around 300 during the academic year 1995-96. At the same time, *AMKs* received 736 visiting students (three months or more), and 206 trainees.

I.3. Organisation and structure of studies

Universities

The universities have two terms: the autumn term, usually beginning in September and ending in December, and the spring term, beginning in mid-January and ending in May. There is no summer term, but students can take examinations and study for their degrees in the summer months on courses arranged either by the universities themselves or by the summer university system.

University education is divided into 20 fields of study, which are: theology, the humanities, law, social sciences, economics and business administration, psychology, education, natural sciences, agriculture and forestry, sports sciences, engineering and architecture, medicine, dentistry, health care, veterinary medicine, pharmacy, music, art and design, fine arts, and theatre, drama and dance. The universities define the contents and structure of their degrees within the framework of national statutes. They also design their curricula and forms of instruction.

The university degree system has been undergoing a reform since the early 1990s. The revision of the degree programmes was based on evaluations carried out by universities and the Council for Higher Education (predecessor of the Higher Education Evaluation Council). The objective was to set up broad, flexible and internationally compatible programmes. Amendments to degree legislation provide both universities and students with more freedom and flexibility with regard to the content of studies. The reform has been carried out in most fields of study; the new regulations have applied to all fields since autumn 1997.

With the reform, most fields adopt a subject-based syllabus. The new degree structure usually consists of studies in one main subject, or major (*pääaine/huvudämne*), and in one or more subsidiary subjects, or minors (*sivuaaine/biämne*). In the old system (in some fields, also in the new system) a degree was taken in a given *koulutusohjelma/utbildningsprogram* (degree programme) which was defined as a multidisciplinary entity of studies concentrating upon a specific, socially relevant field where scientific expertise is needed. The new system introduces a lower *kandidaatti/kandidat* (Bachelor's) degree to nearly all fields, whereas degree programmes in the old system used to lead directly to a higher Master's level degree, which was called *kandidaatti/kandidat*, too. The new higher degree is generally called *maisteri/magister*.

Studies in a subject (or a degree programme) are composed of study units (*opintojakso/studieavsnitt*). They may contain several types of work: lectures and other instruction, exercises, essays or other independent work, set-book examinations, seminars and so on. The units can be compulsory or optional, some units can be chosen quite freely. In all programmes, it is possible to take extra courses in addition to those required for the degree. Increasingly, students do part of their studies at other universities in Finland or abroad.

The study units form larger entities of three levels: basic or introductory studies (*perusopinnot/grundstudier*), intermediate (subject) studies (*aineopinnot/ämnesstudier*), and advanced studies (*syventävät opinnot/fördjupade studier*). In basic and intermediate subject studies, students learn the fundamentals of the subject and scientific research. In the advanced studies they go deeper into their subject and acquire the ability to find and apply scientific knowledge.

The lower *kandidaatti* degree usually consists of basic and intermediate studies in the major subject, including a Bachelor's thesis, studies in one or more minor subjects and language studies. For the higher *maisteri* degree students must complete advanced studies and prepare a Master's thesis, on top of the *kandidaatti* curriculum (or the basic and subject studies of a *koulutusohjelma*). There is also a written 'maturity test' essay (*kypsyyskoe/mogenhetsprov*) in both degrees, but if a student has passed it for the Bachelor's degree, it need not be repeated for the Master's degree. Some degrees include compulsory practical training, while in some others it is optional. All students must take courses in the native language (Finnish or Swedish), in the second official language (Swedish or Finnish) and in one or two foreign languages.

The length of the degree programmes is given in credits (*opintoviikko/studievecka*, literally 'study week'). One credit is awarded for approximately 40 hours of work: lectures and other forms of instruction, exercises, seminars, and independent work at home or in the library.

Learning is assessed continuously: lectures, courses, study modules and even larger entities usually end in a written (and oral) examination. Universities use various scales of grades, usually the following:

satisfactory, (*tydyttävät tiedot/nöjaktiga insikter*), good (*hyvät tiedot/goda insikter*), excellent (*erinomaiset tiedot/utmärkta insikter*);
a scale from 1 (pass) to 3;
a scale from 1 (pass) to 5;
pass or fail.

The scale used for theses is usually one of the following two: *approbatur* (lowest accepted), *lubenter approbatur*, *cum laude approbatur*, *magna cum laude approbatur*, *eximia cum laude approbatur*, *laudatur*; or: just satisfactory (*tydyttävä/nöjaktig*), satisfactory (*erittäin tydyttävä/synnerligen nöjaktig*), good (*hyvä/god*), very good (*erittäin hyvä/synnerligen god*), excellent (*erinomainen/berömlig*). Two examples of university degree programmes are given in Appendices II and III.

Non-university higher education

In the *AMK* institutions and vocational institutions the academic year is divided into two terms: the autumn term, which starts in August or September and ends in December, and the spring term which starts in January and ends in May.

There is a continuous assessment system both in vocational institutions and in *AMKs*. The grading scale is usually the following: satisfactory (1-2), good (3-4), excellent (5).

AMK institutions

The *AMK* institutions offer instruction in the following fields:

- natural resources,
- technology and transport,
- administration and commerce,
- tourism, catering, home and institutional economics,
- social services and health care,
- culture,
- recreation and sports (as of autumn 1997).

Studies are organised into degree programmes (*koulutusohjelma/utbildningsprogram*), which are approved by the Ministry of Education. The more detailed degree regulations and curricula are determined at the institutions. A degree programme is an entity of studies which concentrates on a given area of professional expertise. Degree programmes may be further divided into specialisation lines (*suuntautumisvaihtoehto/ inriktningssalternativ*).

The length of a degree programme is measured in credits. The term 'credit' (*opintoviikko/studievecka*) refers to approximately 40 hours of work; the study load for an academic year is 40 credits.

Degree programmes consist of basic studies (*perusopinnot/grundstudier*), vocational studies (*ammattiopinnot/yrkestudier*), optional studies, practice, and diploma work. The compulsory on-the-job training period is equivalent to a minimum of 20 credits. Apart from acquainting students with their profession and future jobs, it enables many students to combine their diploma work with hands-on job experience and an opportunity to work independently and apply their theoretical knowledge in practice. *AMK* programmes also include communication and language studies, i.e. studies in the native language, in the second official language and in one or more foreign languages. Students can also combine studies in other fields, at other institutions or abroad, into their degree.

An example of a degree programme in hotel, restaurant and tourism management is given in Appendix IV.

Vocational institutions

In vocational education there are national core curricula for different fields of study, which define the function, goals and scope of education leading to qualifications; the institutions design their curricula within this framework. In addition to the general and vocational core subjects, the curricula allow regional and local variation — about 30% of the vocational subjects can be tailored according to local needs.

In the recent reform, a modular system of studies was adopted in vocational education. From autumn 1996 onwards post-secondary qualifications have comprised basic studies common to the field, vocational studies and advanced studies, practical training and diploma work. The studies include compulsory, optional and free-choice study modules.

II. Qualifications and diplomas

II.1. Qualifications for admission to higher education

In its development plans for fixed periods, the Council of State sets national targets for the number of university, non-university and vocational qualifications according to field of study. The idea is to offer all comprehensive school-leavers an opportunity for upper secondary studies, either general or vocational, and to provide student places in higher education for 60 to 65% of each age group. In addition, places are reserved in adult education. This creates the framework for distributing openings to different levels and fields of study, according to developments in the demand for labour.

The target number of degrees for each field of study at universities are set in annual agreements on target outcome between the Ministry of Education and the universities. The universities decide on their own intakes according to this. The openings in AMK degree programmes are agreed in annual consultations on objectives and target outcomes by the ministry and the AMKs. As regards vocational education, the Ministry of Education and provincial administrative boards agree on the number of openings in each field of study and for each institution.

II.1.1. Qualifications for admission to university

General eligibility

The Finnish matriculation examination (*ylioppilastutkinto/studentexamen*) taken at the end of the three-year general upper secondary school (*lukio/gymnasiet*) gives general eligibility for university education. The nine-year comprehensive school provides general compulsory education for the entire age group and provides eligibility for further studies either in general or vocational upper secondary education.

The matriculation examination serves to measure pupils' maturity and their mastery of the contents of the upper secondary school curriculum. The matriculation certificate (*ylioppilastutkintotodistus/studentexamensbetyg*) is conferred on those students who have passed the compulsory tests, and who have received school-leaving certificates (*lukion päästötodistus/gymnasiets avgångsbetyg*) from their upper secondary school (or respective certificates from vocational institutions, see below). The tests in the examination are set in all upper secondary schools at the same time by the matriculation examination board (*ylioppilastutkintolautakunta/studentexamensnämnden*), which is subordinate to the Ministry of Education. The examination is marked by the members of the board on unified criteria.

The matriculation examination has been revised. The new examination came into use in spring 1996. Both the old and the new examinations consist of four compulsory tests: native tongue, the second national language, one foreign language, and either mathematics or general studies, i.e. *reaali*. In *reaalia*, students can choose questions from the following subjects: religion and ethics, psychology and philosophy, history and social science, physics, chemistry, biology and geography. In the new examination, candidates can choose between two levels of tests in mathematics, in the second national language and in a foreign language, but must take the advanced level in at least one of these compulsory tests. In the old system, the level of the test was determined by the school course: for example, those who had followed an extended course in mathematics at upper secondary school had to take the advanced-level test. In addition to the compulsory section, the candidate may take one or more (under the old system up to two) additional tests in mathematics, general studies or foreign languages.

Another difference is that according to the new regulations, the examination need not all be taken at one time. Now, if they prefer, candidates may take it in three consecutive examinations, that is, over 18 months. Previously, candidates had to sit the tests during the last spring term (or the following autumn term).

Each test in the new examination is marked on the following scale: *laudatur* (7), *eximia cum laude approbatur* (6), *magna cum laude approbatur* (5), *cum laude approbatur* (4), *lubenter approbatur* (3), *approbatur* (2) and *improbatur* (0 or fail). In the old examination, *laudatur* (6) was the highest mark, *eximia cum laude approbatur* was not in use. Students can retake a test: after a pass, one additional try is allowed (in general studies, two tries); after a fail in a compulsory test, two more tries are allowed.

Persons who have an upper secondary vocational diploma or a combination diploma from one of the experimental institutions (see II.1.2), are also eligible for the matriculation examination, if they have 12 years of education and otherwise fulfil certain additional requirements.

In addition to the matriculation examination, post-secondary vocational qualifications also give the eligibility to apply to universities. However, most of the first-year students in universities are matriculated students (about 95%).

According to legislation, the *International Baccalaureate (IB)*, *Reifeprüfung* and the *European Baccalaureate (EB)* also give the eligibility to apply to universities. The courses leading to the *International Baccalaureate* are offered in seven Finnish upper secondary schools and in the Helsinki International School. The first students graduated in spring 1992. The schools are (with the year the courses started in brackets):

Helsingin Suomalainen Yhteiskoulu (1990), *Kuopion lyseon lukio* (1995), *Mattlidens gymnasium* (1990, Swedish), *Turun normaalikoulu* (1991), *Oulun lyseon lukio* (1992), *Tampereen lyseon lukio* (1992), *Vasa övningsskola* (1992, Swedish).

Courses leading to *Reifeprüfung* are provided by *Helsingin saksalainen koulu (Deutsche Schule Helsinki)*, i.e. the German school in Helsinki.

Selection by the universities

Since the number of applicants to universities is about three times the number of available places, students have to be selected. There is a *numerus clausus*, i.e. the entry is restricted, in most fields of study. The selection is made by the universities, their faculties or departments from eligible candidates. Students can be ranked:

- (a) on the basis of marks in the matriculation examination and in the school-leaving certificate, plus entrance tests (this is the most common system);
- (b) on the basis of the entrance tests only;
- (c) on the basis of marks in the matriculation examination and in the school-leaving certificate.

As stated before, the competition for admission to universities is keen. Entrance tests are designed (by an institution, a faculty or a department) to assess the applicant's interest, aptitude and talent in the field concerned. In certain fields of study, tests are arranged jointly by relevant departments in different institutions. The tests are often based on required set books. There may also be an interview, and students can be required to demonstrate their skills (e.g. in art academies). An entrance test is generally used in the selection of non-matriculated students.

Open university instruction

University centres for continuing education organise open university education in various subjects included in university syllabuses. This instruction is open to all, and it is arranged by the universities, often in co-operation with other adult education organisations. It is not possible to take a degree in this way, but after completing at least one third of the studies needed for a degree, students can apply for entry to the respective university.

II.1.2. Qualifications for admission to non-university higher education

AMK institutions

Students apply for entry to *AMK* institutions after upper secondary studies. The requirement is a matriculation certificate or at least an upper secondary school certificate, an *International Baccalaureate*, *Reifeprüfung* or *European Baccalaureate*; a post-secondary vocational qualification, a secondary vocational qualification in a way defined in the decision by the Ministry of Education, a combination diploma; or a foreign qualification equivalent to these. The combination programmes are offered by a few experimental vocational institutions and upper secondary schools; the programmes include both general and vocational subjects.

The permanent *AMK* institutions select their students from eligible applicants according to their own selection criteria. The Ministry of Education determines the selection criteria for experimental *AMKs* and vocational institutions (post-secondary education). The selection can be based on students' school achievements, work experience and possibly an entrance test. There is a joint national system for application to *AMKs* and post-secondary education, which is administered by the National Board of Education.

Vocational institutions

In the new successive system of vocational education, students who have completed upper secondary education, either general or vocational, can apply for post-secondary vocational programmes — the selection criteria and the joint national application procedure are explained above. In the old system, the pattern was more complicated. There used to be a joint national selection procedure for vocational institutions and upper secondary schools. Matriculated students could choose the level of their studies when applying, while comprehensive school leavers were selected in two phases: they first chose a field of study and towards the end of the one-year foundation course they chose a line of specialisation and its level (*kouluaste*, *opistoaste* or *ammattilinen korkea-aste*). Comprehensive school-leavers with at least a post-secondary level diploma could also apply for the programmes intended for matriculated students.

II.2. Qualifications in higher education

In Finland, all the higher education degrees are final qualifications. They enable the students to pursue a career in the professional world, to undertake studies at a higher level or possibly to begin a course of study in another field. There is a decree (11.3.1994/203) which defines higher education qualifications (*korkeakoulututkinnot/högscolexamina*); it was renewed at the end of 1996.

II.2.1. University qualifications

(List of qualifications in Appendix I; see also Appendices II and III)

Finnish university qualifications are classified into 'lower academic degrees' i.e. *alemmat korkeakoulututkinnot/lägre högscolexamina*, 'higher academic degrees' i.e. *ylemmät korkeakoulututkinnot/högre högscolexamina* and postgraduate or doctoral degrees i.e. *jatkotutkinnot/påbyggnadsexamina*. All universities confer doctorates.

Most fields of study had adopted the reformed degree system by autumn 1996. In health care and fine arts the new degrees were taken into use in autumn 1996; the fields of medicine, dentistry and veterinary medicine did not undergo any structural reform. Students who began their studies under the old system are allowed to change into the new system, or take old degrees up to a date defined in the respective degrees.

Since the 1970s, comprehensive and upper secondary school teacher education has been provided by the universities. The higher academic degree in education is requested of a 'class teacher' who teaches at the lower stage of comprehensive school. As for subject teachers at the higher stage of comprehensive school and at upper secondary schools, they must have a higher academic degree in the subject; the studies include educational methods and teaching practice. Nursery school teacher education was transferred from vocational institutions to universities in autumn 1995; students take a lower academic degree in education.

New degrees — *kandidaatti* and *maisteri*

The biggest difference between the old and the new degree system is the existence of the lower degrees (Bachelor's degrees): in the old system, there were only a few lower degrees, now they have been introduced into nearly all fields of study.

The studies for new lower degrees last three years (minimum). The degree is generally called *kandidaatti/kandidat*. The extent of the degree is usually 120 credits. Degree programmes consist of basic and intermediate studies in a major subject, a Bachelor's thesis, studies in one or more minor subjects, communication and language studies, and possible other studies. It should be noted that in the field of law, *kandidaatti* is a higher degree even in the new system. In the old degree system *kandidaatti* used to be a higher academic degree.

The new higher degrees (Master's degrees) are usually called *maisteri/magister*. The total time of studies for *maisteri* is five years (minimum) or two years after *kandidaatti*; the extent is generally 160 credits (120 plus 40). In addition to the *kandidaatti*; curriculum, students take advanced studies in the major and write a Master's thesis. Practical training may be compulsory or optional.

Old lower and higher academic degrees

Only a few lower academic degrees existed in the old degree system, and they were, in most cases, professionally oriented qualifications. There were lower degrees in law, in social sciences (in a few specific disciplines at two universities), as well as the degrees called 'orthodox' and 'opera singer's degree'.

In the old system studies usually led to higher academic degrees, which were generally called *kandidaatti/kandidat*. This old Master's level degree must not be confused with the new *kandidaatti*, which is a Bachelor's degree.

The structural reform of university degrees does not cover the degrees in medicine, dentistry and veterinary medicine. The first degree in these fields is a Master's level degree (no lower degree exists) called *lisensiaatti/licentiat*, which for its part should not be confused with the *lisensiaatti* in the other fields of study, i.e. the *lisensiaatti* as a pre-doctoral postgraduate degree.

The extent of the old lower degrees is around 120 credits, while that of the higher is 160 to 180 credits, or from 200 to 250 credits in the fields of medicine, dentistry and veterinary medicine. It normally takes three years to study for a lower degree and five to six years of full-time study for a higher degree (although, the average study time has been six and a half years). Practical training is compulsory for some degrees, and optional in many others. All students have to prepare a thesis at least for the higher degree.

Doctoral or postgraduate degrees

Even if a completed *maisteri* degree is the general prerequisite for doctoral studies in certain cases in some fields (e.g. in the natural sciences) it is possible to start the studies directly after *kandidaatti*. In most fields of study students can choose to take a *lisensiaatti/licentiat* degree before the Doctor's degree (*tohtori/doktor*). In medicine, dentistry and veterinary medicine, however, *lisensiaatti* is a Master's level degree (see above), after which students can continue directly to the Doctor's degree. In the field of art and design, *lisensiaatti* was abolished when the new qualifications came into use in autumn 1994.

Research and the preparation of a substantial thesis are essential parts of the studies for both *lisensiaatti* and *tohtori*. The Doctor's thesis is published and must be defended in a public debate. In addition to research, both *lisensiaatti* and *tohtori* programmes include studies in the discipline and studies in the student's specific field of research.

It is possible for a full-time student to complete a *lisensiaatti* in two years and a *tohtori* in four years after *maisteri*, but, in practice, the time spent is often longer. No time limit is set.

II.2.2. Qualifications in non-university higher education

***AMK* institutions**

The essential feature of *AMK* degrees is that they have a pronounced occupational emphasis; they are designed to meet workplace requirements and development needs and students qualify for various expert duties. The minimum duration of studies for an *AMK* degree is three years (120 credits) and the maximum four years (160 credits); an extension of one year is allowed. Every degree includes a project and work practice.

The graduates can use two kinds of titles. *AMK* degrees have ‘general’ names. These are called *ammattikorkeakoulututkinto/yrkeshögskoleexamen (AMK/YH)* with a definition of the field of study in front. On the other hand, since *AMK* programmes have been developed from the higher vocational programmes, students are, in many cases, able to use old established titles with an acronym (*AMK/YH*) after the title, e.g. *insinööri (AMK)/ingenjör (YH)*, etc. There is a list of *AMK* degrees in Appendix I; see also Appendix IV.

Vocational institutions

The post-secondary level of vocational education adopted new curricula and a modular degree structure in autumn 1996. The extent of the new qualifications varies between 80 and 160 credits, the duration of studies is from two to four years. Studies include on-the-job practice and diploma work must be prepared.

As stated before, the vocational education system is under reform. There is *ammattikorkeakoulu* reform going on and a new sequential structure of qualifications has been introduced to all vocational education. The vocational institutions are developing their education and organisation in order to join the *AMK* system — gradually, most post-secondary programmes will be upgraded to *AMK* education. In this situation no list of qualifications would be valid or exhaustive for long. It must also be noted that for a period in certain fields, qualifications will be awarded by both vocational institutions and *AMK* institutions; even the titles can be the same except for the acronym *AMK/YH*, e.g. *artenomi* versus *artenomi (AMK)*.

As for the post-secondary education still offered in vocational institutions in the academic year 1996/97, most shorter programmes (two to two and a half years, practice included) are either in the field of administration and commerce (e.g. *merkonomi/merkonom* (two years, administration and commerce), *matkailualan tutkinto/examen inom turism* (two and a half years, tourism) and *datanomi/datanom* (two and a half years, computing)), or in beauty care (e.g. *erikoiskosmetologi/specialkosmetolog* (two years, beauty therapy), *erikoisparturi-kampaaja/specialfrisör* (two years, hairdresser)).

In the other fields of study, the majority of programmes take from three to four years to complete, practice included. A few examples of titles: *agrologi/agrolog* (agriculture); *hortonomi/hortonom* (horticulture); *sairaanhoitaja/sjukskötare* (nurse); *fysioterapeutti/fysioterapeut* (physiotherapist); *diakoni/diakon* (deacon); *artenomi/artenom* (handicrafts and industrial arts); *tanssinopettaja/danslärare* (dance teacher); *medianomi/medianom* (media studies); *nuoriso- ja vapaa-ajanohjaaja/ungdoms- och fritidslärare* (youth work); *viittomakielen tulkki/teckenspråkstolk* (sign language interpretation); *liikunnanohjaaja/idrottsinstruktör* (sports); etc.

In the field of technology and transport, institutions have not offered new higher level (*ammattillinen korkea-aste*) programmes since autumn 1996, only post-secondary (*opistoaste*) programmes. The programmes usually lead to *teknikko/tekniker* qualifications. All programmes leading to *insinööri/ingenjör* or *merikapteeni/sjökapten* are now provided by *AMK* institutions.

Nursery school teacher education, i.e. education for the qualification *lastentarhanopettaja/barntädgårdslärare*, was transferred from vocational institutions to universities in autumn 1995. The studies lead to a lower academic degree, i.e. *kasvatustieteen kandidaatti/pedagogie kandidat*. Old *lastentarhanopettaja* qualification can be awarded up to the end of July 1998. Note also that the qualification called *farmaseutti/farmaceut* used to be a vocational diploma until autumn 1994, when it was upgraded to a lower university degree; the title remains the same.

II.2.3. Academic recognition of qualifications in higher education for purposes of further study

University qualifications

University degrees and study attainments are recognised throughout the country. Because of their autonomy, universities decide themselves on the intake of students according to their resources. In basic education, there are agreements on transfer between institutions, as well as quotas for students who want to include studies or modules from another university in their degree. For admission to doctoral studies, the principal requirement is a higher academic degree in the same field, or an equivalent foreign degree; a good grade in the major subject is generally required.

The universities may also accept a degree taken in another field, if the person is found to have the knowledge and ability required for the doctoral studies. If the institution deems a degree deficient in some respects, the student may have to take complementary studies before commencing the course.

Non-university qualifications

AMK degrees were planned to provide an alternative to university degrees; they are more clearly professionally oriented. However, the holders of these degrees can apply to universities; universities devise their own selection procedure.

The units for adult education at *AMK* institutions provide further education for those holders of higher vocational diplomas who want to continue their studies for an *AMK* degree. The paths from other vocational education to *AMK* institutions and universities were described in II.1.1 and II.1.2.

III. Special types and forms of qualifications in higher education

University level military qualifications

University level military education is provided by *Maanpuolustuskorkeakoulu/Försvarshögskolan*, which comes under the Ministry of Defence. The extent of the four-year degree programme leading to a higher degree called *upseerin tutkinto/officersexamen* is 160 credits. The programme includes a four-month practise period and a thesis. Matriculated students with certain additional military qualifications, or non-matriculated students with post-secondary military education are both eligible to apply for the degree programme. The selection procedure includes entrance tests. The applicants can choose between three branches: the Army, the Air Force; and the Navy.

The studies for the military postgraduate degree called *yleisesikuntaupseerin tutkinto/generalstabsofficersexamen* take approximately two years. After nine months of basic studies (*esiupseerikurssi/stabsofficerskurs*) students can apply for further studies (*yleisesikuntaupseerikurssi/generalstabsofficerskurs*), which include researcher training and a thesis.

This system of advanced military degrees is quite new, the development will go on up to the end of this decade.

Professional postgraduate degrees and authorisation

Specific professional postgraduate degrees are awarded in medicine, dentistry and veterinary medicine. The degrees are *erikoislääkäri/specialläkare* or the specialist's degree in medicine, *erikoishammaslääkäri/specialtandläkare* or the specialist's degree in dentistry and *erikoiseläinlääkäri/specialveterinär* or the specialist's degree in veterinary medicine. The education includes practical training, theoretical education and a national examination in the chosen field of specialisation. In full-time study it takes six or eight years in medicine, three or four years in dentistry and four years in veterinary medicine. In psychology, a specialist's education can be included in the *licentiate* degree programme.

In a few fields of study, an authorisation is required to enter the professions. Authorisation is needed for example, in pharmacy, psychology, medicine, dentistry and veterinary medicine, for nutritional and speech therapists, as well as in some other professions in health care. The authorisation for health professions is granted by the National Board of Medico-legal Affairs, and in veterinary medicine by the Ministry of Agriculture and Forestry (see also below, chapter IV).

Professional education for university graduates is provided by the centres for continuing education at the universities. In addition to short courses and seminars, they offer longer courses and programmes, after which students are awarded diplomas/certificates (professional diplomas, MBAs, etc.). The adult education units at *AMK* institutions provide continuing education for *AMK* degree holders.

IV. Regulated professions covered by Directive 89/48/EEC

- A. Name of the profession
- B. Competent authority

Legal professions

- A. Advocate (*asianajaja/advokat*)
- B. Finnish Bar Association, Simonkatu 12 B, FIN-00100 Helsinki

Patent agents

- A. Patent agent (*patenttiasiamies/patentombud*)
- B. National Board of Patents and Registration, Albertinkatu 25, FIN-00180 Helsinki

Auditing

- A. Chartered accountant (*tilintarkastaja/revisor*)
- B. Central Chamber of Commerce, PO Box 1000, FIN-00100 Helsinki

Health professions

- A. The title and the activities are regulated:
 - Psychologist (*psykologi/psykolog*)
 - Speech therapist (*puheterapeutti/talterapeut*)
 - Dietician (*ravitsemusterapeutti/näringsterapeut*)
 - Bachelor of Pharmacy (*farmaseutti/farmaceut*)
 - Public health nurse (*terveydenhoitaja/hälsovårdare*)
 - Physiotherapist (*fysioterapeutti/fysioterapeut*)
 - Laboratory technician (*laboratoriohoitaja/laboratorieskötare*)
 - Radiographer (*röntgenhoitaja/röntgenskötare*)
 - Dental hygienist (*hammashuoltaja/tandhygienist*)
 - Occupational therapist (*toimintaterapeutti/ergoterapeut*)
 - Optician (*optikko/optiker*)
 - Dental technician (*hammasteknikko/tandtekniker*)
 - The title is regulated:
 - Orthopaedic technician (*apuneuvoteknikko/ortopedtekniker*)
 - Trained chiropractor (*koulutettu kiiropraktikko/utbildad kiiropraktor*)
 - Trained naprapath (*koulutettu naprapaatti/utbildad naprapat*)
 - Trained osteopath (*koulutettu osteopaatti/utbildad osteopat*)
 - Psychotherapist (*psykoterapeutti/psykoterapeut*)
 - Hospital physicist (*sairaalafysikko/sjukhusfysiker*)
 - Hospital geneticist (*sairaalageneetikko/sjukhusgenetiker*)
 - Hospital chemist (*sairaalakemisti/sjukhuskemist*)
 - Hospital microbiologist (*sairaalamikrobiologi/sjukhusmikrobiolog*)
 - Hospital cell biologist (*sairaalasolubiologi/sjukhuscellbiolog*).
- B. National Board of Medico-Legal Affairs, PO Box 265, FIN-00531 Helsinki.

Seafaring

- A. Captain (*merikapteeni/sjökapten*)
- Pilot (*luotsi/lots*)
- Engineer first class (*ylikonemestari/övermaskinmästare*)

Engineer second class (*konemestari/maskinmästare*).

B. Finnish Maritime Administration, PO Box 158, FIN-00141 Helsinki.

Public service

A. With the exception of technical, clerical and auxiliary services, the requirement set by an act, decree or administrative provision for most posts in public service (civil service, municipalities, associations of municipalities, and communities and institutions under public law) is the degree or diploma defined in this directive (89/48/EEC). The requirement concerns all the different domains of public service, such as management, administration, juridical tasks, engineering, social welfare, educational tasks and other expert advisory tasks.

B. National Board of Education, PO Box 380, FIN-00531 Helsinki.

The Evangelical Lutheran Church of Finland

- A. Priest (*pappi/präst*)
Unordained Master of Theology/Divinity (*lehtori/lektor*)
Cantor (*kanttori/kantor*)
Deacon (*diakoni/diakon*)
Deaconess (*diakonissa/diakonissa*)
Youth worker (*nuorisotyön ohjaaja/ledare för ungdomsarbetet*)
Congregations and federations of congregations also have other posts for which training according to Directive 89/48/EEC is required. There is no up-to-date list of the posts available.
- B. Ecclesiastical Board, PO Box 185, FIN-00161 Helsinki.

**Djagram
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Appendix I

List of qualifications in universities and AMK institutions (polytechnics)

I. University qualifications

The list consists of A. lower academic degrees, new and old; B. higher academic degrees, new and old; C. postgraduate, i.e. doctoral degrees, new and old. The qualifications are listed according to the field of study. The titles and their abbreviations are given in Finnish and Swedish. See also II.2.1 for description of the two systems. For special types of degrees, see section III.

A. Lower academic degrees (i.e. *alemmat korkeakoulututkinnot*)

The dates indicate: for the new degrees, the date when the decrees (the number of the relevant decree in brackets) came into force; for the old degrees, the date until which the degrees can be awarded.

Theology

New: from August 1995 (517/95)

Teologian kandidaatti/Teologie kandidat (TK)

Old: until the end of July 1998 (University of Joensuu)

Ortodoksisen kirkkokunnan kanttori/Ortodoxa kyrkosamfundets kantor

The humanities

New: from August 1994 (221/94)

Humanististen tieteiden kandidaatti/Kandidat i humanistiska vetenskaper (HuK)

Law

New: from August 1996 (86/96)

Oikeusnotaari/Rättsnotarie (ON/RN)

Old: until the end of July 2000

Varanotaari/Vicenotarie (VN)

Social sciences

New: from August 1994 (245/94)

Hallintotieteiden kandidaatti/Förvaltningskandidat (HTK/Fök)

Valtiotieteiden kandidaatti/Politices kandidat (VTK/PK)

Yhteiskuntatieteiden kandidaatti/Kandidat i samhällsvetenskaper (YTK/SVK)

Sosionomi/Socionom; the degree is awarded by the Swedish School of Social Science of the University of Helsinki

Old: until the end of July 1998, University of Tampere

Hallintovirkamiestutkinto/Förvaltningstjänstemannaexamen

Verovirkamiestutkinto/Skattetjänstemannaexamen

Kunnallistutkinto/Kommunalexamen

Yleinen vakuutustutkinto/Allmän försäkringsexamen

Nuorisotyön tutkinto/Ungdomsarbetsexamen

Toimittajatutkinto/Redaktörsexamen

until the end of July 1995

Sosiaalihuoltajatutkinto/Socialvårdsexamen

Yhteiskunnallinen tutkinto/Examen i samhällskunskap

NB: The first two qualifications entitle the holder to use the title *hallintonotaari/förvaltningsnotarie*, and the last six the title *sosionomi/socionom*.

until the end of July 1998, the Swedish School of Social Science of the University of Helsinki:
Sosionomi/Socionom

Economics and business administration

New: from August 1995 (139/95)
Kauppaliiketoiminnan kandidaatti/Ekonomie kandidat (KTK/EK)

Psychology

New: from August 1996 (318/96)
Psykologian kandidaatti/Psychologie kandidat (PsK)

Education

New: from August 1995 (576/95)
Kasvatustieteiden kandidaatti/Pedagogie kandidat (KK/PeK)
NB: Nursery school teacher education was incorporated into universities in autumn 1995, students take the *kasvatustieteiden kandidaatti*. The old qualification *lastentarhanopettaja/barntädgårdslärare* was a vocational diploma; it can be awarded until the end of July 1998.

Natural sciences

New: from August 1994 (221/94)
Luonnontieteiden kandidaatti/Kandidat i naturvetenskaper (LuK/NaK)

Agriculture and forestry

New: from August 1995 (214/95)
Maatalous- ja metsätieteiden kandidaatti/Agronomie- och forstkandidat (MMK/AFK)
Elintarviketieteiden kandidaatti/Kandidat i livsmedelsvetenskaper (ETK/LVK)

Sport sciences

New: from August 1994 (327/94)
Liikuntatieteiden kandidaatti/Kandidat i gymnastik- och idrottsvetenskaper (LitK/GIK)

Health care

New: from August 1997 (628/97)
Terveystieteiden kandidaatti/Kandidat i hälsovård

Pharmacy

New: from August 1994 (246/94)
Farmaseutti/Farmaceut
NB: Before autumn 1994 the qualification called *farmaseutti/farmaceut* was a vocational diploma awarded by universities. The old *farmaseutti* diplomas can be taken until the end of July 1999.

Music

New: from August 1995 (148/95)
Musiikin kandidaatti/Musikkandidat (MuK)
Old: *Oopperalaulaja/Operasångarexamen*
Awarded until the end of 1996 by the Sibelius Academy

Art and design

New: from August 1994 (440/94)
Taiteen kandidaatti/Konstkandidat (TaK/KoK)

Theatre, drama and dance

New: from August 1995 (216/95)

Teatteritaiteen kandidaatti/Kandidat i teaterkonst (TeK/TKK)
Tanssitaiteen kandidaatti/Kandidat i danskonst

Fine arts

New: From August 1997 (381/97)
Kuvataiteen kandidaatti/Bildkonstkandidat until the end of July 1997
Old: *Kuvataiteen kandidaatti/Bildkonstkandidat*
Kuvataiteen maisteri/Bildkonstmagister

B. Higher academic degrees (i.e. ylemmät korkeakoulututkinnot)

The dates indicate: for the new degrees, the date when the decrees came into force; for the old degrees, the date until which the degrees can be awarded. As for the numbers of the relevant degrees, see 'Lower academic degrees' above. The old *kandidaatti* degrees (i.e. Master's degrees) must not be confused with new lower *kandidaatti* degrees (i.e. Bachelor's degrees).

Theology

New: from August 1995
Teologian maisteri/Teologie magister (TM)
Old: until the end of July 1997 at the University of Helsinki and until the end of July 1998 at Åbo Akademi University
Teologian kandidaatti/Teologie kandidat (TK)

The humanities

New: from August 1994
Filosofian maisteri/Filosofie magister (FM)
Old: until the end of July 1996
Filosofian kandidaatti/Filosofie kandidat (FK)

Law

New: from August 1996
Oikeustieteiden kandidaatti/Juris kandidat (OTK/JK)
Old: until the end of July 2000

Social sciences

New: from August 1994
Hallintotieteiden maisteri/Förvaltningsmagister (HTM/FöM)
Valtiotieteiden maisteri/Politics magister (VTM/PM)
Yhteiskuntatieteiden maisteri/Magister i samhällsvetenskaper (YTM/SVM)
Old: until the end of July 1996
Hallintotieteiden kandidaatti/Förvaltningskandidat (HTK/FöK)
Valtiotieteiden kandidaatti/Politics kandidat (VTK/PK)
Yhteiskuntatieteiden kandidaatti/Sociologie kandidat (YTK/SoK)

Economics and business administration

New: from August 1995
Kauppatieteiden maisteri/Economie magister (KTM/EM)
Old: until the end of July 1999
Ekonomi/Ekonom (—)

Psychology

New: from August 1996
Psykologian maisteri/Psykologie magister (PsM)
Old: until the end of 1997

Psykologian kandidaatti/Psykologie kandidat (PsK)

Education

New: from August 1995

Kasvatustieteen maisteri/Pedagogie magister (KM/PeM)

Old: until the end of July 2000

Kasvatustieteiden kandidaatti/Pedagogie kandidat (KK/PeK)

Natural sciences

New: from August 1994

Filosofian maisteri/Filosofie magister (FM)

Old: until the end of July 1996

Filosofian kandidaatti/Filosofie kandidat (FK)

Agriculture and forestry

New: from August 1995

Maatalous- ja metsätieteiden maisteri/Agronomie- och forstma-gister (MMM/AFM)

Elintarviketieteiden maisteri/Magister i livsmedelsvetenskaper (ETM/LVM)

Old: until the end of July 1997

Maatalous- ja metsätieteiden kandidaatti/Agronomie- och forstkandidat (MMK/AFK)

Elintarviketieteiden kandidaatti/Kandidat i livsmedelsvetenskaper (ETK/LVK)

Sports sciences

New: from August 1994

Liikuntatieteiden maisteri/Magister i gymnastik- och idrottsvetenskaper (LitM/GIM)

Old: until the end of July 1996

Liikuntatieteiden kandidaatti/Kandidat i gymnastik- och idrottsvetenskaper (LitK/GIK)

Engineering and architecture

New: from August 1995; decree number 215/95

Diplomi-insinööri/Diplomingenjör (DI)

Arkkitehti/Arkitekt (—)

Maisema-arkkitehti/Landskapsarkitekt (—)

Old: until the end July 1999

Medicine

No structural reform

Lääketieteen lisensiaatti/Medicine licentiat (LL/ML)

Dentistry

No structural reform

Hammaslääketieteen lisensiaatti/Odontologie licentiat (HLL/OL)

Health care

New: from August 1997 (628/97)

Terveystieteiden maisteri/Magister i hälsovård

Old: *Terveystieteiden kandidaatti/Kandidat i hälsovård (THK/HVK)*

Veterinary medicine

No structural reform

Eläinlääketieteen lisensiaatti/Veterinärmedicine licentiat (ELL/VML)

Pharmacy

Old: until the end of July 1999

New: from August 1994
Proviisori/Provisor (-)

Music

New: from August 1995
Musiikin maisteri/Musikmagister (MuM)

Old: until the end of 1996
Musiikin kandidaatti/Musikkandidat (MuK)

Art and design

New: from August 1994
Taiteen maisteri/Konstmagister (TaM/KoM)

Old: until the end of 1996
Taiteen kandidaatti/Konstkandidat (TaK/KoK)

Theatre, drama and dance

New: from August 1995
Teatteritaiteen maisteri/Magister i teaterkonst (TeM/TKM)
Tanssitaiteen maisteri/Magister i danskonst (—)

Old: until the end of 1997
Teatteritaiteen kandidaatti/Teaterkonstkandidat (TeK/TKK)
Tanssitaiteen kandidaatti/Danskonstkandidat (—)

Fine arts

New: from January 1997 (381/97)
Kuvataiteen maisteri/Bildkonstmagister

Old: Awarded from autumn 1993 by the Academy of Fine Arts (gained university status in 1993) until the end of 1998
Kuvataideakatemia *loppututkinto/Slutexamen* *vid* *bildkonst-*
akademin

C. Postgraduate, doctoral degrees (i.e. jatkotutkinnot)

Both new and old degrees

Theology

Teologian lisensiaatti/Teologie licentiat (TL)
Teologian tohtori/Teologie doktor (TT/TD)

The humanities

Filosofian lisensiaatti/Filosofie licentiat (FL)
Filosofian tohtori/Filosofie doktor (FT/FD)

Law

Oikeustieteen lisensiaatti/Juris licentiat (OTL/JL)
Oikeustieteen tohtori/Juris doktor (OTT/JD)

Social sciences

Hallintotieteiden lisensiaatti/Förvaltningslicentiat (HTL/FöL)

Hallintotieteiden tohtori/Förvaltningsdoktor (HTT/FöD)
Valtiotieteiden lisensiaatti/Politices licentiat (VTL/PL)

Valtiotieteiden tohtori/Politices doktor (VTT/PD)

NB: In the old system *Valtiotieteen lisensiaatti* and *Valtiotieteen tohtori*.

Yhteiskuntatieteiden lisensiaatti/Licentiat i samhällsvetenskaper (YTL/SVL)

Yhteiskuntatieteiden tohtori/Doktor i samhällsvetenskaper (YTT/SVD)

NB: In the old system *Sociologie licentiat (SoL)* and *Sociologie doktor (SoD)* (in Swedish).

Economics and business administration

Kauppatieteiden lisensiaatti/Ekonomie licentiat (KTL/EL)

Kauppatieteiden tohtori/Ekonomie doktor (KTT/ED)

Psychology

Psykologian lisensiaatti/Psykologie licentiat (PsL)

Psykologian tohtori/Psykologie doktor (PsT/PsD)

Education

Kasvatustieteen lisensiaatti/Pedagogie licentiat (KL/PeL)

Kasvatustieteen tohtori/Pedagogie doktor (KT/PeD)

NB: In the old system *Kasvatustieteiden lisensiaatti* and *Kasvatustieteiden tohtori*.

Natural sciences

Filosofian lisensiaatti/Filosofie licentiat (FL)

Filosofian tohtori/Filosofie doktor (FT/FD)

Agriculture and forestry

Maatalous- ja metsätieteiden lisensiaatti/Agronomie- och forstlicentiat (MML/AFL)

Maatalous- ja metsätieteiden tohtori/Agronomie- och forstdoktor (MMT/AFD)

Elintarviketieteiden lisensiaatti/Licentiat i livsmedelsvetenskaper (ETL/LVL)

Elintarviketieteiden tohtori/Doktor i livsmedelsvetenskaper (ETT/LVD)

Sports sciences

Liikuntatieteiden lisensiaatti/Licentiat i gymnastik- och idrottsvetenskaper (LitL/GIL)

Liikuntatieteiden tohtori/Doktor i gymnastik- och idrottsvetenskaper (LitT/GID)

Engineering and architecture

Tekniikan lisensiaatti/Teknologie licentiat (TkL)

Tekniikan tohtori/Teknologie doktor (TKT/TkD)

Medicine

Läketieteen tohtori/Medicine doktor (LT/MD)

Dentistry

Hammaslääketieteen tohtori/Odontologie doktor (HLT/OD)

Health care

Terveystieteiden lisensiaatti/Licentiat i hälsovård (THL/HVL)

Terveystieteiden tohtori/Doktor i hälsovård (THT/HVD)

Veterinary medicine

Eläinlääketieteen tohtori/Veterinärmedicine doktor (ELT/VMD)

Pharmacy

Farmasian lisensiaatti/Farmacie licentiat (FaL)

Farmasian tohtori/Farmacie doktor (FaT/FaD)

Music

Musiikin lisensiaatti/Musiklicentiat (MuL)

Musiikin tohtori/Musikdoktor (MuD)

Art and design

Taiteen tohtori/Konstdoktor (TaT/KoD)

NB: In the old system also *Taiteen lisensiaatti/Konstlicentiat (TaL/KoL)*, which can be awarded until the end of 1999.

Theatre, drama and dance

Teatteritaiteen lisensiaatti/Licentiat i teaterkonst (TeL/TKL)

Teatteritaiteen tohtori/Doktor i teaterkonst (TeT/TKD)

NB: In the old system *Teaterkonstlicentiat* and *Teaterkonstdoktor* (in Swedish).

Tanssitaiteen lisensiaatti/Licentiat i danskonst (—)

Tanssitaiteen tohtori/Doktor i danskonst (—)

NB: In the old system *Danskonstlicentiat* and *Danskonstdoktor* (in Swedish).

Fine arts

New: From August 1997 (381/97)

Kuvataiteen tohtori/Doktor i bildkonst

Old: Fine arts did not have any postgraduate degrees before

II. AMK degrees

AMK degrees by field of study in autumn 1996: the general name of the degree, i.e. the field of study and *ammattikorkeakoulututkinto (AMK)/yrkeshögskoleexamen (YH)* is given first, followed by the possible special titles.

Natural resources

Maa- ja metsätalouden ammattikorkeakoulututkinto/Yrkeshögskoleexamen i jord- och skogsbruk

Agrologi (AMK)/Agrolog (YH) (agriculture)

Metsätalousinsinööri (AMK)/Skogsbruksingenjör (YH) (forestry)

Hortonomi (AMK)/Hortonom (YH) (horticulture)

Technology and transport

Tekniikan ammattikorkeakoulututkinto/Yrkeshögskoleexamen i teknik (technology)

Insinööri (AMK)/Ingenjör (YH) (technology)

Merenkulun ammattikorkeakoulututkinto/Yrkeshögskoleexamen i sjöfart (seafaring)

Merikapteeni (AMK)/Sjökapten (YH) (seafaring)

Tekstiili- ja vaatetusalan ammattikorkeakoulututkinto/Yrkeshögskoleexamen inom textil- och beklädnadsbranschen
(textile and clothing industry)

Tourism, catering, home and industrial economics

Matkailu- ja ravitsemisalan ammattikorkeakoulututkinto/Yrkeshögskoleexamen inom turism och kosthållsbranschen
(tourism and catering)

Administration and commerce

Liiketalouden ammattikorkeakoulututkinto/Yrkeshögskoleexamen i företagsekonomi (administration and commerce)

Tradenomi/Tradenom (business and administration)

Social services and health care

Terveysalan ammattikorkeakoulututkinto/Yrkeshögskoleexamen inom hälsovård (health care)
Sosiaalialan ammattikorkeakoulututkinto/Yrkeshögskoleexamen inom det sociala området (social services)
Sosiaali- ja terveysalan ammattikorkeakoulututkinto (social services and health care)
Sosiaali-, terveys- ja kasvatusalan ammattikorkeakoulututkinto (social services and health care)
Diakonian ja kasvatuksen ammattikorkeakoulututkinto (social work of the church)
Sosiaali- ja kulttuurialan ammattikorkeakoulututkinto (social and cultural services)

Culture

Käsi- ja taideteollisuuden ammattikorkeakoulututkinto/Yrkeshögskoleexamen i hantverk och konstindustri (crafts and design)
Artenomi (AMK)/Artenom (YH) (crafts and design)
Konservointialan ammattikorkeakoulututkinto (preservation and restoration)
Muotoilija (AMK)/Formgivare (YH) (designer)
Konservaattori (AMK)/Konservator (YH) (preservation and restoration)
Kuvataiteen ammattikorkeakoulututkinto (visual arts)
Kuvataiteilija (AMK)/Bildkonstnär (YH) (visual arts)
Viestintä- ja kuvataidealan ammattikorkeakoulututkinto/Yrkeshögskoleexamen inom mediekultur och bildkonst (visual arts and communication)
Kuvataiteilija (AMK)/Bildkonstnär (YH) (visual arts)
Medianomi (AMK)/Medianom (YH) (media technology)
Musiikin ammattikorkeakoulututkinto/Yrkeshögskoleexamen i musik (music)
Teatteri- ja tanssialan ammattikorkeakoulututkinto/Yrkeshögskoleexamen i teater och dans (theatre and dance)
Teatteri-ilmaisun ohjaaja (AMK)/Amatörteaterledare (YH) (drama instruction)
Tanssinopettaja (AMK)/Danslärare (YH) (dance instruction)

Recreation and sports

Course started in autumn 1997

Appendix II

Description of a degree programme in comparative literature at the University of Helsinki

Sources: *Humanistisen tiedekunnan opinto-opas A, Yleisiä määräyksiä, Tutkintovaatimukset 1995-97*; University of Helsinki, Department of Comparative Literature, ECTS information package 1995-1996.

General structure of *kandidaatti* and *maisteri* degrees in the humanities (home students)

Humanististen tieteiden kandidaatti/Kandidat i humanistiska vetenskaper (Bachelor of Arts) consists of 120 credits (one credit, corresponds to approximately 40 hours of work), subdivided as follows:

- language and communication studies, 10 credits, i.e. studies in the native language (two credits), in the other official language (i.e. Swedish for Finnish-speakers, Finnish for Swedish-speakers, two credits), and in two foreign languages (six credits);
- basic (20 credits) and intermediate (20 credits) studies in the major subject, including the Bachelor's thesis;
- three modules, a total of 60 credits, in one to four minor subjects. One of the modules may be replaced by advanced studies (20 credits) in the major and in place of one full module (20 credits), students may complete two half-modules (10 credits each);
- elective studies, 10 credits;
- a written 'maturity test', an essay.

Filosofian maisteri/Filosofie magister (Master of Arts) consists of 160 credits; i.e. in addition to the *humanististen tieteiden kandidaatti* syllabus, students complete 40 credits as follows:

- a 20-credit advanced module in the major subject. However, if a student has already included this module in the *kandidaatti* curriculum, he/she must complete a module in some other subject;
- a Master's thesis, 20 credits, also called *pro gradu* thesis. The 'maturity test' need not be taken if the student has already passed it for the Bachelor's degree.

General course structure and contents in comparative literature (major subject studies)

Studies in comparative literature comprise basic, intermediate and advanced studies. As a rule, students are free to decide the order in which they take the courses. However, the basic course in literary criticism has to be taken at first. The requirement for attending a seminar in intermediate studies is to have completed basic studies and two intermediate units: history of literary criticism and literary theory (one of its units). To be able to start the seminar of advanced studies, students must have completed the basic and intermediate studies.

Study units usually consist of an optional lecture course ending in an examination and/or a final examination based on set literature. Courses may also include, or they can be replaced by, written assignments on reading material set by the examiner. In the advanced seminar, the student has to defend his/her seminar paper and act as an opponent of a paper prepared by some other participant.

A grading scale from three (the highest) to one is used in examinations and courses. The completed basic, intermediate and advanced studies, are graded excellent, good or satisfactory.

The basic studies (20 credits) acquaint the student with the field of literature, i.e. literary history and literary genres; a general introduction to critical theory and practice is also included. Studies consist of the following units:

basic course in literary criticism (5 credits);
literary history from the Judeo-Christian and classical tradition to the Enlightenment (5 credits);
literary history from the Enlightenment to the contemporary era (5 credits);
textual analysis (5 credits) in two of the following: prose, poetry and drama.

In the intermediate studies (20 credits), the students focus on the history of criticism and contemporary literary theory. A more detailed study of major works of 20th century literary criticism is required. They also study in detail a special field in literature, several options being available. Students learn to analyse a specific problem in some field of comparative literature and to apply a theoretical approach in practice.

History of literary criticism (5 credits), which consists of two units: history of literary criticism and major works of literary criticism in the 20th century;
Literary criticism, special subject areas (5 credits), two of the following: Option I; Option II (e.g. journalistic criticism, creative writing etc.); children's literature; popular literature;
Literary theory (5 credits), two of the following: structuralism, semiotics and narratology; post-structuralism and deconstruction; post-modernism; feminist theory and criticism; cultural studies; phenomenology and reader-response criticism; psychoanalysis and criticism; optional theory;
Seminar (5 credits), the Bachelor's thesis is written during the seminar.

The aim of the advanced studies (20 credits) is to develop the student's ability to do independent research. The student is expected to attain extensive knowledge of one or two special fields and to master the main concepts, theories and methods of the discipline.

Aesthetics and philosophy of literature (5 credits)
Literature, special subjects (5 credits);
Literary theory, special subjects (5 credits);
Seminar (5 credits).

In addition, a *pro gradu* thesis (20 credits), i.e. Master's thesis, is required.

Students of comparative literature can choose their minors freely. They often study Finnish or Swedish literature, art history, musicology, theatre research, aesthetics, modern languages, philosophy, history or social sciences.

Appendix III

Description of a degree programme in physical sciences at the University of Oulu

Sources: *Opinto-opas, Luonnontieteellinen tiedekunta 1996-97, Oulun yliopisto*; University of Oulu, Information package, ECTS/European Community course credit transfer system, Faculty of Science, Department of Physical Sciences 1996-97.

The Department of Physical Sciences conducts research on and offers degree courses in biophysics, physics and theoretical physics, which can each be chosen as a major in the degree programme of physical sciences. The degrees offered (according to the new degree system) are *luonnontieteiden kandidaatti* (Bachelor of Science), *filosofian maisteri* (Master of Science), *filosofian lisensiaatti* (an optional licentiate degree) and *filosofian tohtori* (Doctor in Philosophy).

The five alternative lines of study for the degrees (options for the major subject in brackets) are biophysics (biophysics), physics (physics), physics and information technology (biophysics, physics, theoretical physics), theoretical physics, (theoretical physics) and teacher education (physics, theoretical physics). The alternative study line can be chosen freely, except for teacher education where an aptitude test is used; the curriculum during the first two years is similar in all the other alternatives.

Filosofian maisteri with physics as the main subject

Structure and content

The studies for the Master's degree start with an orientation course, and students also participate in tutor groups. Besides studies in the main subject, the curriculum always contains mathematics, information technology and languages. Additional courses (e.g. in geophysics and astronomy) or a practice period (two credits) may also be included in the degree.

Studies consist of lecture courses, calculation exercises, laboratory work, project work, essays and seminars. All studies belong to some study unit, the extent of which is from two to six credits (*opintoviikko*, literally 'study weeks', approximately 40 hours of work). Study units are compulsory or optional; some of the optional units can be chosen from other departments, faculties or universities. The units are classified, according to their level, into basic, intermediate or advanced studies.

In the degree programme of physical sciences (160 credits, minimum) students usually take a 15-credit module of basic studies during their first academic year. For the students studying physics as their major subject, 20 or 21 credits of intermediate studies are scheduled in the second year and the autumn term of the third year. The extent of advanced studies, including the Master's thesis, is 27 to 51 credits, and studies are completed during years three to five. The advanced courses are related to the main fields of research of the Department of Physical Sciences; the selection varies from year to year. In addition, there are some compulsory general physics courses.

Assessment

In basic and intermediate studies students can usually choose between two types of examinations. They can take two or three examinations (three hours) during the studies. In this case the final examination is optional: if the student wants to improve his/her final grade, she/he can take the final examinations. Alternatively they can take only the final examination (four hours). They can retake the final examination in order to improve their grades. Final examinations are usually set a couple of times per term for each course. In advanced courses students usually have to take a final examination. The marks are given on the scale three (highest) to one.

An example of a curriculum for a student majoring in physics

First year

Orientation course; basic methods in mathematics I; analysis I; introduction to physics; introduction to data processing; mechanics; heat; physical measurement I; electricity and magnetism; wave motion; atomic and nuclear physics; laboratory exercises in physics I; basic methods in mathematics II; differential equations I and at least one of the following courses: introduction to geophysics, biophysics, astronomy, or theoretical physics.

Second year

English I and II; laboratory exercises in physics I; atomic physics; linear algebra; differential equations II; one of the following two courses: analysis II or function theory I; two of the following courses: thermophysics, mechanics, electricity, or optics; optional studies.

Third year

Swedish; electronics I; laboratory exercises in physics II; structure of matter; at least one of the following courses (other than the two taken during the second year): optics, electricity, mechanics or thermophysics; essay and seminar; electronics II; numerical modelling; advanced studies in physics; optional studies.

Fourth year

radiation physics; quantum mechanics I (partly); probability theory I; environmental ecology or corresponding course; research project in physics; advanced studies in physics; Master's thesis.

Fifth year

Advanced studies in physics; Master's thesis; a written maturity test (an essay).

Appendix IV

Description of a degree programme in hotel, restaurant and tourism management at Haaga Institute

Source: *Opinto-opas, 1996-97 — Handbook, 1996-97*

Haaga Institute was one of the nine first AMK institutions to gain permanent status in autumn 1996. The objective of the degree programme in hotel, restaurant and tourism management is to offer a sound theoretical background, and extensive knowledge of the hotel, restaurant and tourism business. Furthermore, students are given practical training for supervisory, managerial, consulting, planning and development positions in the field and in the other related businesses and enterprises in Finland and also abroad.

Degree course (home students) for *matkailu- ja ravitsemusalan ammattikorkeakoulututkinto*

The extent of the degree course is 140 credits or 'study weeks' (*opintoviikko*). One credit represents one week or 40 hours of work. One unit can contain, for example, 20 classroom hours of lectures, 10 hours of practice and 10 hours of self study, or for example, 18 hours of lectures and 22 hours of independent study, including a written paper or examination.

The programme consists of general studies (40 credits), common professional studies (35 credits), specialisation options (25 credits), free-choice courses (10 credits), placement/internship (20 credits) and a project (10 credits).

General studies are compulsory for all students. The aim is to gain an extensive understanding of the function and role of the service industry in society, working life and internationally; students learn the theoretical fundamentals and communicative practices of the industry. The general studies are divided into four categories: service industry (7 credits), finance management and leadership (12 credits), communication (5 credits) and language studies (16 credits). Language studies develop the student's communication skills in all situations in the hotel, restaurant and tourism (HTR) industry. The courses aim at adequate mastery of the special vocabulary of the industry and knowledge of the special features of traditions and culture in the countries where the language is spoken.

Courses for service industry: introductory course (one credit); principles of tourism 1 (one credit); principles of tourism 2 (two credits); environmental responsibility in HTR field (1 credit); basic course in marketing (two credits). Courses for finance management and leadership: principles of economics and European integration (two credits); basic course in behavioural sciences (two credits); work, the individual and the community (two credits); basic course in data processing (two credits); business mathematics and statistical methods (one credit); bookkeeping and financial statements (two credits); basics of profit and cost accounting (one credit). Courses for communication: written use of the student's native language (two credits); speech communication in the native language (one credit); research methods and academic writing (two credits). Language studies: Finnish-speaking students are required to study Swedish (four credits), English (four credits) and a second foreign language (French or German) (four credits). In addition, students are required to choose additional language courses (four credits) from a selection of English, Swedish, French and German courses.

Common professional studies (35 credits) familiarise the student with important problem areas and applications within the HTR field. The aim is to teach the student the grounds for operating independently in the HTR field, as an expert, manager or entrepreneur, as well as in development work. The studies cover three main areas: HTR field (11 credits); marketing and business planning (11 credits); and finance management and leadership (13 credits). The courses: tourism (3 credits); food science (3 credits); restaurant production and services (5 credits); marketing (5 credits); labour and commercial law (4 credits); founding a company and starting business operations (2 credits); behavioural sciences and human resource management (7 credits); accounting and financial management (6 credits).

Specialisation options allow the student to choose his/her specialisation. All options comprise 20 credits of compulsory studies and five credits of optional professional studies. The specialisation options are management of hotel and restaurant operations, management of food service operations, management of tourism operations and environmental management.

The studies in management of hotel and restaurant operations go deeper into various segments and business operations in the field: food and beverage cultures, hotel and restaurant operations and related financial aspects. The studies in management of food service operations comprise more advanced studies in the operation processes and financial aspects of various food service enterprises. The studies in management of tourism operations aim to provide the student with a comprehensive picture of tourism operations, and familiarise him/her with various theories and practices of tourism. There are courses in management, marketing, regulations, history, sociology, geography, as well as environmental and societal effects of tourism, i.e. studies which will help the graduate to operate in managerial posts both nationally and internationally. The course description for environmental management was published during 1996/97.

Students can choose their optional professional studies (5 credits in specialisation options) and the additional free-choice courses (10 credits) from a selection of courses in financial management, human resources and strategic planning (16 credits); hotel and restaurant industry (18 credits); tourism industry (10 credits) and marketing and business planning (9 credits).

The practical training periods (a total of 20 credits) i.e. industrial placements or internships, are completed in three periods: during the first academic year, and during the next two summers.

In addition, students have to prepare a degree project (*opinnäytetyö*, 10 credits), which prepares them for research and development work in the tourism industry.

France

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Abbreviations

BAC *Baccalauréat*
BEP *Brevet d'études professionnelles*

BTS *Brevet de technicien supérieur*

CAP *Certificat d'aptitude professionnelle*
CDEFI *Conférence des directeurs d'école et des formations d'ingénieurs*
CNAMC *Conservatoire national des arts et métiers*
CNE *Conseil national d'évaluation*
CNESER *Conseil national de l'enseignement supérieur et de la recherche*
CNU *Conseil national des universités*
CPGE *Classes préparatoires aux grandes écoles*
CPU *Conférence des présidents d'université*
DEA *Diplôme d'études approfondies*
DEAU *Diplôme d'accès aux études universitaires*
DECF *Diplôme d'études comptables et financières*
DEFA *Diplôme d'études fondamentales en architecture*
DESCF *Diplôme d'études supérieures comptables et financières*
DESS *Diplôme d'études supérieures spécialisées*
DEST *Diplôme d'études supérieures techniques*
DEUG *Diplôme d'études universitaires générales*
DEUP *Diplôme d'études universitaires professionnalisées*
DEUST *Diplôme d'études universitaires scientifiques et techniques*
DNAP *Diplôme national d'arts plastiques*
DNAT *Diplôme national d'arts et techniques*
DNSEP *Diplôme national supérieur d'expression plastique*
DPE *Ingénieur diplômé par l'État*
DPLG *Architecte diplômé par le gouvernement*
DRT *Diplôme de recherche technologique*
DU *Diplôme d'université*
DUT *Diplôme universitaire de technologie*
ESCP *École supérieure de commerce de Paris*
ENI *Écoles nationales d'ingénieurs*
ENS *Écoles normales supérieures*
ESSEC *Écoles supérieures des sciences économiques et commerciales*
HEC *École de haut enseignement commercial*
IAE *Institut d'administration des entreprises*
IEP *Instituts d'études politiques*
Inalco *Institut national des langues et civilisations orientales*
INSA *Instituts nationaux des sciences appliquées*
IPAG *Instituts de préparation à l'administration générale*
IUFM *Instituts universitaires de formation des maîtres*
IUP *Instituts universitaires professionnalisés*
IUT *Instituts universitaires de technologie*
MIAGE *Maîtrise de méthodes informatiques appliquées à la gestion*
MSG *Maîtrise de sciences de gestion*
MST *Maîtrise de sciences et techniques*
SCUIO *Service commun universitaire d'information et d'orientation*
STS *Sections de techniciens supérieurs*
SUAPS *Service universitaire des activités physiques et sportives*
UFR *Unités de formation et de recherche*
UTC *Université de technologie de Compiègne*

Glossary

Baccalauréat

Secondary school leaving certificate. This is the first national higher education certificate and permits its bearer to enter an institution of higher education.

Concours

Examinations set up by a State- or university-appointed committee. The examinations use a ranking scale to select applicants for admission to courses which have a limited capacity in certain programmes (engineering, management, public administration, etc.).

Conseils

Universities are organised by councils, which are groups of people chosen from the university community. These councils include the administrative council, the scientific council and the student and university welfare council. Together these three councils form an assembly which elects the president of the university for a term of five years. The scientific council and the student university welfare council make proposals and have a consulting role. The administrative council determines university policy.

Cycle

An organised period of study, on different levels, generally lasting two years.

Diplôme national de l'enseignement supérieur

Final diploma for which the same regulations apply at all higher education institutions.

Diplôme d'études universitaires générales (DEUG)

This diploma represents successful completion of the two-year course of the first university cycle.

Diplôme d'études universitaires scientifiques et techniques (DEUST)

This diploma represents successful completion of the two-year cycle of scientific and technical studies.

Diplôme universitaire de technologie (DUT)

This diploma represents successful completion of two years of study at university institutes of technology (*IUT*).

Diplôme d'études approfondies (DEA)

This is a third cycle, national diploma and represents successful completion of the first year of doctoral studies.

Diplôme d'études supérieures spécialisées (DESS)

Professionally oriented third cycle, national diploma awarded upon successful completion of a one-year applied and highly specialised course of study.

Diplôme de recherche technologique (DRT)

This diploma represents successful completion of the two years of study in the third cycle.

Doctorat

This degree is awarded to someone who has defended a thesis or completed a series of original scientific studies. The doctoral degree bears the name of the particular university granting the degree. The doctoral degree allows its holder to pursue research.

Habilitation

The *habilitation* (accreditation to direct high-level research) is a national diploma which is awarded to holders of a *doctorat* and which enables them to take competitive examinations for promotion to university professorship.

Institut universitaire de technologie (IUT)

Institute that is part of a university and offers two-year advanced technical training programmes.

Licence

National degree awarded upon successful completion of the first year of the second university cycle.

Lycées

Lycées are secondary schools which offer training leading to the *baccalauréat*. There are general and technical schools and there are vocational schools. Some secondary schools have a *section de techniciens supérieurs (STS)* which offers technical programmes leading to the *brevet de technicien supérieur (BTS)* and the preparatory classes for the entrance examinations of the *grandes écoles (CPGE)*. There are approximately 600 preparatory classes in *lycées* in different regions of France.

Magistère

This is a university degree accredited by the *ministère de l'enseignement supérieur et de la recherche*, which represents successful completion of a three-year interdisciplinary course of study after the first university cycle (*DEUG* or *DUT*); this course has not changed since 1990.

Maîtrise

National degree awarded upon successful completion of the second year of the second university cycle.

Module

First and second cycle university programmes are organised according to a course credit transfer system (*modules*) applied at many universities since the beginning of the 1993/94 academic year.

Titre

These degrees are diplomas recognised by the government and related to a specific profession (for example, the *titre d'ingénieur* or the *titre de docteur en médecine*). The holder of a degree must be able to prove that he or she was awarded the said degree by a State-accredited institution.

Unité de valeur

Credits are proof of the successful completion of semester or year-long courses in either compulsory or elective subjects.

I. The higher education system

General characteristics

The law adopted in 1968 governing higher education, referred to as the Edgar Faure law, marked an important step in the modernisation and democratisation of higher education in France. It granted private status and administrative, financial and pedagogical autonomy to the various educational establishments. The *facultés* gave way to administrative and pedagogical entities called *unités d'enseignement et de recherche* (programme and research units) allowing for a pluridisciplinary approach to education.

The law of 1984, referred to as the Savary law, defined the parameters for a civil service responsible for higher education, thus grouping together all of the post-secondary education programmes formerly under the direction of different ministerial departments. Its areas of responsibility are as follows:

- initial and adult education;
- scientific and technological research as well as the promotion of ensuing results;
- the diffusion of scientific and technical knowledge and information;
- international cooperation initiatives.

A *Comité national d'évaluation* (CNE) for higher education was also created by the law of 26 January 1984. It constitutes an independent administrative authority which sets forth its own working agenda and is granted financial autonomy.

The *Comité national d'évaluation* examines and evaluates all of the activities of the universities, schools and other educational institutions under the authority of the *ministère de l'éducation nationale, de l'enseignement supérieur et de la recherche*. It can also carry out the evaluation of institutions under the authority of other ministries.

Its activity focuses on the educational institutions, not on people. The committee members in charge of an evaluation mission may designate outside experts to help them. The inspection focuses on the quality of research and teaching, lecturer training, adult education, management of personnel and services, the living environment, accommodation and the continued orientation of the students, local integration and national and international influences. The committee has established for this evaluation a list of *indicateurs de fonctionnement* (operational indicators). The final report, addressed to the *ministère de l'éducation nationale, de l'enseignement supérieur et de la recherche*, is approved by the committee during a plenary meeting; the president or director of the institution evaluated writes up a response published at the end of the report. These documents are then made public.

Each year, the *Comité national d'évaluation* addresses to the president of the Republic a report on its activities and on the state of higher education and research. The 1996 report makes recommendations on the new universities opened in 1991.

Development scheme for higher education

Adopted in May 1991, the improvement and development scheme for higher education, also called *Université 2000* (University 2000), addresses five major objectives:

- to accommodate more students (at least 300 000 by 1995) and to accommodate them better;
- to adapt institutions of higher education to the needs of the economy, especially by developing the vocationally oriented education programmes at all levels and in all of the higher education structures. This mainly involves diversifying and developing the departments of the *instituts universitaires de technologie* (university institutes of technology — IUTs) and doubling the number of engineers trained at schools and universities in the years to come;

to develop higher education in the Île-de-France region by reinforcing the attractiveness of the universities located in the outer suburbs of Paris, by renovating the universities in the closer suburbs and by creating four universities: Évreux, Marne-la-Vallée, Versailles-Saint-Quentin en Yvelines and Cergy-Pontoise. These universities were opened in 1991; to work towards territorial improvement by getting involved in the dynamics of regional development. This entails setting up *IUTs* in a greater number of geographic locations, creating a better balance between the training offered in the north and west regions, and creating the universities of Artois, Littoral and La Rochelle; to prepare France for final entry into the European Community and for the competition that will develop in the intellectual and educational fields. One of the objectives will be to create the concept of a 'European university pole' for which 11 university cities are eligible. These are usually large urban areas which have several universities and other major educational establishments which exchange teaching resources, research and documentation.

This policy relies on a reinforced partnership between the State and the local communities: the regions, departments, towns and cities. An initial financing plan for the construction of universities and the restoration of existing premises was scheduled to come into effect from 1991 to 1995. The funds will be distributed to the regions which expect to have increased student enrolment and according to the requirements of the construction and renovation of university facilities.

I.1. The institutions of higher education

The system of higher education in France is characterised by the coexistence of a large number of varying higher education institutions, about 300, each with its own admission requirements and offering a wide variety of degrees, from the *brevet de technicien supérieur (BTS)*: advanced technical training diploma) to the *doctorat*. A total of 2 170 300 students enrolled at institutions of higher education during the 1995/96 academic year, 1 572 000 at universities and the remainder at various public and private institutions.

I.1.1. Universities and affiliated institutions

The 90 universities and three *instituts nationaux polytechniques* accommodate — in theory without carrying out a selection process, except in the medical and pharmaceutical disciplines — students who have obtained the *baccalauréat* secondary school diploma (or another diploma considered to be equivalent) and wish to enrol for short-term studies (*BAC* plus two years) or long-term studies (*BAC* plus three or more years). They have a large student body. They offer a very diverse choice of educational programmes including basic and practical programmes. A selection process takes place progressively throughout the successive academic cycles.

Some universities offer predominantly literary or scientific programmes, while others are of a more pluridisciplinary nature.

The following institutions can be affiliated with universities: one or more *instituts universitaires professionnalisés (IUP)*, an *institut universitaire de formation des maîtres (IUFM)*, an *institut de préparation à l'administration générale (IPAG)*, an *institut d'administration des entreprises (IAE)*, one or more *instituts universitaires de technologie (IUT)*, several institutes or schools, as well as services which are shared by all these institutions, such as libraries, *service commun universitaire d'information et d'orientation (SCUIO)*: university information and orientation service), *service universitaire des activités physiques et sportives (SUAPS)*: university physical education and sports service) and continuing education centres.

The *instituts universitaires de technologie* provide two-year advanced training programmes, after which the *diplôme universitaire de technologie (DUT)*: university diploma of technology) is awarded.

At the beginning of the 1993/94 academic year, 122 *IUP* (university institutes of professional training) departments were created within universities, as well as in the industrial and services sectors. Now 188 *IUP* departments have been created. Their primary concern is to adapt better the training provided to the demands of the job market, by creating new diplomas which are awarded after the student has completed the training corresponding to the economic sectors concerned, that is to say, those which have difficulty in finding the executives and engineers that they need. The *IUPs* offer students, who have undergone one year of university study (first year of the *DEUG* diploma programme or preparatory classes for *grandes écoles*), a three-year university and professional training programme, after which the *maîtrise* diploma (*BAC* plus four years) is awarded. The engineering degree is granted by a committee according to the course of study pursued by the student. The students can pursue their studies and prepare a *diplôme de recherche technologique*, a third cycle diploma. The *IUPs* also offer programmes in continuing education.

In 1991, the *instituts universitaires de formation des maîtres (IUFM: university institutes of teacher training)* replaced the former institutes for primary and middle school teachers. They are affiliated with universities and were created to meet the following objectives:

- to train teachers with both sound university training and professional skills;
- to recruit enough teachers to enable schools to accommodate an increasing number of students and to replace retired teachers.

The *IUFMs* accept students who have obtained a *licence* diploma or an equivalent degree. The first year of training allows students to prepare for competitive recruitment examinations:

- the *professorat des écoles*;
- the *certificat d'aptitude du professorat second degré (CAPES)*;
- the *certificat d'aptitude au professorat de l'enseignement technique (CAPET)*;
- the *certificat d'aptitude au professorat de lycée professionnel de deuxième grade (CAPLP 2)*.

After passing the competitive examinations, candidates undergo a second year which completes their professional training. Successful candidates then become fully qualified teachers.

Preparation for the competitive *agrégation* examinations is ensured by universities or by *écoles normales supérieures*. They can only be taken by holders of the *maîtrise* diploma or by candidates who have passed one of the competitive examinations listed above.

I.1.2. Other public institutions of higher education

These various educational institutions are headed by a director who is appointed by the sponsoring ministry in charge and who is assisted by an administrative board that includes a number of members from outside the institution itself. They receive their budgets directly from the government and each has its own teaching staff, recruited for the most part by the director.

These institutions are quite varied. One thing they have in common is a selection process, which is often rigorous, to choose their students: the *baccalauréat* is necessary but not sufficient. Students can be admitted on the basis of the studies pursued after the *baccalauréat*, the competitive examinations they have taken or their academic record. In this case, the course of study lasts five years. Students who have attended two years of preparatory classes for *grandes écoles* can also be accepted after taking competitive entrance examinations.

- (a) There are nine *instituts d'études politiques (IEP)*. The one in Paris (*Sciences-Po*) accepts first year students who have earned the *baccalauréat* after a selective examination process. Acceptance into the second year is possible after an interview for students who have a diploma at least equal in level to the *licence*.

There are eight other *IEPs* in the provinces; students who hold the *baccalauréat* are generally admitted into the first year after taking an entrance examination.

- (b) The *grandes écoles scientifiques* under the authority of the *ministère de l'enseignement supérieur et de la recherche* (*École centrale des arts et manufactures*, *École nationale supérieure des arts et industries textiles*, *École nationale supérieure des arts et métiers*, etc.) accept students on the basis of a competitive entrance examination. The students prepare for this very selective examination for two years after the *baccalauréat* either in the scientific preparatory classes (*classes préparatoires des grandes écoles — CPGE*), or in a first cycle university programme, or sometimes at the advanced schools themselves. After admission, the length of courses varies from two to five years according to the school. The schools issue an engineering degree which is accredited by the *commission des titres* (Commission on Engineering Diplomas) under the direction of the *ministère de l'enseignement supérieur et de la recherche*.
- (c) There are 14 *grands établissements* which, for the most part, offer third cycle postgraduate training programmes and award their own diplomas:

École pratique des hautes études (EPHE);
École des hautes études en sciences sociales (EHESS);
Institut de physique du globe (IPG).

Other institutions, such as the *Institut national des langues et civilisations orientales (Inalco: National Institute of Oriental Languages)*, offer complete courses of study. The *Collège de France* is open to the general public. There are no admission requirements nor enrolment procedures and a diploma is not awarded.

- (d) The four *Écoles normales supérieures (ENS)*, located in Paris, Fontenay/Saint-Cloud, Lyons and Cachan, have similar requirements: a very selective entrance examination prepared for over two years after the *baccalauréat* in scientific preparatory classes (notably in a *mathématiques supérieures* class and then in a *mathématiques spéciales* class) or literary preparatory classes (*lettres supérieures* class then *première supérieure* class). The schools prepare their students for the national university diplomas and for the competitive examinations that serve to recruit teachers (the *CAPES* and the *agrégation*).
- (e) Certain *écoles supérieures* (advanced schools) are under the responsibility of other ministries, notably:

The *École nationale d'administration (ENA)*

The *École nationale d'administration* is under the supervision of the prime minister. Its purpose is to train civil servants who are destined for senior management posts in the Civil Service, with the exception of the engineering corps and the technical personnel. Access to the school is subject to an entrance examination. The duration of studies, which includes internships and studies, is two years.

The military institutions of higher education

These educational institutions are dependent upon the *ministère de la défense* and include the army, navy and air force schools. Admission into the most prestigious (*École polytechnique*, *École spéciale militaire de Saint-Cyr*, *École navale*, *École de l'air de Salon-de-Provence*, etc.) is obtained after completing the scientific preparatory classes and earning a sufficiently high rank in the competitive entrance examination.

The *Écoles des mines*

The *Écoles des mines* are under the authority of the *ministère de l'industrie*. They accept students after an entrance examination or upon consideration of a degree (depending on the case: *BAC* plus one year, *BAC* plus two years, or *BAC* plus four years) and issue an engineering diploma in three or four years.

The *École nationale des ponts et chaussées*

The oldest member of the advanced schools, the *École nationale des ponts et chaussées* is under the supervision of the *ministère de l'équipement, du logement, des transports et du tourisme*. It recruits students after an entrance examination at the end of the scientific preparatory classes or upon consideration of a degree. An engineering diploma is issued after three or four years of study.

The agricultural institutes of higher education under the responsibility of the *ministère de l'agriculture et de la pêche*, which include:

- (i) the *Institut national agronomique Paris-Grignon* and the *écoles nationales supérieures agronomiques* which recruit students using a very selective entrance examination at the conclusion of the scientific preparatory classes and issue an agricultural engineering diploma;
- (ii) several specialised institutions that prepare students for various agricultural occupations: forestry engineer, agricultural engineer, horticultural engineer, landscape designer, etc.

The *écoles nationales vétérinaires (ENV)*

Students are admitted to the national schools of veterinary medicine after taking an entrance examination. The veterinary course is divided into three cycles (first cycle: two years, second cycle: three years, third cycle: one year). The length of the programme is six years.

Institutions of higher education in fine arts

These institutions, *écoles d'art, conservatoires nationaux supérieurs, École nationale supérieure des arts décoratifs, École nationale supérieure des beaux-arts, École du Louvre, École nationale du patrimoine*, etc., are under the authority of the *ministère de la culture*. They offer courses of study of varying length (generally from three to five years), which are concluded by national diplomas.

The *écoles d'architecture*

The 22 architecture schools, placed under the authority of the *ministère de la culture*, offer a course of study divided into two academic cycles and which lead to national diplomas:

- (i) The first cycle, which lasts two years, is devoted to orientation and introductory studies and culminates in the *diplôme d'études fondamentales en architecture (DEFA)*: diploma of basic studies in architecture) issued jointly by the *ministère de l'équipement, du logement, des transports et du tourisme* and the *ministère de l'enseignement supérieur et de la recherche*. The *DEFA* has the same academic standing as a *DEUG* diploma and allows students to continue their studies at a university.
- (ii) The second cycle leads to the architect's diploma awarded by the government: *diplôme d'architecte diplômé par le gouvernement (DPLG)* and normally lasts three years (thus a programme of *BAC* plus five years).

An additional year of specialised studies can be carried out in order to obtain the *certificat d'études architecturales approfondies (CEAA)*: certificate of advanced studies in architecture).

The *École nationale supérieure des arts et industries de Strasbourg (Ensaïs)* prepares students for an architecture and engineering diploma. Admission to the school is based on a competitive entrance examination.

I.1.3. Private institutions of higher education

The law of 12 July 1987 established the principle of the freedom of higher education. Private institutions can therefore be created and are subject to a legal notification concerning their opening.

All of these institutions can request recognition by the State which is a guarantee of quality granted by the State to schools which make a useful contribution to education and offer satisfactory curricula. There are several criteria for obtaining recognition which involve:

the educational programmes: objectives and length of training, admission requirements and standards, schedules and programmes, teaching methods, the composition and quality of the teaching staff;
the facilities (premises, equipment);
the legal status;
the financial situation (origin and use of resources).

Recognition is granted by decree from the *ministère de l'éducation nationale, de l'enseignement supérieur et de la recherche*. It gives the institutions that have obtained it the possibility to receive State subsidies or, for their students, the possibility to obtain government-funded scholarships. The recognised institutions can be subject to inspections. The appointment of the director and of the teaching staff is submitted to the local commissioner of education for his or her approval.

The authorisation to issue a diploma *revêtu du visa officiel* (validated with an official seal) can be granted by the *ministère de l'éducation nationale, de l'enseignement supérieur et de la recherche* to institutions that have been recognised by the State for at least five years. The criteria are the same as for official recognition, but with more demanding requirements concerning the level and quality of the study courses provided.

There are three types of private institutions of higher education:

- (a) private engineering schools;
- (b) *grandes écoles de commerce et de gestion*, all of which are private. Students who hold the *baccalauréat* and attended one or two years of advanced preparatory classes (*prépa. HEC*) can take the competitive examinations for entrance to these schools:
 - École des hautes études commerciales (HEC)*;
 - École supérieure des sciences économiques et commerciales (ESSEC)*;
 - École supérieure de commerce de Paris (Sup de Co)*;
 - École supérieure de commerce de Lyon*;
 - écoles supérieures de commerce et de gestion (ESC)*;
 - écoles or instituts supérieurs des sciences commerciales*;
- (c) *instituts catholiques*, which are private educational institutions recognised by the *ministère de l'enseignement supérieur et de la recherche*, group programmes offered by the universities and the *écoles supérieures*. The students from these institutes take their examinations before university boards. There are five Catholic institutes, one located in each of the following cities: Paris, Lille, Lyons, Angers and Toulouse.

I.1.4. Short-term higher education programmes

These programmes concern essentially the industrial sector, the service industries and paramedical sector. After two or sometimes three years of study, a professional diploma is awarded. The programmes are offered:

in *instituts universitaires de technologie (IUT)* which are affiliated to universities. The programmes are concluded by a *diplôme universitaire de technologie (DUT: university diploma of technology)* which should allow its holder to quickly exercise middle-level responsibilities in the manufacturing and service industries. Admission to technical institutes is subject to a selection process. There are presently 90 *IUTs*, divided into 505 departments which offer programmes in 23 areas of study related to both the manufacturing and services sectors.

in the *sections de techniciens supérieurs (STS: advanced technical training programmes)* open in *lycées d'enseignement général et technologique*: the two-year course of study differs from that of the technical institutes in that it leads to a more finely tuned specialisation, highly adapted to precise duties. These programmes are concluded by a *brevet de technicien supérieur (BTS: advanced technical training diploma)*. Admission to the highly skilled technicians' sections is granted upon consideration of an application;

in universities themselves where students may study, over two years, for a *diplôme d'études universitaires scientifiques et techniques (DEUST)* which allows them to enter directly into the workforce;

in universities, and other schools, under the authority of the *ministère du travail et des affaires sociales*, for paramedical programmes: speech therapy, vision correction, hearing correction, midwife preparation, social work, etc. The programmes accept a very limited number of students holding the *baccalauréat*, at the conclusion of an entrance examination, a regular examination, a test or an interview. The length of studies can last up to four years;

in *lycées* where *classes préparatoires aux grandes écoles* (CPGE: advanced preparatory classes) prepare students for competitive examinations for entrance to major schools of science and business, *Écoles normales* and schools of veterinary medicine. Admission to the different sections is granted to a very limited number of students and is based on the examination of an application which is submitted after the *baccalauréat*.

I.2. Number of students

In 1995/96, the total number of students enrolled in higher education was 2 170 300. The distribution of students in the three cycles of higher education breaks down into the following figures.

During this same year, the number of foreign students totalled 129 761. Some 35 944 of these students were European, 27 799 of whom came from EC countries:

These figures do not take into account students pursuing internships in the framework of EC programmes (Socrates, Leonardo da Vinci, etc.).

I.3. Organisation of courses of study

The academic year

The academic year runs from September to July. It includes two breaks of approximately 12 days in the winter (end of December) and in the spring (beginning of April). Universities plan their timetables independently. The specific vacations of each institution are determined by its president.

Examinations

In the universities, in order to obtain a *DEUG* (BAC plus two years), a *licence* (BAC plus three years) or a *maîtrise* (BAC plus four years) diploma, written and oral examinations must be passed. The methods of evaluation of the student's aptitudes and knowledge are defined in compliance with the 1984 law by the president of the university or the director of the institution, following the notice of the *Conseil des études et de la vie universitaire* (CEVU: Academic and University Affairs Council). Students are allowed to take examinations during two sessions, two months apart, generally in June and September. The programmes, except for law and economics, are organised as modules or self-contained groups of subjects, in order to facilitate orientation of studies, the resumption of studies and part-time studies. Once a module is passed by the student, it does not have to be taken a second time.

In the first and second cycles, lecture courses, tutorials and practical projects in a given field make up a *unité de valeur* (unit) or a module. In the third cycle, the decision to grant a diploma is not only based on the grades of the final examination, but also on independent work and research.

In non-university institutions, a continuous assessment system or annual examinations help to evaluate the student's progress from the first year of study until the final diploma is awarded. If a student fails an examination, permission to re-enrol is determined by the institution. Usually, a course of study includes an internship of about three weeks. A report or technical project is normally part of this training. This practical part of the student's course of study is taken into consideration in the granting of his or her diploma.

Programmes and courses of study

Higher education is based on short-term and long-term study courses. Short-term courses last two years and long-term courses three to eight years (minimum). University courses are divided into three successive cycles, at the end of which the student obtains a national diploma.

- (i) The first and second cycles

Students can enrol in a *DEUG* diploma programme a maximum of three times. The provisions concerning university studies are to be found in the legislation issued by the ministry in May 1992. The new organisation of university studies is based upon two major principles:

the continuity of studies, covering courses of study ranging from the *baccalauréat* to the *maîtrise*, progressively centred on a major area of study;

the continuity of academic orientation as progressively as possible by emphasising the organisation of modules (with special measures applied in law and economics) in order to create a link between the various courses of study.

University studies are divided into three major groups, divided, in turn, into sectors:

science and technology group: sciences, industrial technology, physical education, medicine, dentistry, pharmacy;

literature, arts and humanities group: literature and languages, arts, humanities, social sciences, theology;

law, political science, economics and administration group: economics and management, law and political science, economic and social administration.

The student's major field of study appears on the diplomas awarded (*DEUG*, *licence* and *maîtrise*). The number of major fields is limited in order to ensure coherence.

The second cycle serves to go deeper into more advanced general scientific and technical studies that prepare students for professional responsibilities.

In health programmes (medicine, dentistry, pharmacy, human biology), a selection process is used after the first year of study based on the student's final rank. The number of students to be accepted to the second year programme is determined by the *ministère de l'éducation nationale, de l'enseignement supérieur et de la recherche* in conjunction with the *ministère du travail et des affaires sociales*.

(ii) The third cycle and doctoral studies

The third cycle involves intense specialisation and preparation for research. Admission to the third cycle is subject to a selection process carried out among students who hold a *maîtrise*, an engineering degree or a diploma deemed equivalent through validation of personal experience.

The provisions regarding third cycle studies are to be found in the interministerial order of 30 March 1982 and published in the Official Journal on 3 April 1992.

There are two kinds of educational programmes:

a one-year professional programme accompanied by an obligatory internship in a company, with a view to earning a *diplôme d'études supérieures spécialisées (DESS)*: diploma of higher specialized studies);

a programme that prepares students for research (by carrying out research), confirmed after the first year by a *diplôme*

d'études approfondies (DEA) and leading to the preparation, in three or four years, of a *doctorat* (thesis or presentation of completed work).

The organisation of the doctoral programmes was completely revised during the *DEA* accreditation process (about 1 200 *DEAs* accredited). Within the framework of the four-year contracts for the development of research and doctoral studies, concluded between the *ministère de l'enseignement supérieur et de la recherche* and the different institutions, emphasis was placed on the creation of host doctoral research teams which allow students enrolled in a thesis programme to prepare to write their theses within a research team at their university, or, if the case arises, at another university. On a more global note, the creation of *écoles doctorales* (doctoral schools) grouping together all of the *DEA* and doctoral welcoming teams was strongly encouraged.

Obtaining a *doctorat* can be followed by another qualification with a view to being accredited to direct doctoral research projects and dissertations, an accreditation which confirms the aptitude of its holder to implement an original and advanced scientific research project, and his or her capacity to train and supervise young researchers. The essential purpose of this diploma, the *habilitation à diriger des recherches*, is to permit promotion to full university professorship.

Furthermore, engineers with a *maîtrise* from a university (*ingénieurs-maîtres*) and engineering students in their last year of engineering school can work towards a *diplôme de recherche technologique* (*DRT*: technological research diploma), a third cycle diploma issued after completion of a programme centring on innovation through technological research in the industrial sector and service industries, thus satisfying the criteria established by the ministerial order of 9 March 1993 of the *ministère de l'éducation nationale et de la culture*.

The *DRT* marks the successful completion of a programme of 18 months to two years that is carried out in an industrial or service-oriented scientific environment, notably in private or public research laboratories, and under the joint responsibility of two advisers, one being a teacher-cum-researcher, the other coming from the industrial sector or a service industry.

Open university

The *téléenseignement universitaire* (*TEU*) is offered to students who wish to obtain a national diploma but are unable to attend courses due to extraordinary factors (medical problems, distance, work or family commitments).

Courses in 11 major fields of study are given by 26 universities equipped with an open university centre and nine university institutes of technology. In 1995, about 35 000 students were enrolled in open universities.

The *Centre national d'enseignement à distance* (*CNED*: national centre for the open university), an institution under the direction of the *ministère de l'éducation nationale*, offers correspondence courses of varying levels and preparation for administrative competitive examinations.

Continuing education

A system of continuing education, organised in universities or schools, allows people with full-time careers to take evening courses, and thus obtain university degrees without interrupting their working schedules.

People with full-time careers also have the possibility of attending courses at the *Conservatoire national des arts et métiers* (*CNAM*). The students attend a series of courses or units after which the *diplôme d'études supérieures techniques* (*DEST*: diploma of higher technical education) is awarded by the State. This diploma can lead to an engineering degree. Self-taught engineers aged 35 or older and who can justify at least five years of professional experience are authorised to take examinations in their field of specialisation which can lead to an engineering degree awarded by the State: *ingénieur diplômé par l'État* (*DPE*).

II. Qualifications and diplomas

II.1. Qualifications for admission to higher education

The *baccalauréat*

To enter an institution of higher education, a student must possess a *baccalauréat*. It is a national diploma which is awarded based on the final examinations which cover the curricula studied during the last two years of secondary school (*première* and *terminale*). The State confers the university title of *bachelier* upon those students who pass the examinations. New regulations came into force as of 1995 and took effect in 1994 for the examinations in French which took place at the end of the year preceding the *terminale*.

There are several types of *baccalauréats*.

(a) The *baccalauréat général* (general education *baccalauréat*) entails the following series:

ES: économique et social

L: littéraire

S: scientifique

(b) The *baccalauréat technologique* (technical *baccalauréat*) comprises the series:

SMS: sciences médico-sociales

STI: sciences et technologies industrielles

STL: sciences et technologies de laboratoire

STT: sciences et technologies tertiaires

The *baccalauréat technologique* is evidence of sufficient preparation for entry into the working world. At the same time, it allows its bearer to enter an institution of higher education.

(c) The *baccalauréat professionnel* (vocational *baccalauréat*)

Created in 1985, the *baccalauréat professionnel* is intended as a direct qualification for employment, either as a workshop technician or highly skilled worker. It is not to be confused with the *baccalauréat technologique* which grants entry into programmes leading to the *DUT* (university diploma of technology) or the *BTS* (higher technician's certificate). The *baccalauréat professionnel* also enables students to pursue higher education programmes (20% of the holders of a *baccalauréat professionnel* enrol in post-*baccalauréat* programmes).

There are a total of 35 different *baccalauréat professionnel* programmes, created in close collaboration with the professional world and covering areas of specialisation in industry and services. Students are required to spend from 16 to 20 weeks over a two-year period in companies which provide on-the-job training.

The *baccalauréat professionnel* is intended for students who hold a *BEP* or a *CAP*, or students who have completed the penultimate year of study leading to the *baccalauréat technologique*.

The *baccalauréat agricole*

This is an agricultural programme which is offered in *lycées agricoles* and leads to the *baccalauréat agricole*; students who hold this degree are employed as technicians or highly skilled technicians in the field of agriculture and agronomy.

The *baccalauréat* examination

The *baccalauréat* examination takes place at the end of the last year of secondary schooling, generally in June and the beginning of July. Some examinations are administered at the end of the preceding year:

for the *baccalauréat général* and the *baccalauréat technologique*, written and oral French examinations;
for the *baccalauréat technologique*, history and geography examinations for students enrolled in the *STI*, *STL* and *SMS* sections.

The examination consists of compulsory written and oral examinations, some of which represent electives chosen by the candidate. Grades range from 0 to 20 points. The grade obtained on each examination is multiplied by a coefficient. Candidates who receive an average score equal to or higher than 10 points out of 20 on the first set of required examinations are granted the diploma following the decision of the examination panel. Candidates whose average score is 8 points out of 20 must take a second set of examinations. Those candidates who receive an average score equal to or above 10 points out of 20 on both sets of examinations are granted the diploma.

According to the scores attained in the examinations, one of the following rankings will be assigned and written on the diploma:

16 to 20: *très bien* (exceptional)
14 to 16: *bien* (very good)
12 to 14: *assez bien* (good)
10 to 12: *passable* (acceptable)

An indication of rank is not included on the diplomas of students who pass the second set of examinations. The diplomas awarded can also specify if the student attended the *section européenne* (European section) or the *section de langue orientale* (oriental language section).

II.1.1. Qualifications for admission to non-university higher education

Institutions and private or public schools, which are under the supervision of various ministries, offer higher education programmes with more vocational or professional aims. In order to be admitted to these institutes and schools, students must hold a *baccalauréat*, take an examination or a series of competitive examinations or submit a special application which is examined by the admissions board, which may be followed by an interview.

These institutions offer either short-term advanced technical training programmes (*STS*) which can be technological, commercial or paramedical in nature, or long-term advanced education programmes (*BAC* plus three years or more) in political science institutes, engineering schools, business or management schools, schools of veterinary medicine, architecture schools, national telecommunications schools, art schools, etc.

Preparatory classes for *grandes écoles* (CPGE) are offered at *lycées* and only students with very high grades on the *baccalauréat* examinations are actually eligible for these classes. After completing one or two years of study, candidates can take the competitive entrance examinations administered for the *grandes écoles* specialising in science and management.

II.1.2. Qualifications for admission to universities

The requirement for entrance to the first year of the first university cycle is a *baccalauréat* or a diploma considered to be equivalent, or a pass grade on the *diplôme d'accès aux études supérieures (DAEU)*. The universities usually organise, under the conditions stipulated by the order of 3 August 1994, two special university entrance examinations, the *DAEU A* (literary) and the *DAEU B* (scientific). The first (*DAEU A*) allows students to enrol in the following disciplines: literature, arts, social sciences, languages, communications, law, economics, administration and management; the second (*DAEU B*) authorises enrolment in the sciences, technology, physical education, medicine, dentistry, pharmacy or in the paramedical sector. These examinations allow many young people and adults who do not have a *baccalauréat* to pursue university studies.

Special cases

The *certificat de capacité en droit* (legal scholastic aptitude certificate) is designed for students aged 17 or older without a *baccalauréat*. It allows those candidates who obtain a score of at least 10 points out of 20 on the series of tests to enter a first year university *DEUG* diploma law programme. Candidates with a score of 15 points or more can enter the second year programme.

Admission to the different post-*baccalauréat* education programmes offered at institutions which come under the *ministère de l'enseignement supérieur et de la recherche* (universities or business and engineering schools) can also be authorised in conformity with the conditions stipulated in the decree relating to the validation of studies, professional experience or personal knowledge (Decree No 85-906 of 23 August 1985). Validation enables the candidate to enter directly into an educational programme leading to a national diploma or degree which is regulated by the State, or to apply for the competitive entrance examinations administered at a particular institution. Candidates who hold a foreign diploma or degree, for instance, can also make a request for validation. Validation is decided by the president of the university or the director of the institutions on the proposal of the academic commission.

Admission to *instituts universitaires professionnalisés (IUP)* is granted to students who have completed either the first year *DEUG* diploma programme, one year of preparatory classes for *grandes écoles* or a year of study after the *baccalauréat*. They must also submit a letter in support of their application along with letters of recommendation from two instructors.

Selection occurs after one year in medicine, dentistry and pharmacy: continued study is determined by the ranking of scores on a general examination.

Admission is selective to the following professional *maîtrise* programmes:

- maîtrise de sciences et techniques (MST: science and technology);*
- maîtrise de sciences de gestion (MSG: management science);*
- maîtrise des méthodes informatiques appliquées à la gestion (MIAGE: computer science applied to management).*

Admission to these *maîtrise* programmes requires that the student have a *certificat préparatoire* (preparatory certificate) which certifies his or her completion of the preparatory courses prepared jointly with the *DEUG* diploma.

After four years, students who have obtained the degree of *maîtrise* may wish to continue their study in the direction of a *diplôme d'études spéciales supérieures (DESS)* or a *diplôme d'études approfondies (DEA)*, which represents the first year of preparation of a doctoral degree. Permission to continue study is granted by the president of the university according to the student's demonstrated merit, particularly during the *maîtrise* programme.

Short-term higher education programmes

Selection is made as soon as a student has obtained the *baccalauréat*. This is done in the case of the *instituts universitaires de technologie* by means of a formal application submitted to a selection committee. Admission is announced after the scores of the *baccalauréat* examination have been reviewed by the selection committee; or in the case of paramedical programmes, by means of a very selective entrance examination which is normally accompanied by an interview and by physical and psychological aptitude tests.

II.2. Intermediate degrees in higher education

In France, there is no such thing as a terminal intermediate diploma. Every diploma awarded by a university or school is by definition a final diploma. It enables the student to pursue a career in the professional world, to undertake studies at a higher level or possibly to begin a course of study in another field.

II.2.1. Intermediate degrees in non-university higher education

No intermediate diploma is granted upon completion of the two-year *classes préparatoires aux grandes écoles (CPGE)*. Students who fail the competitive entrance examinations administered at the chosen school can obtain equivalency credits and be exempt from one or two years of university study, according to the decision of the president.

The *écoles supérieures* do not issue intermediate diplomas. The training which leads to a final diploma is seen as a single block consisting of several years of study. Each year terminates with an examination which determines whether the student may pass into the next year of study. These examinations verify the continuing knowledge acquired by the student in view of the final examinations required for obtaining the final diploma.

The *STS* and *IUTs* award a diploma after two years of study. These two years form an indivisible entity.

II.2.2. Intermediate university degrees

Diploma awarded upon completion of the first cycle: *DEUG* or *DEUST* (*BAC* plus two years).

Diploma awarded after the first year of study at an *institut universitaire professionnalisé (IUP)*: *DEUP* (*BAC* plus one year).

Diploma awarded after the first year of the third cycle: *DEA*.

II.2.3. Academic recognition of intermediate degrees for purposes of further studies

(See II.3.3. below.)

II.3. Final degrees in higher education

Universities are the only institutions allowed to grant national diplomas. They have the power to issue their own university diplomas. They bestow engineering degrees, as well as State medical, pharmaceutical and dentistry degrees, and provide training for certain State paramedical diplomas.

The *écoles* grant specific diplomas, sometimes certified by the *ministère de l'éducation nationale, de l'enseignement supérieur et de la recherche* or by institutions such as the *chambre de commerce et d'industrie*. They grant engineering degrees when given the authority to do so by the *commission du titre d'ingénieur (CTI)*, a board under the auspices of the *ministère de l'éducation nationale, de l'enseignement supérieur et de la recherche*. Some *grandes écoles* have been authorised by the State to grant national diplomas for the third cycle (*DEA*), or may provide the preparation for universities which do grant third cycle diplomas.

The *diplôme d'architecte diplômé par le gouvernement (DPLG)*

This diploma is awarded by public architectural colleges under the direction of the ministère de la culture et de la communication. The architectural programme is divided into three cycles:

the first cycle is concluded by the *diplôme de premier cycle des études d'architecture*; this national diploma is granted by both ministère de l'éducation nationale, de la recherche et de la technologie and the ministère de la culture et de la communication;

the second cycle is concluded by the *diplôme de deuxième cycle des études d'architecture*; this national diploma is granted by both ministère de l'éducation nationale, de la recherche et de la technologie and the ministère de la culture et de la communication;

the third cycle is concluded either by the *diplôme de troisième cycle des études d'architecture*, the national diploma granted by the ministère de l'éducation nationale, de la recherche et de la technologie or by the *diplôme d'architecte DPLG* granted under the direction of the ministère de la culture et de la communication.

The titre d'ingénieur (engineering degree)

This degree is awarded by non-university engineering schools or by engineering schools attached to universities, upon successful completion of five years of study after the *baccalauréat*. Some engineering schools accept candidates on the basis of competitive examinations or according to the *baccalauréat* examination results, followed by aptitude tests and an interview. Engineering programmes are divided into two cycles: a two-year preparatory cycle and a three-year engineering cycle.

The majority of engineering colleges accept students who have attended two years of scientific preparatory classes and who pass the competitive entrance examinations. The duration of studies is three years.

Some engineering schools can train students already holding an engineering degree or a *DEA*. The student then receives a special engineering degree according to the particular field he or she has chosen.

The mastère spécialisé

Several schools of engineering, business and management offer this degree to students who are recipients of engineering degrees or the *DEA*. The *mastère spécialisé* is a specialised, 12-month programme (including four months' training). Upon successful completion of the programme, the student is granted a diploma or certificate, called a *mastère spécialisé*, which is a degree authorised by the *Conférence des grandes écoles*.

The diplôme de docteur-vétérinaire

The veterinary programme is conducted in veterinary *écoles*. Defence of a doctoral thesis is conducted before a university committee, and is a requirement for practising the profession.

The diplômes d'État du secteur paramédical, des carrières sociales et de la comptabilité

State diplomas are awarded upon completion of two- or three-year courses following secondary school in the fields of paramedical training and social work, leading to careers as:

- (i) occupational therapist, nurse, medical laboratory assistant, electro-radiologist assistant, physical therapist, podiatrist, psycho-motor therapist, childcare specialist, etc.;
- (ii) social services assistant, nursery school teacher, special education teacher.

The *diplôme d'expertise comptable*, awarded after completing the preliminary programmes granting the *diplôme préparatoire aux études comptables et financières (DPECF)*, the *diplôme d'études comptables et financières (DECF)* and the *diplôme d'études spécialisées comptables et financières (DESCF)*.

Specific diplomas are issued at the end of a training programme in specialised schools.

See I.1 for the description of the institutions and I.1.3 for more information about the qualifications for the *diplôme d'ingénieur* and the *diplôme de haut enseignement commercial*.

II.3.1. Final degrees in non-university higher education

These qualifications are issued by both public and private institutions which may or may not be State-approved and are supervised by a number of different ministries. Some diplomas are examined by the State and given official approval by the *ministère de l'éducation nationale, de l'enseignement supérieur et de la recherche*; others are issued by a given institution and are the responsibility of that institution alone.

Principal diplomas issued according to national standards

The brevet de technicien supérieur (BTS)

This certificate is a national diploma for specialised fields in most industrial and services sectors. The programmes leading to this diploma, the *STS* (advanced technical training programmes), last two years and take place in *lycées*. The programmes offer a high level of specialisation according to the exact demands of the field.

Participation in the programme requires 32 to 35 hours a week. During the first year, half of the training is devoted to general subjects, while the other half is devoted to practical exercises and directed projects. The first year also includes training in industry or business. Two thirds of the training during the second year are devoted to professional courses. The second year ends with the presentation of a project. The final examination leading to the certificate contains at least six separate tests, including one practical test which must cover all the major aspects of the subject.

There are more than 100 areas of speciality for this certificate, which is under the direction of the *ministère de l'éducation nationale*, and a further 19 subjects for the *BTSA* (agricultural certificate), which is under the supervision of the *ministère de l'agriculture et de la pêche*.

The diplômes nationaux d'arts (national arts diplomas)

National arts diploma programmes are offered at municipal, regional and national art schools which are under the supervision of the *ministère de la culture et de la francophonie*:

the *diplôme national d'arts et techniques (DNAT)* and the *diplôme national d'arts plastiques (DNAP)* are awarded upon successful completion of a three-year course of study (short cycle);

the *diplôme national supérieur d'expression plastique (DNSEP)* is awarded upon successful completion of a five-year course of study (long cycle).

A student who has a *BTS* in the arts can continue his or her study and obtain a *diplôme supérieur d'arts appliqués* upon successful completion of a two-year programme offered in applied arts schools (*BAC plus four years*).

Other courses offered by these institutions lead to:

the *diplôme des métiers des arts graphiques* (graphic arts);

the *diplôme des métiers des arts de l'habitat* (interior decorating);

the *diplôme des métiers du décor architectural* (architectural design).

II.3.2. Final university degrees

Universities offer students a choice of many varied programmes, both short and extended. These culminate in national diplomas or university degrees or diplomas granted under their own responsibility, which is part of their administrative autonomy.

National diplomas

Approval of national diplomas

National diplomas for the first, second and third cycles are subject to approval within the framework of a four-year contract between each institution and the *ministère de l'éducation nationale, de l'enseignement supérieur et de la recherche*. The national diplomas must come within the scope of a coherent academic project. The projects are submitted for approval by groups of experts who evaluate the content of the programmes offered. The institution is granted the right to award a national diploma if the programme is in keeping with the requirements of national regulations (legislation dating from May 1992).

University degrees and diplomas included in a list published by law are national diplomas. The following are national diplomas:

certificat de capacité en droit
baccalauréat
diplôme universitaire de technologie (DUT)
diplôme d'études universitaires générales (DEUG)
diplôme d'études scientifiques et techniques (DEUST)
licence
maîtrise
titre d'ingénieur-maître (engineering degree awarded upon completion of a four-year programme at an IUP)
magistère (this course has not changed since 1990)
diplôme d'études supérieures spécialisées (DESS)
diplôme d'études approfondies (DEA)
diplôme de recherche technologique (DRT)
doctorat
habilitation.

University medical degrees and diplomas:

certificat de capacité d'orthoptiste (vision correction)
certificat de capacité d'orthophoniste (speech therapist)
diplôme d'État de psychomotricien (psycho-motor therapist)
diplôme d'État d'audioprothésiste (hearing-aid specialist)
diplôme d'État de sage-femme (midwife)
diplômes d'État de docteur en médecine, en pharmacie, en odontologie (medicine, pharmacy and dentistry).

These diplomas are subject to national regulations (*habilitation*), but universities have a great deal of autonomy as regards the content of the teaching provided and the methods used to assess students' knowledge.

Short-term programmes

Short technical courses

These last for two years and provide training for advanced technicians in all sectors of industry. The following diplomas are awarded.

Diplôme universitaire de technologie (DUT)

The 90 *instituts universitaires de technologie (IUT)* are organised in 505 different departments of study covering 23 specialisations in the secondary and tertiary (services) sectors. The teaching methodology is such as to permit students to make the transition to an actual work situation with relative ease.

To receive the *DUT*, a student must complete from 1 600 to 2 000 hours of instruction spread over two years, or about 34 hours per week. Half of the courses are applied or practical in nature and take place in a laboratory or workplace, with small groups. The first year is primarily made up of basic courses, while the second year allows for specialised choices. All students must undergo a mandatory six to eight weeks of training during their two years of study.

Diplôme d'études universitaires scientifiques et techniques (DEUST)

This short study course (two years) corresponds to technical needs on the regional level. The total number of instruction hours is between 1 200 and 1 400, and consists of practical work, project studies and training periods.

Short-term paramedical and medical courses

These courses lead to State-regulated diplomas. The courses include theoretical and tutorial work as well as periods of practical training.

Long-term programmes

The second cycle increases the student's knowledge to a high scientific level and prepares him or her for subsequent employment. These

programmes culminate in:

the *licence*: *DEUG* plus one year = *BAC* plus three years;

the *maîtrise*: *licence* plus one year = *BAC* plus four years.

The first and second cycle university programmes underwent a vast reform which was completed during the 1992/93 academic year. A series of ministerial orders determined, for each national diploma (*DEUG*, *licence*, *maîtrise*), a minimum number of hours of theoretical courses and, for certain disciplines, of practical courses.

In the case of the *licence* and *maîtrise*, the total number of course hours ranges from a minimum of 350 hours to a maximum of 550 hours, according to the field of study. The teaching of at least one foreign language was made obligatory in all programmes.

The following three professionally oriented courses consist of a single two-year block after the *DEUG*, and have a more demanding hourly requirement:

maîtrise de sciences et techniques (MST)

maîtrise de méthodes informatiques appliquées à la gestion (MIAGE)

maîtrise de sciences de gestion (MSG).

The third cycle is devoted to specialisation and training in research. There are two possible branches of study:

the professional branch leading to the *diplôme d'études supérieures spécialisées (DESS)* which is one-year long and includes one training course in industry or business:

DESS: *maîtrise* plus one year = *BAC* plus five years;

the branch leading to the *doctorat* (doctoral degree), the first year of which culminates in the *diplôme d'études approfondies (DEA)*:

DEA: *maîtrise* plus one year = *BAC* plus five years;

doctorat: *DEA* plus three to four years = *BAC* plus eight to nine years.

Medical programmes

Medical programmes — medicine, dentistry and pharmacy — are not only organised per year but also in cycles.

Medicine (requires eight years of study or more)

Entrance to the programme is open to students holding a *baccalauréat*. The first cycle of medical studies (*PCEM*) takes two years; the first year of this cycle is the same for both students of medicine and students of dentistry. Its purpose is to prepare students for a competitive examination taken at the end of the year. Only those students who receive a high enough ranking in this examination are allowed to continue in the second year.

The second cycle of medical studies (*DCEM*) lasts four years and includes practical training in hospitals.

The third cycle of medical studies is open to students who have successfully completed the second cycle (*DCEM*) and have passed the examination for the *certificat de synthèse clinique et thérapeutique (CSCT)*. The third cycle in general medicine lasts two years and consists of a residency; it culminates in a State medical diploma (*diplôme d'État de docteur en médecine*). The third cycle in specialised medicine requires that students pass a competitive examination for the medical internship. The examinations are given in four fields each year: medical specialisations, surgery, medical biology and psychiatry. This cycle leads to the *diplôme d'Études spécialisées (DES)* and requires four to five years' preparation. At the end of this cycle, successful students are granted the *diplôme d'État de docteur en médecine* and the *diplôme d'études spécialisées*. Students may prepare for a *DEA* during the third cycle of medical studies.

Dentistry (requires five years of study or more)

Entry to the programme is open to students holding a *baccalauréat*. Candidates sign up for the first year of general medicine (*PCEM I*) and take the competitive examination at the end of the year. Only those students who score highly enough in the ranking are allowed to enrol in the second year of dentistry.

When a student has successfully completed his or her fifth year of study, he or she may defend his or her thesis to obtain the *diplôme d'État de docteur en chirurgie dentaire*. Oral surgeons may then continue their study in one of the following specialisations:

research: in preparing the doctoral degree of dental sciences (five years);
certificats d'études supérieures (CES: two years);
certificat d'études cliniques spéciales mention orthodontie
(*Cecsmo*);
diplôme d'études supérieures de chirurgie buccale (DES).

Pharmacy (requires six years of study or more)

The programme is open to students holding a *baccalauréat*. The course programme in pharmacy includes:

a first cycle, in which the first year is based on general preparation for the competitive examination at the end of the year;
a second cycle of two years;
a third cycle of three years, at the end of which the student defends a thesis to obtain his or her *diplôme d'État de docteur en pharmacie (BAC plus six years)*.

Students holding this diploma may continue their studies, if they so desire, in one of the following ways:

by enrolling in the doctoral cycle (*DEA plus doctorate*);
by enrolling in the programme leading to the *diplôme d'études supérieures spécialisées (DESS)*.

At the end of the fifth year of studies, those students who wish to continue their studies may do so if they obtain a high enough score in the competitive examination for the pharmaceutical internship. They then enrol in the programme leading to the *DESS* in the field of biological sciences and the field of specialised pharmaceutical sciences. The *DESS* report may take the place of the thesis for the *diplôme d'État de docteur en pharmacie*.

In order to allow students in medicine, dentistry and pharmacy to prepare for a research career (by taking the programme leading to the *DEA* and then continuing with research), a *maîtrise* in biological and medical sciences has been created. This degree is open to students in their second year of study, either in medicine, dentistry, pharmacy or veterinary medicine.

University diplomas

The universities offer their own university diplomas, for which they take sole responsibility. University programmes of varying length and level of difficulty are open to both entry-level and advanced students and admission requirements are generally selective. Many university diplomas, particularly in the fields of law, economics and management, are European or international in scope. The third cycle offers specialised programmes based on general training. Diplomas resulting from these programmes cannot bear the same name as a national diploma.

II.3.3. Academic recognition of final degrees in higher education for purposes of further study

Admission to the different levels of higher education can be granted through the validation of other studies, work experience or personal knowledge, under the conditions defined by the decree of 23 August 1985.

Institutions of higher education take sole responsibility for evaluating a diploma for purposes of further study; the candidate must submit a validation request application to the institution or institutions offering the course of study he or she wishes to pursue. The decision to validate a degree or not is made by the president of the university, or the director of the institution with the input of an academic committee. The candidate is then informed of the final decision.

Holders of foreign degrees and diplomas can also benefit from these measures. The Minister for Higher Education and Research makes decisions concerning the validation of diplomas in medicine, pharmacy and dentistry only.

The French system allows students to transfer from one university course of study to another. The most common transfers are from short-term to long-term courses of study:

from the *DUT* to the second university cycles;

from the *DUT* to engineering and business schools and to *instituts d'études politiques (IEP)*;

from general university programmes to technical or specialised programmes;

from *DEUG*, *licence* or *maîtrise* to engineering schools, business schools, art schools, journalism schools, etc.;

from *DEUG* to the special training year following the first cycle, which are offered at *instituts universitaires de technologie (IUT)*;

from technology programmes to research programmes;

from completed *écoles* programmes to third university cycles or doctoral programmes.

Most engineering schools have made it possible for students to transfer to an engineering programme after they have obtained a *DEUG*, a *DUT* or a *BTS*.

Admission to an *institut universitaire professionnalisé (IUP)* is possible at all levels, *BAC* plus one year, *BAC* plus two years, *BAC* plus three years, according to specific procedures determined by the universities.

**Diagram
higher**

of education the

**French
system**

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B. Office of Student Orientation and Employment (DGES 13) publications

Documents published by the *ministère de l'éducation nationale, de l'enseignement supérieur et de la recherche* (61/65, rue Dutot, F-75015 Paris). They can be found in cultural services offices and at French embassies.

1. Documents explaining the organisation of higher education:

L'enseignement supérieur en France: les formations
Établissements d'enseignement supérieur: les structures
dépliant: «enseignement supérieur»

2. Booklets concerning higher education programmes (revised annually):

Les diplômes de 1^{er} cycle dans les universités: DEUST, DEUG
Diplômes de deuxième cycle et plus: licences, maîtrises, magistères, diplômes d'ingénieurs
Diplômes de troisième cycle: DEA
Diplômes de troisième cycle: (DESS)
Enseignement supérieur technologique court: instituts universitaires de technologie (IUT)
Enseignement supérieur technologique long: écoles d'ingénieurs
Les instituts universitaires professionnalisés

3. Thematic documents (revised annually):

(i) Two brochures for foreign students:

Les procédures d'inscription
Les études supérieures en France

(ii) Ten brochures on programmes and training offered in French universities (*formations dispensées dans les universités françaises*):

Droit et science politique

Sciences économiques et de gestion

Lettres et arts

Langues vivantes

Sciences humaines: philosophie — psychologie — communication

Sciences humaines: histoire — géographie

Mathématiques, informatique, physique, chimie
Sciences de la vie, sciences de la terre
Sciences et technologie: électronique — électronique automatique — mécanique
Formations de santé: médecine, odontologie, pharmacie, paramédical

(iii) Four specific brochures:

La formation des ingénieurs en France
Le téléenseignement universitaire
SCUIO: services communs universitaires d'information et d'orientation
Les pôles Firtech (formation des ingénieurs par la recherche technologique)

C. Onisep publications

These publications are available at cultural services offices and at French embassies and are on sale at the Onisep bookstore, 168, boulevard Montparnasse, F-75006 Paris.

Après le bac ... Réussir ses études: opportunities offered to students who hold or who do not hold the various baccalauréats

Études supérieures, mode d'emploi: practical information about higher education

Files on various diplomas (*BTS, IUT, magistères*)

Onisep publishes many dossiers on higher education programmes offered in every field of study.

Appendix I

List of professions and occupations which come under Order No 89/48/EEC in France (subject to inventory)

Professions juridiques

Administrateur judiciaire et mandataire judiciaire à la liquidation des entreprises
Agent immobilier
Avocat
Avocat au Conseil d'État et à la Cour de cassation
Avoué
Commissaire aux comptes
Commissaire-priseur
Greffier des tribunaux de commerce
Huissier de justice
Notaire

Expert-comptable

Géomètre expert

Professions paramédicales

Ergothérapeute
Masseur kinésithérapeute
Orthophoniste
Orthoprothésiste
Orthoptiste
Podo-orthésiste

Assistante de service social

Psychologue

Conseils en propriété industrielle

Guide interprète national

Actes d'électroradiologie médicale

Actes

de

rééducation

psychomotrice

Appendix II

List of professions and occupations which come under Order No 92/51/E33
in France (subject to inventory)

Professions paramédicales

Aide-soignant
Audioprothésiste
Auxiliaire de puériculture
Diététicien
Opticien lunetier
Pédicure podologue

Professions juridiques

Agent immobilier
Administrateur de biens
Syndic de copropriété

Professions dans le domaine du tourisme

Agent de voyages
Entrepreneur de remise et de tourisme et chauffeur
Guide interprète régional

Professeur de danse

Professions artisanales

(Maître-artisan)
Ambulancier
Chauffeur

de

taxi

Professions maritimes

Capitaine de navire de commerce (x < 1 600 t)

Chef mécanicien (navires de commerce et de pêche — en fonction de la puissance ou du tonnage du navire)

Cuisinier d'équipage

Lieutenant 'pont' sur les navires de commerce

Lieutenant 'pont et machines' de navire de commerce

Opérateur et chef de poste sur navire de charge

Opérateur sur tout navire à passagers

Patron de navire (plaisance à voile — 'petite pêche')

Capacité professionnelle maritime permettant l'accès aux concessions du domaine public maritime

Chef d'exploitation en conchyliculture et capacité professionnelle agricole et maritime pour l'accès au domaine public maritime

Expert en automobile

Professions dans le secteur des transports

Déménageur

Formateur de moniteur d'auto-école

Moniteur d'auto-école

Germany

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Glossary

Abendgymnasium

General secondary night school for employed adults providing university entrance qualification.

Allgemeine Hochschulreife

Qualification obtained as a rule by taking a final examination (*Abiturprüfung*) after 13 years of schooling, including upper secondary education, normally at a *Gymnasium*. The holder has in general the right to study at all institutions of higher education without restrictions with regard to subject areas.

Berufliches Gymnasium

Upper level of *Gymnasium* with a career-oriented or technical bias (grades 11 to 13) which leads to a general university entrance qualification. Career-oriented subject areas and focuses such as economics and engineering are added to the subjects otherwise available at the general education *Gymnasium*.

Berufsfachschule

Full-time vocational school at the upper level of secondary education that prepares students for jobs or provides them with vocational training at the same time as general education. Depending on the objective of training, the requirements for admission (*Hauptschule* or *Realschule* certificate) and the period of training vary from one year to three years.

Berufsgrundbildungsjahr

Basic vocational training year as the first stage of vocational training either in a full-time school or in the cooperative form of part-time school and on-the-job training.

Berufsschule

Part-time vocational school at the upper level of secondary education providing general and vocational education for pupils in initial vocational training; special attention is paid to the requirements of training in the dual system (part-time school and on-the-job training).

Fachgebundene Hochschulreife

Qualification entitling holder to study at a *Fachhochschule*. May usually be obtained after 12 years of schooling at a *Fachoberschule* or — under certain conditions — at other vocational schools.

Fachgymnasium

See *Berufliches Gymnasium*.

Fachhochschule

Institution of higher education offering degree programmes, particularly in engineering, economics, administration, social work, agriculture and design. The preparation for employment on the basis of application-oriented teaching and research is the specific training purpose of the *Fachhochschulen*.

Fachhochschulreife

Qualification obtained, as a rule, by taking a final examination after 12 years of schooling, the last two years at a *Fachoberschule*. It provides access to studies at *Fachhochschulen* and the corresponding courses of study at *Gesamthochschulen*.

Fachoberschule

Technical secondary school (grades 11 and 12) specialised in various areas and providing access to *Fachhochschulen*.

Fachschule

Technical school providing advanced vocational training.

Gesamthochschule

Institution of higher education existing in two *Länder* combining functions of the universities, *Fachhochschulen* and, in some cases, colleges of art and music. They offer courses of study of varying duration and leading to different degrees.

Gesamtschule

Comprehensive school existing in two forms: the cooperative comprehensive school combines the schools of the traditional tripartite system under one roof and harmonises the curricula in order to facilitate the transfer of pupils between the different coexisting types; the integrated comprehensive school admits all pupils of a certain age without differentiating between the traditional school types.

Grundschule

Primary school marks the beginning of compulsory education, to which all children go together once they have reached the age of six (in general grades one to four). The aim of the primary school is to provide its pupils with the basis for their continuing education at the lower level of secondary education.

Gymnasiale Oberstufe

Upper level of the *Gymnasium* (normally grades 11 to 13) providing general university entrance qualification by the final examination (*Abiturprüfung*).

Gymnasium

General education secondary school (normally grades 5 to 13) providing general university entrance qualification. See also *Allgemeine Hochschulreife*.

Hauptschule

General education secondary school — lower level — providing full-time compulsory education.

Kolleg

Institute of general education offering day school courses for adults with work experience and the possibility to acquire the *Allgemeine Hochschulreife*.

Kunsthochschule/Musikhochschule

College of art/College of music.

Mittelschule

General education secondary school (grades 5 to 10) in Saxony providing different courses of education and the possibility to acquire the *Hauptschule* certificate or the *Realschule* certificate. From grade seven, compulsory subjects are taught in class at two different levels according to the curricula and the intended final examination of the *Hauptschule* (after grade nine) or the *Realschule* (after grade 10).

Orientierungsstufe

Grades five and six may be organised as an orientational stage during which the decision on a particular school type is left open. In some *Länder* the orientation stage may be a separate organisational unit independent of the standard school types, for which the starting grade is seven.

Pädagogische Hochschule

Teacher training college which only exists in five *Länder* where teachers are trained for careers in primary and lower secondary as well as in special education. In the other *Länder* courses for the abovementioned teaching careers are offered by universities, *Gesamthochschulen* and colleges of art and music.

Realschule

General education secondary school — lower level, normally grades 5 to 10 — going beyond the level of the *Hauptschule* and giving access to upper secondary education where a higher education entrance qualification or a vocational qualification may be obtained.

Regelschule

General education secondary school (grades 5 to 10) in Thuringia providing different courses of education and the possibility to acquire the *Hauptschule* certificate or the *Realschule* certificate. From grade seven, compulsory subjects are taught at two different levels according to the curricula and the intended final examination of the *Hauptschule* (after grade nine) or the *Realschule* (after grade 10).

Sekundarschule

General education secondary school (grades 5 to 10) in the Saarland and in Saxony-Anhalt providing different courses of education and the possibility to acquire the *Hauptschule* certificate or the *Realschule* certificate. From grade seven, compulsory subjects are taught at two different levels in groups or classes according to the requirements of the leaving certificates of the *Hauptschule* (after grade nine) or the *Realschule* (after grade 10).

Sonderschule

Special schools for children with learning difficulties, schools for the blind and visually handicapped, schools for the deaf and hard of hearing, schools for children with speech handicaps, schools for the physically handicapped, schools for mentally handicapped children, schools for children with behavioural disturbances and schools for sick pupils.

Technische Universität/Technische Hochschule

Technical university.

Verwaltungsfachhochschule

Special type of *Fachhochschule* offering degree programmes in public administration which include periods of on-the-job training for future civil servants at the middle echelon level in federal, *Land* or local authorities.

I. The higher education system

I.1. Types of higher education institutions

The following types of higher education institutions award academic degrees in the Federal Republic of Germany (figures in brackets correct as at June 1994):

universities, technical universities, comprehensive universities, as well as higher education institutions that only offer special subjects (105);
Fachhochschulen (134);
teacher training colleges (7);
colleges of art and colleges of music (48).

With very few exceptions, the higher education institutions in the Federal Republic of Germany are public institutions. Characteristic of higher education institutions is their right to self-administration, their right to administer academic examinations and to award academic degrees, as well as the right to recruit academic staff. Private State-recognised institutions of higher education have the same level and qualitative status with regard to studies offered and degrees conferred as State institutions.

I.1.1. Universities

Universities, technical universities, comprehensive universities as well as institutions of higher education only offering special subject areas have the function of carrying out research, offering teaching and study opportunities, as well as promoting young academic talent. Accordingly, they have the right to confer doctoral degrees and professorial qualifications (*Habilitation*).

As a rule, the range of subjects offered includes theology, the humanities, law, economics, the social sciences, science and engineering, the agricultural sciences and medicine. The term 'university' includes various institutions specialising in medicine, veterinary medicine, administrative studies or sport sciences, as well as the federal armed forces' universities where officers study.

The churches have higher education institutions of their own for the training of theologians, or departments in addition to the theology departments at public universities.

After acquiring a doctoral degree, professors and lecturers have usually proved their academic achievements in research and teaching in an additional procedure (*Habilitation*).

Universities are divided into faculties or departments. Special research departments may be set up to promote cross-faculty research.

Comprehensive universities (*Universitäten — Gesamthochschulen*), in Hesse and North Rhine-Westphalia, combine in one institution the functions of the universities, teacher training colleges and *Fachhochschulen*, and in part also the functions of the colleges of art and of music.

I.1.2. *Fachhochschulen*

As universities for applied studies and research, the *Fachhochschulen* with 134 out of a total of 294 higher education institutions (1994), and around 400 000 out of a total of around 1.8 million students, represent a major section of the German higher education system. They have the task of preparing students for professional activities on the basis of application-related teaching, involving the practical application of scientific knowledge and methods or the ability to apply artistic skills. They carry out research and development tasks in the framework of this education mandate.

Fachhochschulen are structured and organised in the same way as other higher education institutions. The courses offered by *Fachhochschulen* are predominantly in the engineering sciences disciplines, in the economic sciences and in the social sciences. The structure of the study programmes and the organisation of teaching and studies at the *Fachhochschulen* are particularly oriented towards practical application and are tailored to the requirements of professional practice.

The requirements for employment as a professor are an academic degree, outstanding achievements in the application or development of scientific knowledge and methods, as well as at least five years of practical experience, of which at least three must have been outside the academic sphere. A further prerequisite is outstanding ability to do academic work, normally evidenced by a doctorate.

I.1.3. Teacher training colleges

Teacher training colleges (*Pädagogische Hochschulen*) have the task of training teachers for careers in primary schools, *Hauptschulen* and special schools. In some cases, teachers are specifically trained for *Realschulen* or other secondary level I school types. Some teacher training colleges also train graduates in education (*Diplom-Pädagogen*). The training of teachers for *Gymnasien* and vocational schools, i.e. for careers in secondary level II institutions, takes place at universities. Many teacher training colleges were integrated into the universities in the 1970s. They continue to exist as independent institutions in Baden-Württemberg and Thuringia. Like universities, teacher training colleges have the right to confer doctoral degrees.

The appointment of professors at teacher training colleges is dependent on the same conditions as govern the appointment of university professors. As a rule professors also have several years of teaching experience at schools.

Students at teacher training colleges conclude their (minimum) three-year courses of study with the first State examination. The subsequent preparatory service is concluded with the second State examination. Only then can they be employed as teachers in the relevant types of schools.

I.1.4. Colleges of art and music

Colleges of art and colleges of music offer training in the practice and study of fine art, design and the performing arts, or in musical subjects.

I.2. Higher education studies

I.2.1. Access to higher education and admission procedures

Access to higher education

The prerequisite for starting a course of study at universities and equivalent institutions of higher education is proof of having a (general or subject-specific) university entrance qualification (*Allgemeine bzw. Fachgebundene Hochschulreife*), generally acquired after completing 13 grades at school (12 grades in Mecklenburg-Western Pomerania, Saxony, Saxony-Anhalt and Thuringia) by passing the *Abitur* examination.

The prerequisite for starting a course of study at *Fachhochschulen* is a special entrance qualification for studies at *Fachhochschulen* (*Fachhochschulreife*), generally acquired after completing 12 grades at school, or the general higher education entrance qualification (*Allgemeine Hochschulreife*).

Depending on the *Land* law in each case, prior practical courses (*Vorpraktika*) or aptitude tests are required for some courses of study, e.g. in technical subjects.

For admission to colleges of art and colleges of music, applicants are as a rule required to pass an artistic aptitude test in addition to having the *Allgemeine Hochschulreife*.

Admission procedures

In some disciplines (above all: medicine, veterinary medicine, dentistry, architecture, biology, pharmacy, food chemistry, food science, business studies) demand far exceeds the number of student places available. Access to these disciplines is therefore restricted at all institutions of higher education in the Federal Republic of Germany (*numerus clausus*). Moreover, certain institutions have admission restrictions on a number of other courses (e.g. so-called 'green' degree programmes such as geo-ecology, agriculture, etc.). Subsequent to formal application, places on these study programmes are allocated by the central office for the allocation of study places (*Zentralstelle für die Vergabe von Studienplätzen*) if the *numerus clausus* applies to that subject at all higher education institutions, and if not by the institutions themselves. Each semester, an information sheet from this office details which courses carry admission restrictions. Decisions on admission are made predominantly on the basis of grades (the average mark on the *Abitur* certificate; admission to medical courses also rests on the result achieved in a special test which is held every autumn). The length of time *Abitur*-holders have been waiting for a study place also plays a part in the admissions procedure.

These rules of procedure apply both to German applicants and to nationals from EC Member States. For other foreign applicants a special quota of available places is reserved for each degree programme. The higher education institutions themselves are responsible for allocating these study places.

I.2.2. Standard period of study, minimum period of study and duration of studies

Study is governed by State or State-approved examination regulations (see I.2.4). In accordance with these regulations, courses of study are normally divided into two sections: basic studies (*Grundstudium*) and advanced studies (*Hauptstudium*), both of which are concluded with a final examination. The examination regulations also indicate the standard period of study (*Regelstudienzeit*) for each degree programme. Degree studies can and should be completed and the final examination taken within this period. This standard period of study — which varies from 8 to 10 semesters according to subject — is primarily a guideline for institutions of higher education to help them plan and organise their degree programmes and examinations accordingly. For medical degree programmes (medicine, veterinary medicine, dentistry) a required minimum period of study (*Mindeststudienzeit*) of 12 semesters has been stipulated (for pharmacy, eight semesters). This minimum period of study must be completed in order to qualify for being licensed.

In practice, the duration of studies for most graduates at present exceeds the defined standard period of study or minimum period of study.

I.2.3. Classes and academic year

Courses are held in the form of lectures, seminars, exercise courses, practical courses and field trips. In lectures, the lecturer presents the material to the students and does not generally enter into discussion with them. It is quite common for lectures to be attended by more than 400 students. Generally speaking, attendance of a lecture is not 'certified', but in some subjects written examinations are held at the end of lecture courses.

In all other forms of class, active student participation is expected. In exercise courses, generally speaking, students practise the methods and skills required for the related disciplines (e.g. statistics for psychologists, stylistics for philologists); these courses are often used to consolidate the material presented in lectures, which is discussed in smaller groups. Following successful completion of an exercise course, a course certificate (*Schein*) is issued to certify the student's participation (which may take the form of a written assignment and/or presentation of a seminar paper and/or a written examination).

Similarly, in practical courses, especially in natural science disciplines, experiments are conducted and analyses carried out etc. in laboratories. These serve towards practical student training.

Seminars are often divided into introductory seminars (*Proseminare*) and advanced seminars (*Hauptseminare*). Introductory seminars are intended for beginners, and advanced seminars for students who have already passed the intermediate examination (*Vorprüfung* or *Zwischenprüfung*). In seminars students discuss particular issues relating to their subject under the guidance of lecturers, on the basis of their own work. Seminars thus serve as an introduction to independent academic work. Successful attendance is again certified by a course certificate. Besides introductory and advanced seminars, there are also seminars for examination candidates or postgraduate students (*Mittelseminare* and *Oberseminare*); the titles of these seminars define which participants are mainly addressed by these specific courses. The term *Blockseminar* is used in an entirely different context: whilst seminar courses are usually taught in a prescribed number of classes (usually two) each week during the semester, in block seminars several hours of classes are combined (often at weekends).

In some disciplines lectures have to be complemented by observation at first hand (e.g. in geography, art history). This takes place through field trips, which are often undertaken during the breaks between semesters. Students often have to prepare and hold talks on the particular objectives of these field trips.

The academic year is divided into semesters. The summer semester runs from April to September, the winter semester from October to March of the following year. Lectures in the winter semester are usually held from early October/November until mid/late February, and in the summer semester from early April/May to mid/late July. A period of three months without lectures at the *Fachhochschulen* and five months at other higher education institutions allows students time to prepare for seminars, undergo practical training and sit examinations.

I.2.4. Examinations

Students graduate from a degree programme either by passing an academic examination or State examination or, in the case of theology, ecclesiastical examinations. A candidate who has passed an academic examination is awarded the *Diplom* degree or a *Magister Artium*. Students who pass a first State examination usually go on to further practical training outside the higher education institution.

In order to guarantee the equivalence of academic degrees and to enable students to move freely between higher education institutions, the German Rectors' Conference and the Standing Conference of the Ministers for Education and Cultural Affairs of the *Länder* in the Federal Republic of Germany agreed on general conditions for academic examinations (*Diplom* examinations at universities and *Fachhochschulen* and *Magister* examinations). For individual courses these are then complemented by framework examination regulations (*Diplom* examinations) or by conditions specific to the subject (*Magister* examinations). Framework examination regulations exist for 18 university courses of study.

Each individual higher education institution issues examination regulations for each course of study, taking into account the preconditions for sitting the degree examination, the purpose and nature of the examinations and the examination procedure and requirements. As a rule, the preconditions for sitting the final examinations are that the student has passed an intermediate examination (*Vorprüfung/Zwischenprüfung*), normally taken after the fourth semester, and can present a certain number of course certificates from special classes. The intermediate examination tests whether students have learned the fundamental principles and scientific methods relating to their subject. The examination usually consists of written and oral sections. Students are examined on the entire range of material taught during the first four semesters of the degree programme.

The final degree examination (*Magister examination, Diplom examination, first State examination*) includes, alongside written and oral examinations, a dissertation of some length (*Magisterarbeit/Diplomarbeit, Zulassungsarbeit* — paper qualifying for admission to the final examination). In this dissertation students must prove that they are capable of carrying out independent scientific work. The written and oral examinations cover the entire range of material taught during the study programme but concentrate on some specialist areas.

In the Federal Republic of Germany there is no cumulative testing system involving ‘credits’ or *unités de valeur*, leading to the acquisition of a degree on having reached the required minimum number of credits.

I.2.5. Grading system

The German grading system involves five or six grades as a rule, ‘1’ being the best grade and ‘5’ or ‘6’ the worst. A ‘4’ is the lowest pass grade.

II. Examinations and academic degrees

In the case of degree examinations there is a need to distinguish between purely academic examinations (*Hochschulprüfungen*), State examinations (*Staatsprüfungen*) and, less often, ecclesiastical examinations (*Kirchliche Prüfungen*). The degrees these examinations lead to generally constitute a professional qualification. There are the following kinds of academic examinations, all of which are connected with the conferring of an academic degree:

the *Diplom* examination involving the conferring of the *Diplom* degree (e.g. *Diplom-Ingenieur*, *Diplom-Kaufmann*); the *Diplom* degrees conferred by *Fachhochschulen* are marked by an additional 'FH' in brackets;
the *Magister* examination involving the conferring of the *Magister* degree (e.g. *Magister Artium*);
the *Lizentiat* examination involving the conferring of the *Lizentiat* degree (e.g. *Licentiatus theologiae*).

The awarding of a degree is connected with the right to use the respective title in connection with the holder's name in legal transactions and socially. Under German law these degrees enjoy special protection against abuse and confusion. Abusive use of academic titles is punishable.

A number of study courses leading to occupations in which the public have a special interest are concluded with a State examination (*Staatsprüfung*). This is so in the case of medicine, dentistry, veterinary medicine, pharmacy, law, food chemistry and teaching careers. For persons with law and teaching degrees, the first State examination degree certificate provides access to a further phase of training known as preparatory service (*Vorbereitungsdienst*). This period of preparatory service is concluded with a further State examination. This second State examination qualifies the holder for the profession in question (e.g. lawyer or teacher).

Successful completion of the above examinations constitutes a formal prerequisite for admission to doctoral programmes (see Section II.9); special provisions apply in the case of *Fachhochschule* graduates.

With the Council Directive of 21 December 1988 on a general system for the recognition of higher education diplomas awarded on completion of professional education and training of at least three years' duration (*Official Journal of the European Communities* L 19/16, of 24 January 1989) the European Communities agreed a regulation which does not apply to a specific occupation but covers higher education qualifications gained after at least three years of study. It must be emphasised that the directive applies to what are known as the 'regulated professions'.

II.1. *Diplom* degree

II.1.1. General characteristics

The *Diplom* examination constitutes a qualification entitling holders to enter a profession. The *Diplom* examination is designed to establish whether the candidate has a grasp of the interrelationship of aspects of the subject, has the ability to use scientific methods and findings, and has acquired the thorough knowledge of the subject necessary in professional practice. The *Diplom* degree is awarded by universities to candidates who have passed the *Diplom* examination. Courses in the engineering sciences, natural sciences, economics and social sciences lead to the *Diplom* degree, as do cultural and humanities courses and artistic degree programmes. *Diplom* degrees at universities and equivalent institutions of higher education are acquired after completion of a broad-reaching course of academic and theoretical study. *Fachhochschulen* award *Diplom* degrees following successful completion of a practice-oriented academically-based training course.

Diplom degree courses are characterised by concentration on the broad range of the main subject. The purpose of this is to prevent bias towards one area and to encourage professional flexibility. In contrast to non-German degrees, the German *Diplom* degree entitles the holder to practise the respective profession (*effectus civilis*).

II.1.2. Structure and duration of studies

Diplom degree courses are divided into two phases: a period of basic studies (*Grundstudium*) followed by advanced studies (*Hauptstudium*). Basic studies are generally concluded with an intermediate examination (*Zwischenprüfung* or *Diplom-Vorprüfung*), and advanced studies with the *Diplom* examination. The duration of the various study phases depends on the course and type of higher education institution in question and is laid down in the examination regulations. In accordance with the general provisions on *Diplom* examination regulations, the intermediate examination is, as a rule, conducted in one block once classes held for the first stage of the degree programme (basic studies) have been completed; and the examinations which together constitute the *Diplom* examination are conducted in one block once classes and courses in stage two of the degree programme (advanced studies) have been completed. The regional examination regulations may, according to the framework regulations, provide for division of the intermediate examination and the *Diplom* examination into separate examination sections. Examinations in one particular subject can be taken parallel to study, i.e. brought forward (*vorgezogene Fachprüfungen*) before the examination periods stipulated for each subject in the framework regulations, if the curriculum relating to the basic or advanced studies for that examination subject has already been covered. However, only a minority of candidates should be allowed to take such degree examinations early.

The regional examination regulations may, in accordance with the framework regulations, allow examinations to be substituted by coursework, insofar as the two are judged equivalent in terms of examination requirements and procedure (*prüfungsrelevante Studienleistungen*). However, the examinations which together constitute the *Diplom* examination cannot be entirely replaced by coursework.

Studies to acquire a *Diplom* degree at universities and equivalent institutions of higher education last according to the study course, 8 to 10 semesters as a rule, including the periods of the examinations. Practical training (*Fachpraktika*) of up to 26 weeks' duration is required for some degree programmes. These practicals must be completed during the breaks between semesters, and in some cases also before starting the degree programmes.

The standard period of studies at *Fachhochschulen* lasts eight semesters, including the theoretical and one or two practical semesters as well as the *Diplom* thesis and the examination periods.

II.1.3. Examination procedures, certificates and *Diplom* document

When the courses defined by the degree examination regulations have been attended and the programme requirements fulfilled, and requisite preliminary and/or intermediate examinations passed, students can register for the final examination, i.e. the *Diplom* examination.

The *Diplom* examination consists as a rule of a large, independently written thesis (*Diplom* thesis), and written and oral examinations in several subjects.

The *Diplom* thesis, concluding a period of university training, is intended to show that the student is able to analyse a problem in his field within a given period of time independently and in accordance with scientific or scholarly methods. The *Diplom* thesis at the end of a course of study at a *Fachhochschule* is primarily application-oriented and usually takes three to six months to complete.

When the examination has been passed a certificate is issued giving the subject of the *Diplom* thesis, the grade received on it, and the grades received on the examination in the individual subjects. At the same time, a diploma is presented on the basis of which the *Diplom* degree is awarded. The holder of the degree is granted the right to use the title in connection with the subject studied (*Diplom-Ingenieur*, *Diplom-Mathematiker*, *Diplom-Kaufmann*, *Diplom-Betriebswirt*). The designation (FH) is added in the case of *Diplom* degrees from *Fachhochschulen*.

Grade scale

The following grade scale is used for intermediate and final examinations in *Diplom* degree programmes:

1	=	very good
2	=	good
3	=	satisfactory
4	=	sufficient

5 = insufficient.

For more subtle assessments of individual achievements in examinations half grades can be used.

An overall grade is calculated on the basis of grades in individual subjects:

up to 1.5	=	very good
between 1.5 and 2.5	=	good
between 2.5 and 3.5	=	satisfactory
between 3.5 and 4.0	=	sufficient.

II.1.4. Curriculum

Within the framework of regulations for *Diplom* examinations the institutions of higher education are free to vary course contents and subject focuses. Thus, curricula for *Diplom* degree programmes in the same subject may differ, but no differences in academic standard would result from this.

The *Diplom* degree courses described in the following are intended to serve as examples of the way such degree programmes may be organised. The examples have been taken from two key fields of activity, i.e. engineering and economics.

Engineering sciences

Example: mechanical engineering (university)

The *Diplom* degree course in mechanical engineering at the Technical University of Aachen involves seven subjects (see degree examination regulations of 30 November 1989):

1. Production engineering
2. Design engineering
3. Process engineering, chemical engineering and bio-process technology
4. Plastics and textiles engineering
5. Energy engineering
6. Transport engineering
7. Fundamentals of machine systems.

By way of example, a programme of studies and examinations leading to the *Diplom-Ingenieur* degree in production engineering would involve the following requirements.

The degree programme includes compulsory, optional-compulsory and optional subjects, involving a total of 208 to 211 semester hours plus a total of 26 weeks of practical training (basic practical and subject-related practical, 13 weeks each).

In stage I studies, lectures, seminars and exercise courses have to be taken in general and special engineering on which students are given written and oral tests in the intermediate *Diplom* examination:

phase A: chemistry, physics, electrical engineering/mechanics A, higher mathematics A

phase B: thermodynamics I and II; materials science I and II; fundamentals of information technology and numerical mathematics; mechanics B; higher mathematics; machine elements I and II.

During stage II studies, the following subjects have to be taken and the courses completed with a written and oral examination or a laboratory certificate:

general subjects and lab subjects: work science and business organisation; numerical mathematics; programming course; fundamentals of oil hydraulics and pneumatics; machine dynamics I; hydrodynamics I; machine lab; production engineering lab; welding lab I and II.

compulsory subjects: control engineering; heat, power and work machines; production systems I and II; production engineering I and II; welding production processes I and II; machine tools I and II; production and assembly-appropriate design; quality control.

Optional-compulsory subjects.

In addition, two major studies are required (usually involving about 200 hours of work each) as well as participation in an excursion and completion of practical training.

The *Diplom* degree examination itself involves:

1. written and oral tests in the eight compulsory subjects and two optional-compulsory subjects;
2. the *Diplom* thesis.

In the *Diplom* thesis the student is supposed to deal independently with a problem from his/her field, making use of scientific methods.

A period of three to six months is allowed for writing the thesis. The *Diplom* thesis is assessed by two professors.

On passing the examination the student is given a certificate indicating the results of the *Diplom* examination as well as a diploma stating that the student has been awarded the *Diplom-Ingenieur* degree (*Dipl.-Ing.*).

Example: mechanical engineering (Fachhochschule)

Example of study regulations and *Diplom* examination regulations for the degree programme in mechanical engineering at a *Fachhochschule* (study regulations for the degree programme in mechanical engineering at the *Fachhochschule* Kiel, in force since 1 August 1991, and the *Diplom* examination regulations for the degree programme in mechanical engineering at the *Fachhochschule* Kiel of 1 August 1991).

The objective of the degree programme in mechanical engineering is to produce students capable of performing a scientifically-based professional activity in the area of mechanical engineering.

The standard period of study is eight semesters, divided into two phases: basic studies (three semesters) and advanced studies (five semesters). The fifth semester is a practical study semester and examinations are taken in the eighth semester.

Basic studies conclude with the intermediate examination and advanced studies with the final examination.

The aim of practical training (prior practical training and a practical study semester) is that the student acquires certain subject-related skills and knowledge, and also to introduce the student to the work involved in his or her future profession. A total of 16 weeks of practical training must be completed before the start of the degree programme. Practical work experience of 20 weeks in total must be completed during the practical study semester.

The degree programme is divided into compulsory subjects, compulsory options and additional possible options. Compulsory subjects may be concluded by examination or by the award of a certificate stating that the course has been successfully completed. The same applies to the compulsory options offered as an alternative in the advanced studies phase; the curriculum involves a total of eight such compulsory options during the course of study. Optional subjects may also be concluded with an examination.

The three semesters of basic studies involve a total of six aggregate hours of weekly attendance obligation in basic mathematics, ten in higher mathematics, eight in experimental physics, three in applied chemistry, eight in materials science, two in materials testing, twelve in statics and the science of the strength of materials, four in kinematics and kinetics, six in technical thermodynamics, four in hydromechanics, six in electrical engineering for mechanical engineers, six in descriptive geometry and technical drawing, fourteen in machine parts and two in production engineering. Teaching in these subjects, all of them compulsory, takes the form of lectures and practical exercises in design/laboratories and/or on computers.

Below, the example of a course of study concentrating on design technology is used to show what the stage of advanced studies involves. A total of 31 aggregate hours of weekly attendance obligation are required in the fourth semester, 8 hours in compulsory options in the fifth (practical study) semester, 29 hours in the sixth semester and 21 in the seventh (examinations are taken in the course of the eighth semester). The student must pass the following subjects: electric drive, data processing (programming), business studies, measuring techniques and automatic control engineering, oscillation, hydraulics/pneumatics, plastics technology, piston engines, turbo-engines, mechanical laboratory, materials-handling technology/structural steel engineering, design theory, computer-aided design (CAD), computer-aided design (finite-element method — FEM), theory of mechanism design, ergonomics and industrial safety, production engineering, economics and legal studies I.

The eight compulsory options must be chosen from a list of around 45 subjects, which includes the following: engines and machine tools, welding engineering, practical programming exercises, special areas of materials technology, vehicle technology, machine dynamics, production of printed circuit boards, radiation protection, laser technology, microtechnology, legal studies II, industrial psychology and leadership skills, methods and tools of management.

The final *Diplom* examination, which is governed by the *Diplom* examination regulations, constitutes the final examination at the end of the course of study and qualifies the successful candidate for professions in the field of mechanical engineering. The examination is designed to test whether the candidate has acquired the detailed knowledge necessary to enter a profession in that field and is capable of working independently and methodically on the basis of scientific principles.

The intermediate examination (taken at the end of the third semester) consists of examinations in the subjects detailed above and stipulated by the examination regulations, the requisite certificates of class performance and successful completion of practical training elements. As a rule, each examination subject involves one invigilated written examination or some other appropriate form of examination. The oral examinations stipulated by the examination regulations last between 15 and 30 minutes.

The final examination (taken at the end of the eighth semester) consists of written examinations in the subjects detailed above and stipulated by the examination regulations, the requisite certificates of class performance (course certificates — *Leistungsschein*), successful completion of practical training, an extended essay, the dissertation and the oral examination (*Kolloquium*). In the dissertation, the candidate should demonstrate that he or she is able to solve a problem related to mechanical engineering in a methodical manner, working independently and on the basis of scientific principles. The subject of the dissertation is not presented before the end of the sixth semester, and generally not until the eighth semester, and the completed dissertation must be handed in three months later at most; if difficulties arise for reasons beyond the candidate's control, an application may be made for this period to be extended by two months at most. A total of around 12 written examinations must be taken in subjects stipulated by the examination regulations. The oral examination (*Kolloquium*) is a cross-disciplinary oral examination which lasts around 40 minutes per examination candidate.

On passing the *Diplom* examination the student is awarded the academic degree *Diplom-Ingenieur(in)* (*Fachhochschule*), in abbreviated form, *Dipl.-Ing.* (FH).

Economic sciences

Example: economic sciences (university)

Below, an example of study regulations governing *Diplom* degree courses in the economic sciences at the University of Passau (from 4 March 1993) is used to present the objective, contents and sequence of studies in these *Diplom* degree courses. These study regulations are based on the respective examination regulations for the *Diplom* degree in business studies and the *Diplom* degree in political economy. The *Diplom* degree course for business studies is discussed in particular detail below by way of an example.

The standard period of studies (*Regelstudienzeit*) is eight semesters (including time spent writing the *Diplom* dissertation).

The study regulations give the following information on the objectives, contents and sequence of the study programme.

Study of economics should enable the student to recognise economic problems, to analyse them applying scientific methods and to solve them, working independently. During the course of study the student has the opportunity to prepare for his or her intended profession by choosing a relevant subject combination. Specialisation in various subjects is intended to intensify its practical orientation and broad professional application. For graduates of the *Diplom* degree course in business studies, possible careers may be considered above all in the fields of accountancy and finance, business planning, data processing and information technology, sales, auditing, business organisation and personnel management.

On passing the *Diplom* examination, the university awards the academic degree *Diplom-Kaufmann Univ. (Dipl.-Kfm. Univ.)* or *Diplom-Kauffrau Univ. (Dipl.Kffr. Univ.)*.

The basic studies, covering four semesters as a rule, are concluded with the intermediate *Diplom* examination (*Diplom-Vorprüfung*) in the following subjects: business studies, political economy, statistics and law. The basic studies syllabus includes the following preparatory subjects: business accounting, mathematics for economists, English for economists and introduction to business data processing. Additional optional classes include: classes at the computer centre, general and subject-specific foreign language studies or optional classes offered by the faculty of economics and other faculties.

The individual basic studies subjects cover the following number of aggregate hours of weekly attendance obligation over the period of basic studies: business studies 10 (of lectures) and 6 (of exercise courses); political economy 12/6; statistics 6/4; law 9/2; business accounting 1/2; mathematics for economists 3/2; English for economists 3/0; business data processing 2/2.

The advanced studies section, which also lasts four semesters as a rule, is concluded with the *Diplom* examination (*Diplomprüfung*), which consists of separate examinations in the following subjects: general business studies, political economy, two special business studies subjects and one compulsory option. The two special business studies subjects may be chosen from the following, amongst others: marketing and commerce, banking, business taxation, production economics, investment and finance, insurance and risk theory. Compulsory options may include amongst others a further special business studies subject, economic analysis, public finance, statistics, operational research and private law.

Banking will be taken here as an example of the content and requirements of an examination subject constituting part of the *Diplom* examination: this subject encompasses an introductory class (dealing, in particular, with the banking system and the normative framework covering the banking industry) as well as classes on business accounting/bank controlling, bank planning/banking policy, banking risks and risk management, and other selected banking issues. The certificates required for admission to the *Diplom* examination (*Leistungsnachweis*) can be acquired by participation in an exercise course or seminar for advanced students.

The individual advanced studies subjects cover the following number of aggregate hours of weekly attendance obligations over the period of advanced studies: general business studies 8 (of lectures) and 6 (of exercise courses/advanced seminars); political economy 7/5; first special business studies subject 7-9/4-6; second special business studies subject 7-9/4-6; compulsory option 7-9/4-6.

The *Diplom* examination which concludes the advanced studies consists of two parts. The first involves writing a dissertation (*Diplomarbeit*), and the second involves written and oral examinations in the individual examination subjects. The dissertation is designed to show that the student is capable of applying scientific methods to a problem from the chosen speciality. As a rule the student has 12 weeks to work on the dissertation; the chair of the examination committee may stipulate a period of up to twenty weeks. The topic must be taken from one of the following examination subjects: general business studies, special business studies, political economy or statistics. The second section of the *Diplom* examination — the written and oral examinations — may be completed in one or two blocks.

The overall grade for the *Diplom* examination is evaluated as follows: average grade 1.20 or above = excellent; 1.21 to 1.50 = very good; 1.51 to 2.50 = good; 2.51 to 3.50 = satisfactory; 3.51 to 4.00 = sufficient.

A certificate (*Zeugnis*) is awarded upon successful completion of the *Diplom* examination, detailing the dissertation topic and mark, the individual marks for the subjects examined and the overall grade attained in the *Diplom* degree examination.

Alongside the certificate, the successful candidate is also awarded a diploma (*Diplom*) detailing the overall grade attained in the *Diplom* examination and certifying the award of the academic degree. Once examination candidates have been given the diploma, they are authorised to bear the degree title.

Example: business studies (Fachhochschule)

Example of the study and examination regulations at a *Fachhochschule* in the business studies degree programme (study regulations for the *Fachhochschule* degree programme in business studies at the *Fachhochschule*, Coburg, of 18 January 1982 with later amendments, and the examination regulations of the *Fachhochschule*, Coburg, of 2 October 1981 with later amendments, each understood in connection with the corresponding framework study regulations/framework examination regulations of the *Land* of Bavaria).

The general framework regulations for the intermediate and final *Diplom* examinations at *Fachhochschulen* in Bavaria of 7 November 1980, together with later amendments, contain general guidelines for the *Fachhochschulen* in Bavaria. They stipulate that the standard period of study is eight semesters, incorporating six semesters of theory and two practical semesters.

A special regulation of the Bavarian State Ministry of Teaching, Cultural Affairs, Science and Art *Rahmenstudienordnung für den Fachhochschulstudiengang Betriebswirtschaft* (framework study regulation governing the *Fachhochschule* degree programme in business studies) of 20 June 1994 provides special guidelines for the *Fachhochschule* degree programme in business studies. These state that the objective of the study programme is to train students to become business management graduates capable of applying the tools, developed on the basis of scientific knowledge in all economic and administrative areas, to the solution of practical problems. This objective is also served by the two practical study semesters which are integrated into the study course, when the place of learning is transferred from the higher education institution to companies and other organisations in the professional sphere. Both the basic studies and advanced studies phase involve three semesters of theoretical study and one practical semester. The practical semesters constitute the third and sixth semester of study. From the seventh semester, the study regulations offer students the choice of the following specialisations: banking, finance and investment, marketing, organisation and business computer science, accountancy and controlling, personnel management, corporate taxation. The study regulations can also provide for further specialisations.

The practical study semesters are governed by the regulation on practical study semesters at *Fachhochschulen* in Bavaria of 3 December 1980 with later amendments and additional provisions. This states that the practical semesters are an integral part of the study course and are carried out externally, in companies and other organisations, but under the supervision of the higher education institution. The practical semesters combine study and practical work experience. The first practical semester provides a general introduction to basic procedures and working methods. The second practical semester is devoted to activities more specifically related to the profession. A practical semester covers one continuous period of 20 weeks, including the lectures which accompany the work experience. The accompanying lectures take place on one day each week; if necessary they can also be carried out in two blocks of one week of lectures each. Before commencing the first practical semester, the student must be able to present certificates proving that he or she has completed the requisite subjects, and before commencing the second practical semester he or she must present certificates proving that the intermediate examination has been passed and the first practical semester successfully completed. The latter is decided by the Examination Commission, which considers the result of an oral examination (*Kolloquium*) and any course certificates which may have been awarded, together with the certificate from the training company and a report submitted by the candidate.

In the business studies degree programme, the student studies compulsory subjects, compulsory options and optional subjects. Under the framework study regulations, the basic studies segment involves 15 compulsory subjects, two compulsory options and classes for optional use. A total of 162 aggregate hours of weekly attendance must be completed during the course of study. Between four and eight aggregate hours of weekly attendance per subject must be completed in the basic studies phase, and between two and six hours in the advanced studies. A further six compulsory subjects must be completed in the advanced studies phase, with an additional 12 aggregate hours of weekly attendance obligation in subject-related compulsory options and 20 aggregate hours in the specialisations, as well as two hours in general compulsory options. Examinations must be taken in 15 compulsory subjects.

Among the compulsory subjects, the following should be particularly highlighted: basic principles of business administration, finance and investment, personnel management, data processing, accounting, mathematics for economists, corporate statistics, corporate taxes, economics and political economy, private business law, business languages and lectures accompanying practical work experience.

The framework study regulations lay down the objectives and contents of study for the individual subjects in the degree programme. The regulation for the subject 'basic principles of business administration' is mentioned here by way of an example, which defines an overall objective as well as individual aims and contents. The overall objective is to provide an insight into the academic and theoretical approaches to business administration; fundamental knowledge of the instruments, functions and laws of the microeconomic production of goods and services, i.e. without more specific reference to sector-specific or function-specific issues; knowledge of the main aspects of legal relations between businesses and the surrounding environment as a result of constitutive decisions taken by the company management. Of the individual objectives and contents, special mention is made of the following by way of example: providing an insight into the problem of the definition of business administration as an academic discipline, an overview of the conceptual approaches to describing the object, with course contents including among others: basic concepts of business administration such as the factor theory, the decision-oriented and the system-oriented approaches, further development of the systems approach, ecology-oriented business administration.

The intermediate examination concludes the period of basic studies. As well as certificates of class performance, the intermediate examination involves a one, one-and-a-half or two-hour written examination in the examination subjects: basic principles of business administration, finance and investment, personnel management, accounting, cost accounting and results accounting, business mathematics, statistics, basic principles of economics and private business law.

The advanced studies are concluded by the final examination, which serves to establish whether the candidate has acquired an education which enables him or her to apply academic methods or creative activities in professional practice. Admission to the final examination depends among other things on success in the intermediate examination, and production of the necessary certificates of class performance. The higher education institution's own examination regulations may stipulate submission of the dissertation as a prerequisite for admission to the last section of the final examination. The written examinations taken as part of the final examination last 90 minutes as a rule; these examinations must be taken in the following general compulsory subjects: business administration, marketing, materials science and production science, taxation, economics and political economy, labour law and social security law. Apart from these, written examinations of 90 minutes' duration also have to be taken in the two compulsory subjects which constitute the specialisation; certificates of class performance also have to be presented.

The examinations take the form of either written or oral examinations. The written examinations are invigilated examinations, and the oral examinations can last between 15 and 45 minutes.

In all degree programmes the final examination involves a dissertation which is generally written during the eighth semester. The student has in general a period of three months to submit the completed dissertation after submitting the topic, given that he or she is then concerned solely with writing the dissertation. If the dissertation is written parallel to study, the time allowed may be longer, but may not exceed nine months.

The student has passed the final examination if he or she has obtained at least the grade 'sufficient' in the final marks for all examination-based subjects, in the final marks for certificate-based subjects and in the dissertation, and if the second practical semester has been successfully completed. Upon passing the final examination, the student is awarded the degree *Diplom-Betriebswirt* (FH).

II.2. *Magister* degree

II.2.1. General characteristics

In the *Magister* degree programme the student studies either one major subject and two minors, or two major subjects. The regional *Magister* examination regulations define which subjects may be studied as major subjects and as minor subjects, and combined with each other. This combination should guarantee a broad study base.

The *Magister* degree is conferred by universities — predominantly in the arts.

As a first degree, the *Magister* degree is usually awarded as a *Magister Artium* (MA) and the title used without indicating the individual subjects studied.

The *Magister* degree is also conferred at the end of a one to two-year programme of postgraduate studies following the acquisition of an initial degree.

II.2.2. Structure and duration of studies

The standard period of study for a *Magister* degree is nine semesters. Studies are divided into foundation courses (*Grundstudium*) of four semesters ending with the intermediate examination and the stage II studies of five semesters including the *Magister* degree examination.

II.2.3. Examination, certificate and *Magister* diploma

The *Magister* examination consists of the *Magister* thesis in the chosen major subject and, as a rule, written and oral examinations in the major and minor subjects. The final examination certificate contains the subject and grade received on the *Magister* thesis, the grades received in the individual subjects as well as an overall grade. At the same time as this certificate, a *Magister* diploma is issued on the basis of which the *Magister* degree is awarded.

The grade scale used for *Magister* degree examinations corresponds to that used for *Diplom* degree examinations.

If the grades received on the thesis and the individual subject examinations average out to 'sufficient', the degree examination is considered passed. The overall grade based on individual grades also appears on the certificate in the following form:

up to 1.5	=	very good
between 1.5 and 2.5	=	good
between 2.5 and 3.5	=	satisfactory
between 3.5 and 4.0	=	sufficient.

II.2.4. Curriculum

The curricula of *Magister* degree programmes are determined by the teaching and research focuses of each university. A possible degree programme is described below by means of an example of the examination regulations for a *Magister* degree.

To do *Magister Artium*, from the Philosophical Faculty of the University of Cologne (degree regulations of 10 December 1986) with a major in German language and literature, the first minor in medieval and modern history and the second minor in sociology, the total number of semester hours (compulsory subjects, optional-compulsory subjects and optional subjects) must be 80 hours in the major field and 40 in each of the minors.

Stage I studies involve three or four semesters of lectures, introductory seminars and exercise courses in the individual subject areas. For students to be able to register for the intermediate examination in their fourth semester they must be able to present proof of having taken certain lecture courses as well as certificates proving successful completion of introductory seminars and exercise courses.

Major: German language and literature (six certificates):

- introduction to linguistics I and II;
- introduction to modern German literature I and II;
- introduction to old German;
- introduction to old German literature.

First minor: history (five certificates):

- ancient history;
- medieval history;
- modern history;
- translation of medieval source texts from Latin or old church Slavonic;
- translation of modern source texts from a modern foreign language (English expected).

In the second minor, sociology, proof of course participation does not have to be presented until the student registers for the *Magister* examination.

The intermediate examination is supposed to take place in the fourth semester in the selected major and in the first minor. It consists of written and oral examinations. In the major (German language and literature) there is an oral examination in a selected area outside the compulsory courses taken during stage I studies. In the first minor (history) there are three written exams in ancient history, medieval history and modern history.

Stage II studies involve further course study in the three selected subject areas. The minimum requirements to be fulfilled prior to registration for the *Magister* degree examination include lecture courses, and advanced seminars for which certificates must be acquired.

Major: German language and literature (two advanced seminar certificates):
modern German literature;
old German and old German literature; or
German language.

First minor: history (one advanced seminar certificate):
medieval or modern history.

Second minor: sociology (four introductory seminar certificates, one advanced seminar certificate):
methods of empirical social research I and II;
statistics for students of social science;
foundations of sociology (micro and macro-sociology);
one optional core area.

The *Magister* degree examination consists of the *Magister* thesis in the major subject, as well as written and oral examinations in the three established subject areas.

In the *Magister* thesis, students are to show that they are capable of independently analysing a problem taken from their main area of study and applying scholarly methods in doing so. This must normally be done within a period of six months. The time limit can be extended for another three months if a good reason is given. The *Magister* thesis is assessed by two professors.

Degree examinations in the individual subjects consist of a written examination and an oral examination in the major subject and in the two minors.

On passing the *Magister* degree examination the student in question is issued a certificate indicating the subject of and the grade received on the *Magister* thesis, grades received in the individual subject examinations and the overall grade. At the same time, a *Magister* diploma is issued on the basis of which the academic degree *Magister Artium* (MA) is awarded.

II.3. *Lizentiat* degree

The *Lizentiat* degree is obtained on the basis of graduate or supplementary studies following attainment of an initial degree. This degree can also be obtained following a degree course in an area of Catholic theology.

II.4. State examinations for teaching careers

II.4.1. General characteristics

Teacher training is regulated differently in the individual *Länder* in the Federal Republic of Germany. It is based on the school types or levels. The arrangement of the various teaching careers according to the different school types or levels is governed by *Land* law. According to the summary agreed on by the Standing Conference of the Ministers for Education and Cultural Affairs of the *Länder* in connection with the implementation of EC Directive 89/48/EEC, all the many different types of teaching career are classified under the following designations.

Type 1: Teaching careers at *Grundschulen* or primary level

- Type 2: General teaching careers at primary level and all secondary level I school types or individual secondary level I school types
- Type 3: Teaching careers at all secondary level I school types or at individual secondary level I school types
- Type 4: Teaching careers in the general education subjects at secondary level II or for the *Gymnasium*
- Type 5: Teaching careers in vocational subjects at secondary level II or at vocational schools
- Type 6: Teaching careers in special education

Training for any of the teaching careers described above is divided into two phases:

1. a course of study at an institution of higher education (university, technical university, teacher training college, art or music college, comprehensive university), which, from the outset, is geared towards the subsequent teaching profession and the required certificates and also includes student teacher practical training components as an integrated part of the course;
2. a pedagogic-practical training programme in the form of preparatory service (*Vorbereitungsdienst*) at seminars for teacher training and training schools.

Entrance to teacher training requires a higher education entrance qualification, which is acquired after 12 or 13 years of schooling by passing the *Abitur* examination. In specific cases it can also be acquired in other ways, for example by adults after successfully completing night school classes, or in certain cases following successful completion of a non-university training course in the tertiary sector.

II.4.2. Description of training

The first period of training i.e. the course of study, is organised differently according to the *Land* and the teaching career, either as:

- a specialist component (including subject-oriented teaching methods) with study of at least two subjects/subject areas or subject groups;
- an educational sciences component with compulsory study of educational theory and psychology; plus a choice of additional study areas (e.g. philosophy, social sciences/politics, theology);
- teaching practice, sometimes of several weeks duration, accompanying courses of study.

Here the agreement reached by the Standing Conference of the Ministers for Education and Cultural Affairs sets minimum standards for the two first-mentioned components, in the form of hours of instruction per week during the semester.

The characteristic elements of courses for the above types of teaching career in the Federal Republic of Germany will be described below in generalised form applicable to all *Länder*. Particulars are laid down in study regulations and State training and examination regulations. These include in particular provisions on:

- the subjects/subject areas and combinations that may be chosen for the respective teaching careers;
- the scope and content of the course of study in the individual subjects/subject areas, including educational sciences and subject-oriented teaching methods;
- the type of certificates acquired during the course of study, and the type and scope of the individual parts of the examination and the assessment procedure.

Teaching career type 1

Teaching careers at Grundschulen or primary level

(Teaching careers at *Grundschulen*; teaching careers at primary level; teaching careers with the emphasis on primary level)

Training for this type of teaching career consists of a six to eight semester course of study which accords a special place to educational science and practical teaching components. Here, in particular, primary school teaching methods or two subjects with an optional or specialised subject (including teaching methods) are studied; possible options and specialisations are determined by the *Länder*.

The basic educational science course incorporates general education and school education as well as psychology; possible options are philosophy and sociology/politics or theology. The practical training periods which accompany study and are based on an everyday teaching routine are mainly completed in two four to five week blocks; further subject-teaching courses in the institution of higher education or social or commercial training in areas/institutions of social and economic life may be demanded.

Studies in an area of specialisation — besides providing a guiding overall picture — concentrate on particular fields of the subject and demand an appropriate link with subject-specific questions of teaching methods. The area of artistic subjects and particularly important subjects (e.g. German or mathematics) has a special position in many *Länder* resulting in particular (minimum) study obligations.

Teaching career type 2

General teaching careers at primary level and all secondary level I school types or individual secondary level I school types

(Teaching careers at *Grundschulen* and *Hauptschulen*; at *Volksschulen* and *Realschulen*; at the *Grundstufe* and *Mittelstufe*; careers as *Lehrer*)

Training for a teaching career included in this type corresponds largely to that for a type 1 teaching career. Depending on the *Länder* regulations a teaching qualification can be acquired both for the primary level and for certain secondary level I school types or — as for a type 3 teaching career — for the entire secondary level I. Study of the chosen subjects is also (at the full academic level) partly geared to a particular school level or to school types.

Teaching career type 3

Teaching careers at all secondary level I school types or at individual secondary level I school types

(Teaching careers at *Hauptschulen*; at *Realschulen*; at *Hauptschulen* and *Realschulen*; at *Mittelschulen*; at *Regelschulen*; at *Sekundarschulen*; teaching careers with the emphasis on secondary level I; teaching careers at the *Mittelstufe*; teaching careers with specialist training in two subjects)

The courses for teaching careers included in this group lead to teaching qualifications for all secondary level I school types or for specific secondary level I school types. The essential course description (especially for *Hauptschulen* teaching careers) has already been given in the description of training for teaching careers 1 and 2.

As a rule a six to nine semester course of study of at least two subjects with accompanying educational science courses must be successfully completed. In addition participation in practical training periods of several weeks duration is required.

Teaching career type 4

Teaching careers for the general education subjects at secondary level II or for the Gymnasium

(Teaching careers at the *Gymnasium*; at the *Gymnasium* and *Gesamtschulen*; for the *Mittelstufe* and *Oberstufe*; at the *Oberstufe* at *allgemeinbildende Schulen*; at secondary level II; at secondary levels II and I; with the emphasis on secondary level II; careers as *Studienrat*)

Training for this type of teaching career incorporates an 8 to 10 semester course of academic study — occasionally 12 semesters in the case of artistic subjects — of at least two subjects. Studies in an area of specialisation, including subject-oriented teaching methods, are complemented by educational science courses and practical training periods of several weeks' duration as well as at least one subject-related practical training period accompanying study in at least one of the two subjects.

The principles for the academic examination for a teaching career at *Gymnasien* and the general regulations on the standards for the academic examination for almost all disciplines that can be chosen as examination subjects have been laid down in agreements reached by the Standing Conference of the Ministers for Education and Cultural Affairs. The resolutions contain agreements on relatively concrete standard profiles which have entered the examination regulations of the *Länder*. These also include, provided training is related to school levels, regulations for the acquisition of a teaching qualification specialising either in secondary level II or in both secondary levels I and II, in which case the teaching qualification applies as a rule to the *Gymnasium* or *Gesamtschule* with *gymnasiale Oberstufe*.

Teaching career type 5

Teaching careers in vocational subjects at secondary level II or at vocational schools

(Teaching careers at part-time vocational schools (*berufliche Schulen*); at full-time vocational schools (*berufsbildende Schulen*); at the *Oberstufe* — *berufliche Schulen*; at secondary level II; at secondary level II with vocational emphasis; careers as a *Studienrat* with vocational emphasis)

Teacher training incorporating a teaching qualification for vocational school subject areas for teaching in subject-related theory and general education subjects follows an 8 to 10 semester course of study.

This demands:

- a subject-related practical training period of at least 12 months duration in appropriate companies,
- study of educational science, as a rule extended study of a subject area in the vocational education system and study of a mainly general education subject,
- a practical teaching period of several weeks' duration at a vocational school, occasionally an additional practical training period in the social field.

An agreement reached by the Standing Conference of the Ministers for Education and Cultural Affairs stipulates the general principles for the basic structure of training and examinations in the following subject areas in the vocational education system: metals technology, electrical engineering, construction engineering, design engineering, graphic-design technology, textile and garment technology, biotechnology, chemical engineering, economics, administration, dietetics and home economics, agriculture and horticulture and social sciences. In the above-named subject areas other special fields can be chosen in the framework of extended study (e.g. production engineering in the framework of the subject area metals technology).

According to *Länder*-specific regulations, a *Diplom* examination may replace the first State examination for teachers in certain subject areas.

Training for teaching careers at vocational schools is — to take into account the special needs of each *Land* — at times organised in very different fashions; for instance, in terms of the authorised subjects and subject combinations, the required student teacher practical training experience or further basic conditions affecting the contents and duration of the course of study.

Teaching career type 6

Teaching career in special education

According to an agreement by the Standing Conference of the Ministers for Education and Cultural Affairs, candidates may qualify for a teaching career in special education either via the basic course of study leading to the first and second State examination or, following qualification for another teaching career, by completing an additional course of study in special education and passing the first State examination for a teaching career in special education.

Study incorporates educational sciences and specialist studies in at least one subject or subject area and in special education. The study of special education includes two special education subject areas (e.g. education for pupils with learning difficulties) and cross-disciplinary studies which also consider issues of educational integration.

II.4.3. Description of qualifications

The course of study concludes with the first State examination for teachers (*Erste Staatsprüfung*), which entitles the holder to be accepted into the second phase of teacher training (preparatory service) organised by the *Land*. According to *Länder*-specific regulations in some cases (e.g. in the vocational schools sector) the appropriate *Diplom* examinations may replace the first State examinations for teachers.

Whilst the respective *Land* Ministry of Science, Education or Cultural Affairs is responsible for fundamental questions concerning training and examinations, the holding of the first State examination for teachers is the responsibility of the State examining authorities, assigned to the ministries responsible for the school system. The examination they implement consists as a rule of:

- a major written paper (State examination dissertation/*Diplom* dissertation) in the first or second subject or in educational science;
- a subject-oriented (possibly also subject-teaching) written and oral examination in the subjects;
- an examination in the educational sciences. This examination component must be taken later if it is not included in a *Diplom* examination;
- if necessary, a practical examination in artistic or technical subjects.

The preparatory service (*Vorbereitungsdienst*) as the second phase of teacher training serves as practical teacher training. According to the *Land* and the teaching career type the *Vorbereitungsdienst* is of varying duration (18 to 24 months). The *Vorbereitungsdienst* places a special emphasis on sitting in on lectures, classes, guided and independent teaching at training schools as well as an educational theory/subject-specific teaching methods component in seminars which reappraise and consolidate experience gained through practical training. It concludes with the second State examination for teachers (*Zweite Staatsprüfung*). This is the prerequisite for final employment in a teaching career but does not guarantee a teaching position. The examination is taken under the State examining authorities or a State examining board and consists as a rule of four parts:

- a major written paper in the field of educational theory, educational psychology or the teaching of one of the subjects studied;
- a practical teaching examination with demonstration lessons in the chosen subjects;
- an examination on the basic questions of educational theory, of education and civil service law, of school administration and, if necessary, on sociological aspects of education;
- an examination on teaching and methodical issues in the subjects studied.

II.5. State examinations in medicine

The structure, curricula and examination requirements for degree programmes in medicine, dentistry and veterinary medicine are uniformly defined country-wide on the basis of State regulations governing the licensing of physicians (*Approbationsordnungen*). The degree programmes are concluded with degree examinations in medicine, dentistry or veterinary medicine.

The mutual recognition of these degrees for the purpose of access to these professions is governed in the European Community by Council directives. The directives involved are:

Physicians: Directive of 5 April 1993 (93/16/EEC);

Veterinary surgeons: Directives of 18 December 1978 (78/1026/EEC and 78/1027/EEC) with later amendments.

In the following the study requirements to be completed prior to the degree examination are described for the individual degree programmes.

Passing the degree examination in medicine, dentistry or veterinary medicine does not immediately entitle the holder to work as a physician, dentist or veterinary surgeon. The right to work in these professions is acquired through licensing (*Approbation*) carried out by the responsible health authorities in the *Länder*. It is only after this (for the physician's completion of a period of practical training is required first) that the professional designations *Arzt* (physician), *Zahnarzt* (dentist) or *Tierarzt* (veterinary surgeon) may be used.

The doctorate in medicine is not awarded on passing the State medical examination. Instead, a supplementary doctoral procedure must be gone through at a university and a doctoral thesis written.

II.5.1. Medicine

Structure of studies, curricula, examinations

Medical training, uniformly regulated country-wide on the basis of federal regulations on the status of physicians (*Bundesärzteordnung*) as well as the regulations governing the licensing of physicians (*Approbationsordnung für Ärzte*), consists of:

- at least six years of medical studies;
- an 18-month period of practical training after medical studies (*Arzt im Praktikum*) initiated in October 1988, up until then the training of physicians was completed on passing the medical degree examination;
- first aid training;
- a two-month period of nursing practicum;
- a four-month period of external clerkship (*Famulatur*);
- the following examinations:
 - (i) the preliminary examination in medicine (*Ärztliche Vorprüfung*); and
 - (ii) the degree examination in medicine (*Ärztliche Prüfung*), which has to be taken in three stages.

The abovementioned examinations are taken as follows:

- the preliminary medical examination following two years of medical studies;
- the first stage of the medical degree examination at the end of one year of medical studies after passing the preliminary medical examination;
- the second stage of the medical degree examination after passing the first stage of the medical degree examination and three years of medical studies after passing the preliminary medical examination; and
- the third stage of the medical degree examination following one year of medical studies after passing the second stage of the medical degree examination.

Medical studies are broken up into a two-year preclinical phase and a four-year clinical phase. The last year of medical studies is the practical year.

The degree programme in medicine involves both theoretical and practical training. The regulations governing the licensing of physicians stipulate only the required periods of practical training and compulsory courses. The other courses, in particular lecture and seminar courses, are defined by the medical schools.

- (a) On registering for the preliminary medical examination (*Ärztliche Vorprüfung*) students must be able to prove that they took part regularly and successfully in the following practical courses: physics practical for students of medicine; chemistry practical for students of medicine; biology practical for students of medicine; physiology practical; biochemistry practical; course in macroscopic anatomy; course in microscopic anatomy; course in medical psychology; also seminar in physiology, seminar in biochemistry and seminar in anatomy all including clinical aspects; practical in introduction to clinical medicine; practical in professional orientation; practical in medical terminology.

In addition, training in first aid and a two-month period of training in patient care must be documented.

- (b) On registration for the three-stage medical degree examination, students must document their attendance on the following courses, completion of the required period of study and that they passed the preliminary medical examination:

- (1) On registering for the first stage of the medical degree examination:

course in general pathology
practical in microbiology and immunology
practical in microbiology
practical courses in biomathematics for students of medicine
course in general clinical diagnostics in the non-operative and
practical in clinical chemistry and haematology
course in radiology including radiation protection course
course in general and systematic pharmacology and toxicology
practical exercises in emergency treatment and first aid.

- (2) On registering for the second stage of the medical degree examination:

course in special pathology
course in special pharmacology
practical or course in general medicine
practical in internal medicine
practical in paediatrics
practical in dermato and venereal diseases
practical in urology
practical in surgery
practical in obstetrics and gynaecology
practical in emergency medicine
practical in orthopaedics
practical in ophthalmology
practical in otorhinolaryngology
practical in neurology
practical in psychiatry
practical in psychosomatic medicine and psychotherapy
course in ecological areas (including environmental hygiene, hospital hygiene, infection prevention, vaccination and individual prophylaxis).

- (3) On registration for the third stage of the medical degree examination:

regular participation in 'practical-year' training, involving a 48-week period of consecutive practical training at university clinics and training hospitals (16-week periods of training in internal medicine, surgery and in one other (optional) clinical area).

The State examinations, in accordance with the regulations governing the licensing of physicians (*Approbationsordnung für Ärzte*), are administered by the examination boards for medicine established by the *Länder*.

- (a) The preliminary medical examination is a written examination. As of autumn 1989, it has consisted of both written and oral parts.

The written part of the preliminary medical examination covers the following subject areas:

- (i) physics for students of medicine and physiology
- (ii) chemistry for students of medicine and biochemistry
- (iii) biology for students of medicine and anatomy
- (iv) medical psychology and medical sociology.

The oral examination will cover two of the following subjects:

physiology;
biochemistry;
anatomy;
fundamentals of medical psychology and medical sociology.

- (b) The first stage of the medical degree examination is a written examination and covers the following subjects:

- 10 *Fundamentals of pathology and neuropathology; human genetics; medical microbiology; immunology and immunopathology and the history of medicine.*
- (ii) dealing with patients; fundamentals of clinical diagnostics; initial treatment of acute emergency cases and radiology;
 - (iii) fundamentals of pharmacology and toxicology; pathophysiology and pathobiochemistry, clinical chemistry and biomathematics.

- (c) The second stage of the medical degree examination consists of written and oral parts.

The written examination covers the following subjects:

- (i) non-operative areas
- (ii) operative areas
- (iii) neurology
- (iv) ecological areas and general medicine.

In the oral part of the examination, as of autumn 1988, students are tested in one each of the subjects listed under numbers 1 and 2:

- 1. internal medicine, surgery, paediatrics, obstetrics and gynaecology, pathology, pharmacology, microbiology, hygiene, public health and social medicine;
- 2. general medicine, anaesthesiology, emergency treatment and intensive care, work medicine, ophthalmology, dermatology and venereal diseases, otorhinolaryngology, clinical chemistry, neurology, orthopaedics, psychiatry, psychosomatic medicine and psychotherapy, radiology, medical law, urology.

- (d) The third stage of the medical degree examination is oral and practical in nature.

The examinee is presented with practical clinical problems. Interdisciplinary and general medical questions are included. The examination must cover internal medicine, surgery and the subject covered by the examinee in the course of practical training in accordance with Section 3, subsection 1, s. 3 (3). It must also include questions from the other clinical subjects, in particular paediatrics, obstetrics and gynaecology, neurology, pathology, pharmacology, toxicology, taking into account, in particular, the influences of society, family and career on health and extending to cover questions of the historical, intellectual and ethical foundations of medicine.

The examination boards must allocate the examinee one or more patients before the date of the examination to be examined and diagnosed. The examinee must prepare a report of the case covering case history, diagnosis, prognosis, treatment plan and epicrisis. Immediately on completion, this report is countersigned by a member of the examination board and is submitted at the examination.

- (e) All examinations are graded on the basis of the usual grade scale from 'very good' to 'insufficient'.

The responsible State examination board for medicine of the *Land* issues a certificate in accordance with the prescribed pattern for every examination passed. The student also receives a certificate on the overall result of the medical degree examination (*Zeugnis über die ärztliche Prüfung*). This certificate is a medical diploma recognised in the EC Member States, documenting the completion of medical studies in accordance with the provisions of European Community law. As of April 1990, this has been supplemented by a certificate on the proper completion of the physician-in-training period, since, in the future, medical training will not be concluded until this practical phase has been completed.

Physician-in-training period

The period as physician in training (*Arzt im Praktikum*) is completed either on a full-time basis or on a part-time basis for a correspondingly longer period in accordance with Section 34a, subsection 1, s. 1 (but not exceeding three years). This training takes place in a hospital, in a doctor's surgery, or any other out-patient treatment centre, in a medical centre or in a similar facility run by the armed forces or police or in a prison medical unit with a full-time physician. It should, if possible, include at least nine months' training in the non-operative and at least three months in the operative areas.

Credit may be given for periods spent gaining practical experience in public health, in a medical service for the health insurance agencies, with company medical services, in an institution for the rehabilitation of the handicapped or in a military medical facility.

Licensing, doctoral degree, specialisation

Physician licences are issued on the basis of the medical degree examination certificate if the applicant is a German national, a national from one of the other European Community Member States or a stateless foreigner and if the applicant fulfils the other requirements. Licensing as a physician entitles the holder of the licence to practise as a physician permanently, on his or her own responsibility and independently.

Acquisition of the doctoral degree in medicine *Dr. med.* (academic degree) is based on the regulations and doctoral degrees established by the medical schools and departments. Acquisition of the doctoral degree in medicine is not necessary to practise as a physician or to embark on further medical training.

Specialised medical training is regulated by the medical board or medical profession legislation in the *Länder* and by the medical board regulations on specialised medical training.

II.5.2. Dentistry

Structure of studies, curricula, examinations

Dentistry training is uniformly governed country-wide in the law on dental practice and the regulations governing the licensing of dentists issued on the basis of this law. It consists of:

- at least 10 semesters (five years) of studies in dentistry;
- successful completion of the following State examinations:
 - (i) the pre-degree science examination (*Naturwissenschaftliche Prüfung*)
 - (ii) the pre-degree dentistry examination (*Zahnärztliche Vorprüfung*)
 - (iii) the degree examination in dentistry (*Zahnärztliche Prüfung*).

Dental studies are divided up into a pre-clinical and a clinical part of five semesters (two and half years) each and involve both theoretical and practical training. The regulations governing the licensing of dentists stipulate compulsory courses (lectures, practical courses, etc.). The various institutions of higher education are free to offer other courses as well.

(a) On registering for the pre-degree science examination, students must document that they:

- have studied dentistry in accordance with regulations for at least two semesters at a German university;
- have regularly attended a course of lectures in either zoology or biology for one semester and lecture courses in both physics and chemistry for two semesters, completing them successfully;
- have regularly attended a practical course in chemistry for one semester, completing it successfully.

(b) On registration for the pre-degree examination in dentistry, students must document that they:

- have studied dentistry for at least five semesters;
- have passed the pre-degree science examination;
- have attended lectures on histology and embryology, physiology, physiological chemistry, materials science and anatomy; and
- have regularly attended and successfully completed a course in practical anatomy, a practical in physiology and physiological chemistry, a course in microscopy and anatomy, a technical preparatory course, and courses in dental prosthesis.

- (c) On registration for the degree examination in dentistry, students must document that they:
- have studied dentistry for at least ten semesters;
 - have passed the pre-degree examination in dentistry;
 - have attended the following lecture courses: introduction to dentistry, general surgery, diseases of the ear, nose and throat, hygiene (including preventive medicine), medical microbiology (with labs), introduction to orthodontics, the profession and history of medicine with special reference to dentistry; and also attended two lecture courses each in pharmacology (including prescription course), internal medicine, diseases of the teeth, mouth and jaw, surgery of the teeth, mouth and jaw, dental preservation, prosthetic dentistry and orthodontics;
 - have taken part regularly and successfully completed courses of one semester in each of the following: pathohistology, chemical and physical clinical examination methods, radiology with special consideration for protection against radiation, tooth preservation with exercises on models; and courses of two semesters in operations and orthodontic treatment;
 - have regularly attended and successfully completed one semester each as an observer at a dental clinic and out-patients department and at the out-patients surgical department and as a trainee at a dermatology clinic; a two-semester traineeship in the course and at an out-patients clinic for dental preservation and for dental prosthesis; and a three-semester traineeship at a clinic and out-patients clinic for dental, oral and jaw diseases.
3. In accordance with the regulations governing the licensing of dentists, the State examinations are taken before State boards at the institutions of higher education. They are oral, practical and, to the extent that reports and treatment plans need to be formulated, written.
- (a) The pre-degree science examination covers the subjects: physics, chemistry, zoology or biology.
 - (b) The pre-degree dentistry examination covers the subjects: anat-omy, physiology, physiological chemistry, dental prosthesis.
 - (c) The degree examination in dentistry covers the subjects: gen-eral pathology and pathological anatomy, pharmacology, hygiene, medical microbiology and health care, internal medicine, dermatology and venereal diseases, ear, nose and throat diseases, diseases affecting the teeth, mouth and jaws, surgery (including radiology and radiation protection), dental pres-ervation including eurodontics, endodontics, periodontics and paedodontics, dental prosthesis, orthodontics.
4. All examinations are graded. The grades are: very good (1), good (2), satisfactory (3), unsatisfactory (4), insufficient (5), bad (6).

The examination board issues a certificate on every examination in accordance with the established samples. The certificate on the degree examination in dentistry (*Zeugnis über die zahnärztliche Prüfung*) is a dental diploma in the sense of Article 3a(1) of Directive 78/686/EEC and is recognised by the EC Member States.

Licensing, doctoral degree, specialisation

A dental licence is issued on the basis of the dental degree examination certificate if the applicant is a German national, an EC national or a Stateless foreigner and if the other requirements are met.

A dental licence entitles the holder to practise dentistry in the Federal Republic of Germany on a permanent and independent basis.

Acquisition of a doctoral degree in dentistry, *Dr. med. dent.* (academic degree), is based on the regulations governing the acquisition of doctoral degrees established by the medical schools and departments. A doctoral degree in dentistry is not required to practise dentistry or for further medical specialisation.

Specialist training is regulated under legislation covering the medical professions or medical boards in the *Länder* and by dentistry board regulations on specialisation.

II.5.3. Veterinary medicine

Structure of studies, curricula, examinations

Under the regulations governing the licensing of veterinary surgeons of 22 April 1986, the overall duration of veterinary training, including examination periods, is at least five and a half years.

- (a) Prior to the preliminary pre-clinical examination (*Vorphysikum*) the natural science phase (one year) includes the following compulsory courses: physics (including radiation physics), chemistry, zoology, botany (including fodder, poisonous and medical plants), biometry, history of veterinary medicine.

The subjects covered in the preliminary pre-clinical examination are: physics (including radiation physics), chemistry (including radiation chemistry), zoology (including radiation biology), morphology and biology of bees, fish and laboratory animals, and botany.

- (b) The anatomy and physiology phase (one year) prior to the pre-clinical examination (*Physikum*) includes compulsory courses in: anatomy, histology, embryology, physiology, physiological chemistry (biochemistry), and the physiology of nutrition.

A course in medical terminology must also be taken.

The pre-clinical examination (*Physikum*) covers the following subjects: anatomy, histology and embryology, physiology, and physiological chemistry (biochemistry).

The preliminary pre-clinical examination and the pre-clinical examination together form the pre-degree examination in veterinary medicine (*Tierärztliche Vorprüfung*).

(c) The following courses are required in the first phase of clinical studies (one year): general pathology, clinical preparatory course, general internal medicine, general surgery, general therapy, general obstetrics and gynaecology, general theory of infections and epidemics, pharmacology and toxicology, animal breeding and assessment (including additives), general agricultural theory, practical agricultural course on a training farm, animal breeding and maintenance (14 days).

The examination subjects in the first phase of the degree examination in veterinary medicine (*Erster Abschnitt der tierärztlichen Prüfung*) are: clinical preparatory course, general pathology, general theory of infections and epidemics, pharmacology and toxicology, animal breeding and assessment, animal nutrition and food.

- (d) The second phase of clinical studies (one year) includes the following compulsory courses: bacteriology and mycology, virology, parasitology, animal hygiene, prescription and preparation of medicines, radiology medicine. The examination subjects in the second phase of the degree examination in veterinary medicine (*Zweiter Abschnitt der tierärztlichen Prüfung*) are identical with the subjects of the compulsory courses.
- (e) The third phase of clinical studies (at least half a year) includes compulsory courses on: special pathological anatomy and histology (including autopsies), functional pathology (pathological physiology), applied anatomy, internal medicine (including laboratory diagnostics, in-patient and out-patient situations), surgery (including operation and anaesthetisation techniques), clinical radiology, eye diseases, hoof-and-claw diseases, hoof-and-claw care, in-patient care and out-patient care, birth and diseases in infancy, gynaecology (including diseases of the udder), andrology and domestic animal insemination, poultry diseases (including out-patient treatment), fish diseases, food analysis and theory, milk analysis, milk theory, milk hygiene, meat animal and meat examination, meat hygiene (including poultry meat hygiene), slaughterhouse management, laboratory animals and laboratory animal diseases, animal epidemics, forensic veterinary medicine, animal protection and animal behaviour, law governing veterinary medicine.

Prior to taking the degree, examination students must document their completion of required periods of practical training (three parts):

on passing the first part of the degree examination in veterinary medicine (see (c) above):

six weeks in a veterinary practice or an animal clinic;

on passing the second part of the degree examination in veterinary medicine (see (d) above):

six weeks in the animal and meat inspection section of a State-recognised slaughterhouse or a meat inspection authority;

a three-month period of practical training in one of the abovementioned areas or under the supervision of a veterinary surgeon at a university institute, a federal research institution, a veterinary control institution, a veterinary administration office, a public or State-promoted animal health service, an artificial insemination station, the pharmaceutical industry (development, production and inspection of animal foodstuffs), or in the animal food industry (production and inspection of mixed animal foods);

the third part of the degree examination in veterinary medicine (*Dritter Abschnitt der tierärztlichen Prüfung*) covers the following subjects: special pathological anatomy and histology, internal medicine, surgery, gynaecology, birth, andrology and domestic animal insemination, poultry diseases, food theory and law, milk and milk hygiene law, meat animal and meat inspection, meat and poultry-meat hygiene law, animal epidemic control, animal protection and animal behaviour, forensic veterinary medicine and the veterinary profession.

Certificates are issued on all parts of the degree examination and for the periods of practical training. The final certificate or certificate on the degree examination in veterinary medicine contains the individual grades received in the examination subjects of the third part of the degree examination as well as the overall grade, based also on the grades received in the first and second parts of the degree examination.

Licensing, doctoral degree, specialisation

On passing the degree examination in veterinary medicine, students, on written application, can be issued a licence to practise veterinary medicine and use the professional title *Tierarzt* (veterinary surgeon).

A doctorate in veterinary medicine (*Dr. med. vet.*) is obtained on the basis of a doctoral procedure involving the fulfilment of special requirements and the presentation of a doctoral thesis.

On being licensed the person in question can begin further training in a special area of veterinary medicine. Recognition as a veterinary specialist is given by the veterinary boards in the various *Länder*.

II.6. State examination in pharmacy

II.6.1. Preliminary remark

The structure, curriculum and examination requirements for the degree programme in pharmacy are laid down uniformly for the entire country in the federal regulations governing the licensing of pharmacists (*Approbationsordnung*). The old regulations of 23 August 1971 in the version of 26 February 1986 valid until 1989 were replaced on 1 October 1989 by the new regulations of 19 July 1989 governing the licensing of pharmacists and extending the duration of the training programme from four and a half to five years. Pharmacy training is concluded with the pharmaceutical degree examination (*Pharmazeutische Prüfung*).

Recognition of this degree for the purpose of entering the profession is regulated in the European Community by Directive 85/433/EEC of 16 September 1985 and the subsequent amendments. The new regulations of 1989 contain the necessary adjustment of German pharmacists' training to the training requirements as laid down in Directive 85/432/EEC of 16 September 1985 of the European Community.

II.6.2. Structure of studies and examinations

Pharmaceutical training in accordance with the *Approbationsordnung* of 1989 involves five years of study, divided up into:

1. at least four years of pharmacy studies at a university, including a full-time eight-week clerkship (*Famulatur*) during university holidays;
2. a total of 12 months of practical training, with six months spent in a pharmacy and the other six months either in a pharmacy, a hospital pharmacy, a university institute or in industrial, university or administrative institution;
3. the pharmaceutical degree examination (to be taken in three parts):
the first part after at least two years of pharmacy studies;
the second part after a total of at least four years of pharmacy studies;
the third part after completion of practical training.

The individual parts of the degree examination cover the following subjects:

First part:

- (i) general organic and inorganic chemistry
- (ii) fundamentals of pharmaceutical biology

- (iii) physics
- (iv) pharmaceutical analysis.

Second part:

- (i) pharmaceutical chemistry
- (ii) pharmaceutical biology
- (iii) pharmaceutical classification
- (iv) pharmacology and toxicology.

Third part:

- (i) pharmaceutical practice
- (ii) special areas of law for pharmacists.

II.6.3. Licensing

On passing the pharmaceutical degree examination a written application can be made for licensing as a pharmacist. This entitles the holder to work as a pharmacist and to use the professional designation *Apotheker* (pharmacist).

II.7. State examinations in law

Training for the legal profession is carried out on the basis of Sections 5 and 6 of the German judiciary act (*Deutsches Richtergesetz*) which contains the basic principles for legal training. The exact details of the training are set out by the *Länder* in their educational requirements (laws or regulations).

Legal training is intended to provide a qualification entitling the holder to exercise judicial functions. This qualification is the legally binding prerequisite for becoming a judge, public prosecutor, lawyer, notary public or legal specialist in higher public administrative service. Employers usually demand that legal experts in industry and in associations have also attained this entitlement to exercise judicial functions.

Apart from the qualification to exercise judicial functions, no provision is made for further or specialised training.

II.7.1. Structure and duration of training

Training in law comprises two stages:

a course of study in law at a university, culminating in the first State examination (*Erste Staatsprüfung*);

a probationary period in law (*Vorbereitungsdienst*), culminating in the second State examination (*Zweite Staatsprüfung*).

Previously, this course of study took in practice an average of nearly six years, rather than the three and a half years foreseen by the regulations. There has been a noticeable reduction in the average length of time required in practice since the new regulations were introduced. Although the course of study is not divided into basic studies and advanced studies (*Grundstudium* and *Hauptstudium*), admission to the first examination depends upon students demonstrating a certain structure in their study programme.

The probationary period is two years in length.

An examination period is set for the first and second State examinations. This period was previously approximately one year but, due to the amended regulation, will in future be shorter.

II.7.2. Curriculum

The course of study involves compulsory subjects and electives. The compulsory subjects are major aspects of civil law, criminal law, public law and procedural law including aspects of European law, legal methodology, and the philosophical, historical and social foundations of the law. The electives serve to complement the study programme and to provide greater depth in the compulsory subjects to which they are connected.

The education rules of each of the *Länder* govern the compulsory subjects and compulsory options. According to the training and examination regulations in Bavaria, for example, the following areas of civil law are compulsory: the general section of the German civil code; the law of obligations and property law including the fundamentals of their particular expression in the law governing general terms and conditions, in the consumer credit law and the law of absolute liability; and 'the fundamentals' of certain areas of family law and the law of succession.

In the same way, certain areas are specified for other compulsory subjects such as commercial and company law, labour law, criminal law, public law, European law and procedural law. In Bavaria, electives are offered in 13 subject groups, e.g. 'Private international law and international procedural law, comparative law', or 'Criminology, criminal law relating to young offenders, execution of sentences', or 'Fundamentals of law on economic administration'; 'Environmental law (general principles and fundamentals of the anti-pollution law, law relating to water, law on waste and law on nature conservation)'.

Teaching mostly takes the form of lectures and practical exercises and also seminars. The practical exercises provide an introduction to case-solving techniques. In order to successfully complete a practical exercise course, a grade of 'sufficient' or higher must be attained in a certain number of written assignments and invigilated written examinations (*Klausuren*).

On registering for the first State examination, students must document that they have successfully taken part in practical exercises in civil law, criminal law and public law. In addition, students must document a total of three months of practical experience (*Praktika*) accumulated in the non-teaching part of the year. Depending on *Land* law this can be in a court of law, in administration or in a law practice.

II.7.3. First State examination

The first State examination consists of written and oral work. The written work required in some *Länder* includes one assignment to be written and submitted within six weeks, and also three or four written examinations to be completed within five hours each. Some *Länder* require only written examinations, but a greater number (seven or eight).

The oral examination takes the form of a discussion of several hours between an examining committee and several examination candidates, normally five or six. The examining committee is usually made up of professors and representatives from legal practice (e.g. judges or lawyers). Both written and oral examinations almost exclusively involve solving cases using legal knowledge and methods.

The assessment of student achievement in examinations is defined on the basis of a federal ordinance. According to this ordinance, a distinction must be drawn between assessment of performance in individual parts of the examination and the establishment of the overall grade. Performance in individual parts of the examination must be graded on the basis of the following point system:

16	to	18	points	=	very good
13	to	15	points	=	good
10	to	12	points	=	fully satisfactory

7	to	9	points	=	satisfactory
4	to	6	points	=	sufficient
1	to	3	points	=	unsatisfactory
0			points	=	insufficient.

The overall grade is based on the grades received in the individual parts of the examination. The resultant average is expressed in terms of the following system:

14.00	to	18.00	=	very good
11.50	to	13.99	=	good
9.00	to	11.49	=	fully satisfactory
6.50	to	8.99	=	satisfactory
4.00	to	6.49	=	sufficient
1.50	to	3.99	=	unsatisfactory
0	to	1.49	=	insufficient.

On passing the first State examination in law a certificate is issued containing the final grade received and the number of points.

II.7.4. Preparatory service

On passing the first State examination students may apply for acceptance as a trainee in legal preparatory service (*Referendardienst*), during which they will be assigned to a number of different training placements. The aim of this preparatory service is to allow students to become acquainted with the work involved in the legal process (including the work of a lawyer) and in administration, thus providing them with an introduction to the application and framing of law and the provision of legal advice. As far as possible students should work independently. At the end of the training period, students should be in a position to take responsibility for their legal work, if necessary after an introductory period, and meet the changing and varied demands of society.

The preparatory service is divided between compulsory placements and one compulsory option. In Bavaria these are divided up as follows:

- six months at a civil court, one month of which is spent at a local court dealing with the area of family law or jurisdiction over voluntary matters;
- three months at a criminal court or at a public prosecutor's office;
- five months at the office of a chief administrative officer of a rural district (*Landratsamt*), administratively independent town (*kreisfreie Stadt*), or the administrative centre of a rural district (*Kreisstadt*);
- two months with regional government, in district administration (*Bezirk*), in an administrative court or in the public prosecution service of the courts of administrative jurisdiction;
- four months with a lawyer;
- four months in an approved placement of the student's choice (optional placement or elective placement).

Students have a number of areas to choose from for their optional placement. In Bavaria they may choose from the following six:

- justice system
- administration
- business
- labour and social law
- international law and European Community law
- tax law.

During the placement period, it is also possible to undertake training abroad, particularly for the elective placement but also for the compulsory placement, with a foreign lawyer for example.

This practical training is accompanied by study groups in which the experience accumulated during the various phases of training is critically analysed under the supervision of a State-appointed judge, lawyer or other legal expert and preparations are made for the second State examination.

II.7.5. Second State examination

The second State examination also requires written work and oral work. In some *Länder* the written part takes the form of a written assignment (to be submitted within four weeks) and between four and six written examinations. In other *Länder* it consists only of written examinations (between 8 and 11). In most *Länder* the oral examination consists of a case presentation (after a short preparation time) and an assessed discussion.

Both the written and oral examinations focus on the resolution of practical cases. Students might be asked, for example, to draft judgments.

The examination covers all the material dealt with throughout the entire course.

Again, the grade awarded is based on a point system (see II.7.3). The same assessment scale applies as in the case of the first State examination.

Candidates passing the examination are awarded a certificate showing the overall result as a grade and a mark in figures. The certificate entitles the holder to use the professional designation 'Assessor', and at the same time qualifies the holder to exercise the legal functions described at the beginning of this section.

An *Assessor* may at any time apply to practise as a lawyer.

II.8. Postgraduate studies and degrees

Under specific subject-related conditions students may take postgraduate courses, supplementary study programmes or complementary study programmes at most higher education institutions after acquisition of the *Diplom* or *Magister* or after passing the first State examination. These courses allow students to gain a further professional qualification, to specialise in one area or to pursue further studies. There are no uniform regulations for degree programmes of this kind. They may last from anything between a few weeks or months up to several semesters. These courses are concluded with the award of a certificate or, under certain conditions, an academic degree (*Diplom-* or *Magisterabschluss*).

II.9. Doctoral degree

In order to continue studies with the aim of gaining a doctorate, students must have passed the *Diplom* or *Magister* examination or the first State examination with at least a 'good' grade. Particular conditions apply to *Fachhochschule* graduates. Except in medicine and chemistry, where most students take the doctoral examination as well as the State examination or *Diplom* examination, relatively few German students attempt the doctorate after passing their final examinations.

Traditionally in Germany there are no special teaching programmes leading to a doctorate, as is often the case in other countries. Instead candidates for the doctorate carry out independent academic research under the guidance and specialist supervision of a lecturer (*Doktorvater*). The establishment of the *Graduiertenkolleg* at some universities is a relatively recent development. Here several professors and doctoral students work together to research a particular area, usually taking an interdisciplinary approach. Admission to such a group is generally connected with the award of a grant.

Having completed their examination, doctoral students must publish their thesis within a fixed period of time and present a certain number of copies to the faculty, department or university library for distribution to specialist libraries throughout Germany. Once this obligation has been met, the doctoral certificate is awarded and the doctorate procedure (*Promotion*) is completed. This confers on the holder the right to the title of *Doktor* in the manner indicated in the regulations of the respective faculty.

Diagram of the educational system in Germany

Annotations in the diagram

- ⁽¹⁾ In some *Länder* special types of transition from pre-school to primary education (pre-school classes, school *Kindergarten*). In Berlin and Brandenburg the primary school comprises six grades.
- ⁽²⁾ The disabled attend special forms of general-education and vocational school types (in some cases integrated with non-handicapped pupils) depending on the type of disability in question. Designation of schools varies according to the law of each *Land*.
- ⁽³⁾ The *Orientierungsstufe* (sometimes called *Förderstufe*) exists in all *Länder* with the exception of Bavaria (on trial as a pilot scheme), Berlin and Brandenburg (primary schools include grades five and six) and Thuringia.
- ⁽⁴⁾ As an integrated comprehensive school, this constitutes a separate type of school alongside *Hauptschule*, *Realschule* and *Gymnasium*. The provision of *Gesamtschulen* varies in accordance with the respective educational laws of the *Länder*.
- ⁽⁵⁾ These certificates can also be obtained in evening classes.
- ⁽⁶⁾ Admission to the *gymnasiale Oberstufe* requires a formal entrance qualification. The *Allgemeine Hochschulreife* can generally be obtained after the successful completion of 13 school years, i.e. consecutive grades. As long as the *Allgemeine Hochschulreife* can still in principle be acquired by all pupils after 12 years of schooling in certain new *Länder*, the validity of these certificates is guaranteed in all *Länder* for a transitional period.
- ⁽⁷⁾ The *Fachoberschule* is a school type lasting two years (11th and 12th grades) which takes pupils who have completed *Realschule* and qualifies them for *Fachhochschule*. Pupils graduating from the *Berufsaufbauschule* who have acquired a *Fachschule* qualification during or following initial vocational education can enter 12th grade directly. Pupils who have successfully completed *Realschule* and have been through initial vocational training can also enter the *Fachoberschule* directly in the 12th grade. Alternative routes for acquiring the *Fachhochschulreife* outside the *Fachoberschule* are, for example the *Berufsfachschule* and *Fachschule*.
- ⁽⁸⁾ Full-time vocational schools differing in terms of entrance requirements, duration and leaving certificates. Certain two-year *Berufsfachschulen* requiring a *Realschule* certificate for admission lead to a State-recognised examination as technical assistant (*staatlich geprüfter Assistent*), and one-year courses at *Berufsfachschulen* offer basic vocational training.
- ⁽⁹⁾ Offers extension courses to pupils with vocational qualifications and can enable them to acquire a qualification equivalent to the *Realschule* leaving certificate.
- ⁽¹⁰⁾ *Fachschulen* are schools at the upper level of secondary education, offering courses of between one and three years duration.
- ⁽¹¹⁾ Including institutions of higher education offering courses in particular disciplines at university level (e.g. theology, philosophy, medicine, administration studies, sport).

Greece

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Abbreviations/glossary

<i>ADSEN</i>	<i>Anoteres Dimosies Scholes Emborikou Naftikou</i>				
<i>AEI</i>	<i>Anotata Ekpaideftika Idrymata</i>				
<i>Asetem</i>	<i>Anoteri Scholi Ekpaideftikon Technologon Michanikon</i>				
<i>ASKT</i>	<i>Anotati Scholi Kalon Technon</i>				
<i>DEP</i>	<i>Didaktiko kai Erevnitiko Prosopiko</i>				
<i>Didaktoriko</i>	Doctoral degree				
<i>Dikatsa</i>	Interuniversity Centre for Recognising Foreign Diplomas				
Diploma	First degree award by university departments in engineering and architecture				
<i>dm</i>	<i>didaktiki monada</i>				
<i>EPL</i>	<i>Eniaia Polykladika Lykeia</i>				
<i>Espemes</i>	<i>Epistimoniko Symvoulío Panepistimiakis Erevnas kai Metaptychiakon Spoudon</i>				
<i>ITE</i>	<i>Institouto Technologikis Ekpaidefsis</i>				
<i>L.</i>	Law				
<i>MDE</i>	<i>Metaptychiako diploma exidikefsis</i> (Postgraduate diploma of specialisation)				
<i>PD</i>	<i>Proedriko Diatagma</i> (Presidential decree)				
<i>PATES</i>	<i>Paidagogiki Techniki Scholi</i>				
<i>Ptychio</i>	First university degree				
<i>Ptychio of TEI</i>	Degree award by TEI				
<i>RD</i>	<i>Vassiliko Diatagma</i> (Royal decree)				
<i>SAN</i>	<i>Scholi Axiomatikon Nosileftikis</i>				
<i>SAP</i>	<i>Symvoulío Anotatis Paidias</i>				
<i>Selete</i>	<i>Scholi Ekpaideftikon Leitourgon Epangelmatikis kai Teknikis Ekpaidefsis</i>				
<i>SI</i>	<i>Scholi Ikaron</i>				
<i>SSAS</i>	<i>Stratitotiki Scholi Axiomatikon Somaton</i>				
<i>SSE Stratitotiki Scholi Evelpidon</i>					
<i>STE</i>	<i>Symvoulío Technologikis Ekpaidefsis</i>				
<i>TE</i>	<i>Technological education</i>				
<i>TEI</i>	<i>Technologika Ekpaideftika Idrymata</i>				
<i>TEL</i>	<i>Technika Epangelmatika Lykeia</i>				
<i>FEK</i>	<i>Fillo Efimeridas</i>	<i>Kyverniseos</i>	(official	governmental	gazette)

I. Higher education system

General information on higher education

The institutions of higher education are legal establishments which operate under public Law and they are fully self-governed. Under the terms of Article 16, paragraph 5 of the 1975 Constitution, higher education is provided exclusively by State Institutions. The operation of private higher education institutions is not permitted in Greece.

Higher education institutions are supervised and financially supported by the State and operate under laws which determine their status. The self-governing status means that the higher education institutions have the right to elect their own executive bodies and to decide on the management of their own affairs under State supervision, which is the Ministry of National Education and Religious Affairs.

The Ministry of National Education and Religious Affairs is responsible for devising educational policies and providing all the financial support for the institutions. The institutions are divided into two types, the universities (*AEI*) and the technological educational institutions (*TEI*). There are also a few other institutions which are recognised as institutions belonging to higher education but that are not classified as *AEI* or *TEI*.

The *Symvoulío Anotatis Paidias (SAP)* — Higher Education Council

The *SAP* is responsible for advising the government on higher education issues and specifically on:

- the organisation and planning of Greek universities, the establishment of new university departments and the abolition of existing ones;
- the professional orientation of the scientific manpower of the country;
- the determination of the number of students entering the universities and the allocation of funds to the various *AEIs* of the country.

Members of the council are representatives of the Ministry of National Education, the Ministry of National Economy, representatives of the professional unions and local authorities as well as the rectors of all Greek universities and representatives of the student unions.

The *Symvoulío Technologikis Ekpaidefsis (STE)* — Technological Educational Council

The *STE* is an advisory body and submits to the Minister for National Education and Religious Affairs proposals concerning higher technological education, and especially:

- the establishment, abolition, merger or division of *TEI*, their branches, faculties or departments according to the needs of the national economy;
- the establishment or revision of the content of curricula for each specialisation as well as the description of the professional courses involved;
- the professional rights of *TEI* graduates;
- the allocation of funds to *TEI*;
- the implementation of specialisation, in-service training and retraining programmes at *TEI*.

The Interuniversity Centre for Recognising Foreign Diplomas (*Dikatsa*) is the only body in Greece responsible for the recognition of university diplomas obtained abroad. The Institute of Technological Education (ITE) is the equivalent body for the recognition of diplomas awarded by non-university institutions abroad. Both these centres operate under the supervision of the Ministry of National Education and Religious Affairs.

I.1. The institutions of higher education

I.1.1. Non-university higher technological education

Technologika Ekpaideftika Idrymata (TEI) — technological educational institutions

Technological educational institutions were established under Act 1404/1983. They form a part of higher education just like the universities.

Under this act and internal regulations, the *TEI* are self-governing. By law, such institutions fall under the competence of the Ministry of National Education and Religious Affairs.

The *TEI* are different from the *AEI* (University institutions of higher education) as regards their role and orientation, their students, and also the subjects and qualifications they offer. Specifically, they aim to:

- (a) provide sufficient theoretical and practical training to enable the application of scientific, technological, artistic and other knowledge and skills to the professions concerned;
- (b) educate responsible citizens, capable of contributing to the democratic process, the economy, the social fabric and the cultural development of the country;
- (c) profit from each Greek citizen's right to free education, according to their inclinations as provided for by law.

With this objective in mind, the *TEI*:

contribute to the professional training both of their students and of young people in general;
maintain close links with the relevant production units and with the organised branches of their regional economies;
collaborate with each other or with other educational or technical institutions, bodies or services in Greece and abroad with a view to achieving the above aim;
fulfil their graduates' need for continuous education and training and provide a lifelong educational opportunity for Greek citizens;
inform the public about the degree of achievement of these goals;
coordinate their aspirations with those of the *AEI* as provided for in Act 1268/1983 in a joint effort towards independent economic development of the country;
participate in research programmes on subjects concerned with technological applications both in Greece and overseas.

There are 12 *TEI* located in various parts of Greece. Many of them have subsidiary campuses in neighbouring cities:

1. *TEI* Kavala and *TEI* drama branch
2. *TEI* Serres
3. *TEI* Thessaloniki
4. *TEI* Kozani and Florina branch
5. *TEI* Larissa and (*TEI* Karditsa, *TEI* Lamia) branches
6. *TEI* Messolongi and (*TEI* Arta, *TEI* Ioannina, *TEI* Karpenissi) branches
7. *TEI* Chalkida
8. *TEI* Athens
9. *TEI* Pireas
10. *TEI* Patra
11. *TEI* Iraklio and *TEI* Chania branch
12. *TEI* Kalamata.

The faculties of the *TEI* include among others:

Graphic and fine arts

Management and administration
Health-care professions
Applied technology
Food and nutrition technology
Agricultural technology.

Each *TEI* comprises at least two faculties (*Scholes*) which are subdivided into departments. The department is the main academic unit and offers courses in specific scientific technological fields leading to specific degrees (*Ptychio*).

In each department there are units (sections) called subject groups (*Omada Mathimaton*) dealing with specific matters common to groups of subject areas of the curriculum. The staff of each department (teaching and applied research) is classified as follows:

professors
assistant professors
laboratory professors.

Professors hold a doctoral degree (PhD), assistant professors a postgraduate degree (BSc and MSc or MA) and laboratory professors a university degree or *TEI* degree and certificate of specialisation plus sufficient experience on the specific subject of study.

I.1.2. University-level higher education

There exist 18 universities in Greece which are legal establishments under public law and operate under the provisions for public accounting. These institutions are classified as either universities or technical universities. In addition, the School of Fine Arts in Athens is considered to be an independent institution of university level.

The full list of universities is as follows:

1. National and Capodistrian University of Athens
2. National Technical University of Athens
3. Aristoteleion University of Thessaloniki
4. Athens University of Economics
5. Agricultural University of Athens
6. University of Patras
7. University of Ioannina
8. University of Thessaly
9. University of Crete
10. University of Pireas
11. Ionion University
12. University of Aegean
13. Economic University of Macedonia
14. Democriton University of Thrace
15. Panteion University of Social and Political Sciences
16. Athens School of Fine Arts
17. Technical University of Crete
18. Harocopeion Higher Education Institution of Home Economics.

Some universities, as it can be deduced from the above list, cover a wide area of scientific disciplines while others are specialised in a small number of subjects. For example, universities such as the Athens University of Economics, the University of Pireas and the Economic University of Macedonia specialise in Economics studies, while the Agricultural University of Athens specialises in Agriculture and the Pantion University of Social and Political Sciences specialises in social studies. During the last decade, the existing pedagogical academies and physical education academies were abolished and new departments in these subject areas were introduced in a number of universities. The reason was to upgrade the teaching and research activities in the respective disciplines.

Furthermore, a significant number of new departments were introduced in all the universities in the areas that have an increased scientific demand such as computer science and engineering, psychology, environmental studies, agricultural economy, theatre and music studies, etc.

Organisation of universities

Each university consists of faculties (*Scholes*) which are subdivided into departments (*Tmimata*). The Department is the basic academic unit and is closely associated with a specific scientific field. The department is divided into a number of sections (*Tomeas*) according to the various scientific specialities. Each section is responsible for the teaching and research activities of the department for the scientific speciality concerned.

The members of the teaching and research staff (*DEP*) of each department are academically classified as follows:

- professors
- associate professors
- assistant professors
- lecturers.

All of them hold a doctoral degree and have demonstrated considerable research activities in their respective fields of interest.

The university is governed by:

- (a) the rector and the vice-rectors;
- (b) the senate which is composed of the rector, the vice-rectors, the deans of the faculties, the presidents of the departments and the representatives of the teaching and research staff (*DEP*), teaching assistants, students and administrative personnel;
- (c) the rector's council which is composed of the rector, the vice-rectors, a student representative and the director of the university administration office who introduces the various subjects of the agenda under discussion.

Each university department is governed by:

- (a) the president and the vice-president;
- (b) the council of the department which is composed of the president, the vice-president, and the directors of the undergraduate and postgraduate students;
- (c) the general assembly, composed of the members of the teaching and research staff (*DEP*) and representatives of teaching assistants, students and administrative personnel.

Each section of a university department is governed by:

- (a) the director;
- (b) the general assembly composed of the teaching and research staff (*DEP*) and the representatives of teaching assistants and students.

I.1.3. Other institutions of higher education

Non-university higher education

- (1) *Scholi Ekpaideftikon Leitourgon Epangelmatikis kai Technikis Ekpaidefsis* — *Selete* (Vocational and Technical Teacher Training Academy)

Selete comes under the jurisdiction of the Ministry of National Education, and under its constitution is responsible for the technological and pedagogical education and training of those wishing to become teachers in technical-vocational training schools; it is also responsible for the pedagogical and technological in-service training of graduates who already work in technical-vocational training.

Selete consists of the following faculties and departments:

- (a) *Paidagogiki Techniki Scholi* — *PATES*; Technical teacher training college. This school does not belong to any specific level of the Greek educational system. It is only a training school and has the following departments:

department for *AEI* graduates;
department for *TEI* graduates;
department for graduates from secondary education schools.

- (b) *Anoteri Scholi Ekpaideftikon Technologon Michanikon* — *Asetem*; Higher engineering training college which includes the following specialised departments:

Civil, mechanical, electrical and electronic engineers.

- (2) *Anoteri Scholi Touristikou Epangelmaton Rodou* (Higher school of tourist businesses of Rhodes)

The aim of the school is to provide training, in the area of hotel catering and institutional management as well as other related areas of the tourism industry (L. 151/1971 FEK. 52/ A/16-3-1971). Admission to the school is the same as for the universities and technological educational institutions and other higher schools.

- (3) *Anoteri Ekklesiastiki Scholi Athinon* (Athens higher school of religious studies)

Candidates are accepted for entry to this school after special examinations which are held in September each year. The duration of studies is three years and attendance at classes is compulsory. A certain percentage of graduates may be admitted to universities or other higher education institutions. The school is under the authority of the Ministry of National Education and Religious Affairs.

- (4) *Anoteres Dimosies Scholes Emborikou Naftikou* — *ADSEN* (Higher State academies for the merchant navy)

Studies at the *ADSEN* for aspiring captains and engineers in the merchant navy last three years (six semesters). Besides their theoretical training, the students receive five to seven months of supervised practical training on board merchant ships before the second and the fourth semesters of their studies. At the end of their (theoretical and practical) training, and after passing their examinations, graduates receive the diploma *Dokimou Axiomatikou* (diploma of third officer or third engineer). After a certain period of service in the merchant navy (depending on the school from which they graduated) *ADSEN* graduates can rise to the highest ranks of their specialisation, obtaining the corresponding diplomas (first officer — first engineer). It must be noticed that those Schools operate under the supervision of the Ministry of Merchant Navy.

- (5) *Anoteres Scholes Kallitechnikis Ekpaidefsis* (Higher education at schools of fine arts)

Non-university higher education in fine arts is offered by the *Anoteres Scholes Kallitechnikis Ekpaidefsis* (Act 1158/1981) belonging either to the private or public sector. These institutions aim to provide training for drama, dance, films and television. They operate under the supervision of the Ministry of Cultural Affairs and Science.

The *Anoteres Scholes Kallitechnikis Ekpaidefsis* are divided into the following specific Schools:

(a) drama schools (*Dramatikes Scholes*) with the following departments in:

- drama
- directing
- costume design, set design and make-up;

(b) dance schools with departments for:

- dance teachers
- dancers;

(c) film and television schools, with departments in:

directing — criticism — scriptwriting
set design — costume design
film and television photography
production
sound recording
animation design.

The courses in these schools last three years and attendance is compulsory.

Other university-level institutions

Stratitikes Scholes Axiomatikon (Military Academies)

These academies fall under the jurisdiction of the Ministry of National Defence and are equivalent to the other Greek institutions of university-level higher education according to the provisions of L. 1351/1983. For this reason, the same rules are applied for student entry except that they must have Greek nationality. A brief description of each of the military academies is the following.

(1) *Stratitiki Scholi Evelpidon — SSE* (Military Academy)

The duration of studies is four years and the curriculum covers academic subjects and general military training. The objective of the academy is to test and extend the general knowledge of its students and to provide military training and develop military virtues and discipline. The graduates of the academy serve as officers in the Greek Army.

(2) *Scholi Naftikon Dokimon* (Naval Cadet Academy)

The course of studies at the academy lasts for four years. The students are trained in order to acquire skills required to pursue a career as officers in the Greek Navy and to possess the knowledge necessary for applying scientific and technological advances used by the naval armed forces. There are two sections in the academy designated as combat and engineering. The subjects taught in these sections vary and they are compulsory without electives.

(3) *Scholi Icaron — SI* (Airforce Academy)

The academy was founded in 1931 and the course of studies lasts four years. There are two sections currently operating at the academy which train pilots and engineers specialising in aeronautical engineering and airport installations, administration and meteorology. The attendance of all courses is compulsory. The graduates of the academy serve as officers in the Greek Air Force.

(4) *Stratitiki Scholi Axiomatikon Somaton — SSAS* (Military Corps Academy)

The objective of the academy is to provide scientific and military training so that students may acquire the appropriate knowledge, experience, moral and physical skills to fulfil their duties as science officers in the Army, Navy, Air Force and Police. The following four departments exist at the academy: medicine, veterinary medicine, dentistry and pharmacy.

The course is divided into:

scientific training: classes are taught in the relevant department of the Aristoteleion University of Thessaloniki — the students are trained like all the other students of the university and have the same obligations;
military training: during the academic year training takes place in tandem with university education at periods when there are no university courses for the students;
general training: this consists of courses in topics of general interest, lectures, teaching of foreign languages, educational visits, etc.

(5) *Scholi Axiomatikon Nosileftikis — SAN* (Military Nursing Academy)

The objective of the academy is to provide female students with the appropriate scientific and military training to cover the nursing requirements of all three branches of the Armed Forces. Under the provisions of L.1848/1989, the duration of studies is four years. The curriculum includes subjects of general education (English, international relations, public law), plus medicine, nursing, biology, hygiene, sociology, psychology, and military training (topography — military correspondence, psychological warfare). Clinical training takes place in military and civilian hospitals, preferably at a university hospital. Only female students enrol at the Military Nursing Academy. To qualify for entry they have to pass medical, psychological and physical tests set by the military service and general examinations (strand b) set by the Ministry of National Education and Religious Affairs.

I.2. Number of students

The total number of students attending the higher education institutions varies from year to year, and it is in the order of 165 000 to 170 000. In the academic year 1990-91, some 116 938 students attended Greek universities as indicated in Table 1.

Table 1
Total number of university students during the academic year 1990-91

University	Male	Female	Total
1. National University of Athens	13 054	21 334	34 388
2. University of Aegean	460	722	1 182
3. University of Thessaly	172	312	484
4. University of Thessaloniki	16 219	17 969	34 188
5. University of Ioannina	1 972	3 717	5 689
6. University of Patras	4 658	3 127	7 785
7. Economic University of Athens	1 779	1 798	3 577
8. Panteion University	1 618	2 606	4 224
9. University of Pireas	1 914	1 874	3 788
10. Ionion University	93	316	409
11. University of Macedonia	1 346	1 393	2 739
12. Agricultural University of Athens	1 069	567	1 636
13. Athens School of Fine Arts	174	230	404
14. University of Crete	1 503	2 351	3 854
15. Technical University of Crete	403	129	532
16. National Technical University of Athens	5 311	1 880	7 191
17. University of Thrace	2 660	2 211	4 871
Total number of students	54 402	62 536	116 938
Percentage	46.7	53.3	100

During the same academic year, the total number of students entering the universities was 29 319 from which 56 % (16 471) were women and 44 % (12 848) were men. The total number of foreign students who entered the universities was 956 (3.3 %) from which 374 were men and 582 were women.

During the academic year 1992-93, some 57 514 students attended the *TEI* as indicated in Table 2. The new entrants were 18 679 students that is 32.4 % of the *TEI*'s total student population. The number of foreign new students each year in the *TEI* institutions is about 550 (3.0 %).

Table 2
Number of students of *TEI* 1993-94

<i>TEI</i>	Male	Female	Total	New entrants
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Athens	12 260	7 240	19 500	5 020
Pireas	3 816	1 721	5 537	1 637
Iraklio	2 350	2 194	4 544	1 526
Kalamata	118	133	251	187
Patra	1 832	1 899	3 731	1 159
Messolongi	931	1 331	2 262	993
Larissa	2 722	2 734	5 456	2 174
Kozani	1 381	802	2 183	1 040
Thessaloniki	3 709	4 667	8 376	2 642
Serres	886	555	1 441	580
Kavala	1 131	781	1 912	796
Chalkida	1 395	926	2 321	925
Total	32 531	24 983	57 514	18 679
Percentage	56.6	43.4	100	32.4

All the above statistical figures were supplied by the statistical service of the Ministry of National Education and Religious Affairs.

I.3. Organisation of course of studies

I.3.1. Non-university higher education

A. Technological educational institutions (*TEI*)

Teaching is carried out on a semester basis and includes theoretical instruction in the various subjects; practicals, tutorials and laboratory and field tests, which are aimed at laying the foundations for the application of the theory and the acquisition of professional skills; seminars, visits to industrial plants and other activities; practising the relevant profession.

Regulation of studies

The academic year commences on 1 September and continues until 31 August of the following year. The teaching year commences on 1 September and ends on 5 July of the subsequent year; it contains two independent teaching periods, the didactic semesters, called the winter and spring semesters respectively. The winter semester commences on 1 September; the spring semester continues until the second half of June.

Each teaching period comprises 15 full weeks of instruction plus two examination periods, each lasting two weeks. In case of failure, the relevant subjects will be repeated during the next examination period. For every subject, students are required to attend a minimum of 32 and a maximum of 45 hours' teaching per week. Attendance is compulsory for all students.

Students in a given department receive their degree when:

- they have successfully completed their compulsory and mandatory elective classes, as well as any options, in compliance with the study and procedural regulations;
- their graduation project has been approved;
- they have completed their professional placements.

Studies at the *TEI* last seven or eight semesters, including the compulsory professional placement and the completion of a graduation project, which is evaluated separately. Studies in all departments result in a degree called *Ptychio TEI*, which entitles their holders to practise their respective professions.

Organisation of subjects — Curriculum

Subjects in the curriculum in each department are broken down as follows.

- (1) General compulsory subjects: these subjects involve basic topics that are dedicated to the chosen area of specialisation, and which are compulsory for all students in the department.
- (2) Mandatory elective subjects: these subjects cover areas of specialisation which the students must select from among a limited number. These subjects may be grouped together, and in this case students must follow all the subjects that fall under a given group.
- (3) Optional subjects: these subjects cover areas of general education or provide in-depth treatment of a particular topic; they may either belong to a particular scientific domain or be interdisciplinary.

Each subject in the department's curriculum is divided into a number of teaching modules called *didaktiki monada (dm)*. A teaching module entails one hour of instruction per week. This applies to all the subjects taught in the Department. The graduation project consists of between 10 and 15 teaching modules. Field trips are not included in teaching modules.

If the comprehension of one teaching module is a prerequisite for the successful understanding of another subject, the first subject is termed a prerequisite for the second. The overall number of prerequisite subjects varies between 20 and 25 %.

Under no circumstances can students receive their degree in a shorter period than that stipulated by Article 27 of L. 1404/1983.

Final examinations and examination of the graduation project

Examinations in each subject are the responsibility of the respective instructor while the head of the department guarantees proper supervision of the examinations. Examinations are written and oral and take place during normal teaching hours so as to ensure the students' participation in written examinations at the end of the semester. For orals, a second examiner (the teacher of a related specialisation) is also appointed.

Candidates are examined in the presence of their peers.

Final marks will be the average of the two — written and oral — results.

Grading scale: marks in all subjects are expressed on a scale ranging from 0 to 10 with a 5 counting as a pass.

Marks are interpreted as follows:

0-3.9:	poor
4-4.9:	insufficient
5-6.9:	sufficient
7-8.4:	very good
8.5-10:	excellent.

Graduation project

All students are required to submit a graduation project in an area directly related to practical aspects of production or service. The topic of the graduation project is set by regular academic staff and other members of the research staff. Where necessary, the *TEI* provides the premises, equipment and financial support for the graduation project.

Graduation projects may also be completed outside the *TEI* in organisations, research institutions, private firms, etc. with prior consent from the departmental council. A joint graduation project may be assigned to a group of up to three students, with an equal distribution of work per student. The graduation project may be completed after the end of the last semester, depending on the scope and demands of the particular topic.

After the completion of the graduation project and its approval by the respective supervisor, it is submitted to the department and presented to a committee of three members of the teaching staff from the appropriate department, one of whom acts as rapporteur.

This presentation is open to all members of the teaching staff and students of the faculty. If a graduation project is found wanting, it is referred back for further work, after which the submission and presentation procedure is repeated.

Placement

Under the provisions of Article 24 of L. 1404/83 on the 'Structure and operation of *TEI*', placements are an integral part of the curriculum and a prerequisite for receipt of a degree.

In Presidential Decree (PD) 174/1985, the purpose, duration, and site of the placement are defined. Such professional placements are supervised by the faculties in question and aim to:

- inform the students about the structure and operation of production units and services;
- relate the theoretical and practical skills acquired during study to problems of implementation;
- establish contact between *TEI* and areas of production and applied research.

The duration of professional placements is set at eight months for all students and is divided into two periods, to take place after the last semester of classroom studies, when the student has successfully completed the whole curriculum.

The first placement period of six months involves posting to assignments in the public and private sector. This placement period is uninterrupted, with the exception of assignments in seasonal type industries. The second placement period lasts for two months and may be completed as soon as the department ascertains that doing so does not impede the completion of the six-month placement.

Once the department has approved the two-month placement, it must be completed.

For students of professional health and social care faculties, the placement is organised in institutions, services and organisations outside the faculty.

The department organises the placement of students in the public and private sector (e.g. public transport, cooperatives, banks, municipal companies, etc.) and privately managed sectors, provided that the latter can ensure a proper placement.

Students are given placements by the State in production units and services.

The appropriate degree-awarding department provides general supervision for the professional placement. The placement is usually arranged within the territory served by the *TEI* in question. Students receive payment for the placement.

B. Special types of non-university higher education

(1) *PATES/Selete*

The departments of the technical teacher training college (*PATES*) accept *AEI* and *TEI* graduates for entry as well as those from secondary education schools. The selection for entry to the *PATES* in the *Selete* is based on an assessment scaled from 0 to 100 points; the maximum of 100 is divided as follows:

- (a) studies: 70 points;
- (b) experience: (teaching or professional) 30 points.

Attendance of classes at *PATES* is compulsory. The duration of studies for *AEI* graduates is one semester, while *TEI* graduates and those from higher and secondary educational schools are required to register for one year. Classes are taught during the afternoon each day except for the teaching practicals which are given in the morning. Graduates of the *PATES/Selete* are awarded the qualification *Ptychio Paidagogikon Spoudon* (certificate of pedagogical studies).

This qualification is a prerequisite for registration in a special list updated each year and for subsequent posting of the graduate to the teaching staff giving technical-vocational classes in secondary education. It should also be mentioned that the *Selete* not only has a campus in Athens, but also in Salonika, where a *PATES* branch is located to facilitate pedagogical training in the abovementioned specialisations for candidates from Northern Greece.

(2) *Asetem/Selete* (higher engineering training college)

The *Asetem* is a four-year day college with compulsory attendance. Instruction in each subject is carried out in one or more of the following formats:

- theoretical instruction
- tutorial exercises
- practicals or laboratory exercises
- individual or group projects.

Students complete part of the practical teaching required by their programme in public technical or vocational schools, or in public technical-vocational or multidisciplinary *Lykeia*. During the last semester, each student is required to submit a graduation project, supervised by a member of the teaching staff. A student at the *Asetem* is awarded a qualification when:

- he has successfully completed all the subjects
- his graduation project has been approved
- he has successfully completed his practical specialisation
- he has completed his practical teaching.

Graduates of the *Asetem* receive the qualification *Ptychio Ekpaideftikou Technologou Michanikou* (*Ptychio* for teachers of technical engineering), with the specialisation of the corresponding department or sector in which their studies were completed.

(3) *Anoteri Scholi Touristikou Epangelmatou Rodou* (Higher School of Tourist Businesses of Rhodes)

The study period lasts three years (PD 221/87/FEK99/A/22-6-87) and the attendance of lectures is compulsory. They include a theoretical cycle from October to June. This cycle covers lectures, practical and laboratory exercises and personal or team projects. A practical cycle is also included from July to September each year and includes placement of students in various tourism businesses with which the school has contacts, like the National Tourism Organisation Businesses and various national or international well-known corporations involved in the provision of tourism products (package tours, resorts, hotels, etc.). The aim of the practical cycle is to enable students to gain a thorough understanding of the service areas for which they will eventually be responsible. The degree (diploma) is awarded when the student has successfully passed all the theoretical courses and completed the practical work.

(4) *Anoteres Dimosies Scholes Emborikou Naftikou — ADSEN* (Higher State Academies for the Merchant Navy)

The following entrance requirements must be satisfied for each candidate of the schools:

- to have a certificate of secondary education from a *Geniko, Technico* or *Epangelmatiko Lykeio*, or an equivalent qualification;
- to be of Greek nationality;
- to be under 24 years of age;
- to be in good physical and mental health, according to a health committee examination adapted to the specifications for each specialisation;
- to be in full possession of their civil rights and without a criminal record.

The selection of candidates is computerised and carried out on a strict grading basis combined with consideration of the candidates' order of preference with regard to *ADSEN* schools. Grading for selection is based on the average obtained by adding the marks for graduation on the candidate's *Apolitirio Lykeiou* to the final marks for the examinations in Greek (essay-writing), mathematics, and physics.

(5) *Anoteres Scholes Kallitechnikis Ekpaideftisis* (higher education of fine arts)

Subject to favourable examination results, entrance to the first year may be gained by holders of *Apolitirio Lykeiou* or by holders of a qualification from an equivalent institution either in Greece or abroad.

Exceptions to this are made by drama schools and the dance departments of dance schools, where students are admitted not on the basis of the abovementioned certificates but on the basis of their talent and performance in the dramatic arts or in dancing. The decisions regarding entrance are taken by special committees appointed by the Minister for Cultural Affairs and Science. Subject to favourable examination results, foreign students may also gain entrance to these schools on the basis of their qualifications and knowledge of the Greek language.

Graduates receive the following qualifications:

diploma (graduates of all departments).;

ptychio (graduates of drama schools and of the dance department at dance schools). This qualification is awarded to students who were accepted on the basis of exceptional ability and not through examinations, as mentioned above.

A *ptychio* is equivalent to a diploma in the same specialisation only with regard to the right to teach and perform.

The following *Anoteres Scholes Dramatikis Technis* (drama schools) exist:

Anoteri Scholi Dramatikis Technis Ethnikou Theatrou (National School of Drama);

Anoteri Scholi Dramatikis Technis tou Kratikou Theatrou Voreiou Ellados (School of the National Theatre of Northern Greece);

Anoteres Idiotikes Scholes (Private schools with a drama department).

There are also *Anoteres Epangelmatikes Idiotikes Scholes Chorou* (higher private professional dance schools) and private film schools, that come under the provisions of L. 1158/81. In the music sector, apart from university level, studies are offered by the department of musical studies in the Faculty of Fine Arts (duration of studies is 10 semesters) at the *Aristoteleio Panepistimio* in Salonika, with branches of musicology and musical pedagogy. There are also *Odeia* (conservatories) and *Moussikes Scholes* (schools of music) that do not belong to any level of conventional education.

With the exception of the *Kratiko Odeio Thessalonikis* (State Conservatory of Salonika), the *Odeia* are private institutions.

The qualifications awarded by the *Odeia* and the *Moussikes Scholes* fall into two categories:

Ptychio Odikis (qualification for singers) — duration of studies: two years;

Ptychio or Diploma Vyzantinis Moussikis (qualification in Byzantine music) — duration of studies: five years.

Odeia graduates may be employed as teachers at conservatories or music teachers in public or private secondary education according to the rules set out by the Ministry of Education.

I.3.2. University higher education

Undergraduate programmes

Undergraduate studies are divided into a number of semesters lasting six months each. The minimum duration of studies for obtaining the first degree is 8 semesters for all disciplines but 10 semesters are required for veterinary science, dentistry, engineering and agricultural studies and 12 semesters are required for medicine.

Each academic year commences on 1 September and continues until 31 August of the following year. The teaching year commences each year on 1 September and ends in the first week of July of the following year. It contains two independent teaching periods called the winter and spring semesters respectively. The winter semester commences in September and the spring semester continues until the second half of June. Each semester comprises 13 full weeks of teaching plus three weeks for examinations. There is also a third examination period for all courses taught in both semesters which takes place in September before the beginning of the courses for the winter semester.

The study programme contains compulsory and elective courses. In each semester the students are required to take a number of compulsory courses consisting of the core programme of the respective department or division and a number of elective courses. The total number of courses to be taken is decided by the respective course programme of the department. In some departments, the submission of a dissertation describing the final (graduation) project is required. For example, the 10th semester in all engineering departments is devoted to the preparation of a final year project and the submission of a dissertation. The organisation of studies at the schools of fine arts is quite different. Courses in these schools involve a great amount of practical work. The workshop is the principal place of instruction where the students are taught the theory and practice of the branch of the particular art which they are studying. Studies at the schools of fine arts last for five years. Besides practical work, students are obliged to attend classes and sit examinations in complementary compulsory subjects and elective compulsory practicals.

Assessment of examinations and final degree projects is expressed on the following basis:

0-4.9:	fail
5-6.9:	good
7-8.4:	very good
8.5-10:	excellent.

The pass grade is 5 for all courses while the pass grade for degree projects is 5.5.

For the *Anotati Scholi Kalou Technon* — (ASKT), Academy of fine arts, the grading scale is as follows:

26-30:	excellent
21-25:	very good
15-20:	good
6-14:	mediocre
1-5:	poor.

The pass grade is 15.

Postgraduate programmes

The universities (*AEI*) have the main responsibility for the organisation and operation of postgraduate study programmes. These programmes are organised in order to promote scientific knowledge and to produce independent research aimed at scientific progress. Each department may offer a programme of postgraduate studies with several specialisations. At the request of several departments, an interdepartmental or an interuniversity postgraduate study programme may be organised. The holders of a Greek university degree or the holders of a degree awarded by institutions abroad and recognised by *Dikatsa* may be admitted to attend a postgraduate study programme.

Students of Greek origin must provide evidence that they have a good command of a foreign language. Foreign students have to prove that they have a competent knowledge of the Greek language. The selection of postgraduate students is based on the following criteria:

- the final grade of the first degree (*ptychion*/diploma or equivalent);
- the marks obtained in the graduate courses relevant to the postgraduate programme to be followed;
- the mark of the graduation project, if it is required during the undergraduate programme;
- the activity/ability of the candidate.

A *Metaptychiakon Diploma Exidikefsis* — *MDE* (diploma of postgraduate specialisation) is awarded after the successful completion of the programme courses. Postgraduate students must also participate actively in teaching and scientific activities according to the regulations of postgraduate studies. Finally, a graduation project must be submitted and a dissertation also is examined before the diploma is awarded.

The doctoral degree is conferred after the public defence of a thesis describing the research work conducted. This research work must have original elements and show advances in research and science. A doctoral thesis can be submitted for examination after a period of not less than three years of studies since the student was admitted to the doctoral degree programme. A student can be admitted to a doctoral research programme when he/she holds a Greek *ptychio* or diploma or an equivalent qualification obtained abroad and recognised by *Dikatsa*. In certain university departments, it may also be necessary for a student to possess a diploma of postgraduate specialisation. This is required when the department offers a postgraduate programme relevant to the doctoral research concerned.

The Ministry of National Education and Religious Affairs has introduced a scientific council for university research and postgraduate studies functioning as the minister's advisor for research and technology issues. In the ministry of national education there is also a directorate (office) responsible for the postgraduate studies and research programmes. This directorate is also responsible — to study and give suggestions — on all issues concerning postgraduate studies as well as the scientific and technological research activities of the ministry:

- to administer the budget of the research programmes;

II. Qualifications and diplomas

II.1. Qualifications for admission to higher education

Admission to higher education institutions is only permitted to persons who have successfully finished their secondary education studies. A short description of the Greek system of secondary education is given in order to provide the necessary information. Secondary education in Greece comprises the *Gymnasia* and *Lykeia*. The *Gymnasium* (first cycle of secondary education) lasts three years and is compulsory for all Greeks. Students who complete six-year primary education enter *Gymnasia* without entrance examinations. On graduation, the students are awarded the *Apolitirio Gymnasiou*. *Lykeia* constitute the second cycle of secondary education. The holders of the *Apolitirio Gymnasiou* may enter *Lykeia* without taking further examinations. This cycle lasts three years and is non-compulsory. The following types of *Lykeia* generally exist:

***Genika Lykeia* (general *Lykeia*)**

All students are taught the same subjects during the first two years. The third-year students follow a core programme of general education lasting 10 hours per week and receive 20 hours of specialised instruction in one of the four *Desmes Proparaskevastikon Mathimatou* (streams of preparatory subjects) designated as streams A, B, C and D. Upon successful completion of their written *Panhellenic* examinations, they may gain entrance into the relevant faculty or department at an institution of higher education. The following subjects are included in each of these four streams:

stream (*Desmi*) a: essay, mathematics, physics, chemistry;

stream (*Desmi*) b: essay, physics, chemistry, biology;

stream (*Desmi*) c: essay, ancient Greek, history, Latin;

stream (*Desmi*) d: essay, mathematics, history, sociology.

Technika — Epangelmatika Lykeia — TEL (technical-vocational Lykeia)

The studies at the *TEL* last three years for daytime students and four years for students attending evening courses at evening *Lykeia*. Each *TEL* may consist of a number of specialised departments. These technical vocational *Lykeia* combine a general education together with professional training. After their second year, the students may opt to take a course leading to either the *Ptychio Idicotitas* (specialised qualification) which will enable them to be employed immediately or the *Apolitirio* which will enable them to continue their studies at the level of higher education. Streams A, B and D are offered at the *TEL* and holders of the *Apolitirio* may continue their studies at institutions of higher education (*AEI* and *TEI*).

Eniaia Polykladika Lykeia — EPL (unified multi-disciplinary Lykeia)

The *EPL* were introduced under the provisions of Act 1566/85, which stipulate a three-year course of studies. *EPL* provide a unified general education and technical-vocational training and offer all students the possibility of a balanced development of their potential and the cultivation of their interests and skills so that they can participate in the production process and the economic development of the country. In the first year, all students are taught the same subjects, although they are free to follow elective courses in their spare time. In the second year, an *EPL* is split into *kyklous* (study cycles) and in the third year it is split into *kladous* (branches). All students are taught core subjects during these two years, along with the corresponding cycle and branch subjects.

The cycles lay the foundations and provide a preparatory instruction for higher education. The branches enable the students to:

- continue their studies at institutions of higher education (*AEI* and *TEI*) by including the preparatory subjects corresponding to each stream in their curriculum being followed;
- exercise their profession (via *kladi Proepangelmatikis Ekpaidefsis* — pre-vocational training branches);
- obtain a specialised diploma after studying for one extra year in a specialised department open to graduates of these schools.

The graduates of all branches are awarded the *Apolitirio Lykeiou*. The stream branches A, B and D at the *EPL* particularly reflect Greece's need to promote research and knowledge in both the scientific and technological sectors.

Klassika Lykeia (classical Lykeia)

There exist a few classical *Lykeia* which aim to promote studies of the classics.

Special types of *Lykeia*

A number of specialised *Lykeia* also exist such as the *Ecclissastika Lykeia* (*Lykeia* for religious studies) that operate under the provisions of a *Proedriko Diatagma* — *PD* (presidential decree), *Athlitika* and *Moussika Lykeia* (*Lykeia* for athletics and music). These *Lykeia* may be introduced in several cities in the country and cover the educational needs of persons living in a wider geographical area.

For all types of *Lykeia* the marking grading is from 0 to 20 (10 is pass-mark).

In Greece, a quota (*numerus clausus*) policy is applied to all higher education institutions for admission purposes. Those wishing to enter higher education in Greece sit general examinations which are held each year in the second half of June. Students who have received the *Apolytirion Lykeiou* or an equivalent high school certificate abroad or the European Baccalaureate have the right to participate in these general examinations.

These examinations are called general *Panhellenic* examinations, and are common to all *AEI* and *TEI* in the country. In March every year, all prospective applicants complete the appropriate application forms on which they list the higher education institutions and departments of their choices (*AEI* and *TEI*).

Candidates' entry into higher education institutions depends on the respective quotas of the institutions and is decided on the basis of their marks and their stated preference with regard to the faculties in which they wish to enrol. Their overall grades (marks) are based on the sum of their marks obtained in the examinations which consist of four general subjects which carry an equal weight in the grading process. At least one of the general subjects is defined as the 'basic' one for each specific faculty and the applicant must, in that subject area, achieve the required pass grade, which is defined as the half of the maximum possible grade. If this mark is not obtained, the candidate is not entitled to enrol although he/she has obtained enough marks.

The paper for each subject examined is considered by two independent examiners. The grade given to each paper has a scale between 0 and 80. The final mark of the candidate for each subject is the sum of the marks given by the two examiners (maximum mark in each subject 160).

The examination subjects vary according to the four streams of studies followed in the respective programme at *Lykeion* which permit the admission of students to the respective faculties of the higher education institutes. Each candidate is obliged to select all the subjects of one of the four streams described previously.

In several departments, besides the basic examinations in general subjects, the candidate is also examined in specific subjects. Thus, for example in architectural departments, free drawing or design is also examined; in the foreign language departments the respective language is examined; in music departments, examinations are held in harmony and dictation of a musical score; while the departments of physical education and the military academies hold sport competitions. In addition to the fixed quotas, each department accepts a number of foreign students, Greeks living abroad, scholarship recipients, etc. These candidates sit different general examinations, which are held each year in September. Institutions operate a percentage quota although the examination procedure and the contents of courses examined are identical to that of the normal general examinations. The actual number of candidates admitted in each department of *AET's* and *TEI's* for all the abovementioned categories are decided each year by the Ministry of National Education and Religious Affairs.

II.2. Intermediate qualifications in higher education

According to the Greek system of higher education, no intermediate degree is awarded by the universities. Under the terms of L. 1966/1991, students studying in universities abroad can transfer a certain proportion of periods of their studies to a Greek university under specific rules. The foreign university must, however, be officially recognised by *Dikatsa*. Admission is only permitted to either the third or fifth semester of studies with a percentage limit of 3 and 7% respectively of the total number of students admitted to each university department under the system of general examinations. The selection procedure is based on the marks of an examination organised by the University of Thessaloniki in September each year for all Greek university departments. A similar procedure also applies for students wishing to transfer periods of their studies from one Greek university to another. In this case the respective percentage limit is 8%.

II.3. Final qualifications in higher education

II.3.1. Final qualifications in non-university higher education (technological educational institutions)

These qualifications are awarded within a single cycle, usually lasting seven semesters (three and a half years) but in several Departments the courses last eight semesters (four years), including one semester of practical work placement under the supervision of the relevant teaching staff. The final degree (*Ptychio*) qualifies the holder for immediate employment in the area of his studies. The wide variety of *TEI* qualifications which are awarded include the following.

Degrees (*Ptychia*) in non-university higher education (technological educational institutions)

Ptychiouhos (Graduate):

Graphic arts technologist of TE

Graphic designer

Decorator

Restorer of archaeological findings and works of art

Photographer

Librarian in business administration

Health and care unit in administration

In marketing

In tourist business administration

Accountant

In Cooperative organisations and holdings administration

Aesthetician

In baby/infant care (of TE)

In public hygiene

Occupational therapist

In medical laboratory technology

Social worker

Midwife

Nurse

Dental mechanic

Optician

In radiology — actinography

Physiotherapist

Health visitor

Agricultural machinery and irrigation technologist

Forester

In farm management

In animal breeding

In glasshouse growing and floriculture

Pisciculturist

In crop production

Automation engineer

Energy technology engineer

Electrical engineer

Electronic engineer

Electrical computer systems engineer

Textile engineer

Mechanical engineer

Shipbuilding engineer

Vehicle engineer

Informatics engineer

Civil engineer

Civil works engineer

Medical instrument engineer

Petroleum engineer

Topography engineer

Nutrition technologist

Oenologist

Food technologist

II.3.2. Final university qualifications

The first degree, *ptychio*, is awarded by Greek universities to all students who have successfully completed the respective course programme. Students following an engineering or architecture programme are awarded the degree called diploma. The diploma *metaptychiakon spoudon exidikefsis* (diploma of postgraduate specialisation) is awarded to students who have successfully completed a postgraduate programme of studies. Finally, the *didaktoriko* diploma (doctoral degree) is awarded by universities to students after a successful defence of a doctoral thesis that describes the research conducted in a university department.

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Appendix

Regulated professions under EEC directives

The following provisional list includes the regulated professions concerning *TEI* graduates for which the professional rights have been decided by presidential decrees. *TEI* have 52 different departments but the professional rights for 34 of their graduates have been already decided and the process is in the final stage for the other 18 departments.

1. Marketing officer — L. 1404/83, PD 79/89
2. Business administration officer — L. 1404/83, PD 514/89
3. Tourist industry administration officer — L. 1404/83, PD 356/89
4. Cooperative organisations and holdings administration officer — L. 1404/83, PD 107/89
5. Health and care unit administration officer — L. 1404/83, PD 351/89
6. Librarian — L. 1404/83, PD 385/89
7. Accountant — L. 1404/83, PD 349/89
8. Restorer of archaeological findings and works of arts — L. 1404/83, PD 357/89
9. Graphic designer — L. 1404/83, PD 357/89
10. Graphic arts technologist — L. 1404/83, PD 357/89
11. Photographer — L. 1404/83, PD 357/89
12. Social worker — L. 1404/83, PD 50/89
13. Public hygiene officer — L. 1404/83, PD 83/89
14. Health visitor — L. 1404/83, PD 351/89
15. Aesthetician — L. 1404/83, PD 83/89
16. Optician — L. 1404/83, PD 83/89
17. Occupational therapist — L. 1404/83, PD 83/89
18. Dental mechanics technician — L. 1404/83, PD 83/89
19. Midwife — L. 1404/83, PD 83/89
20. Baby-infant care worker — L. 1404/83, PD 523/89
21. Nurse — L. 1404/83, PD 351/89
22. Electronic engineer — L. 1404/83, PD 346/89
23. Electronic computer system engineer — L. 1404/83, PD 345/89
24. Informatics engineer — L. 1404/83, PD 345/89
25. Medical instruments technology engineer — L. 1404/83, PD 345/89
26. Food technologist — L. 1404/83, PD 78/89
27. Nutrition technologist — L. 1404/83, PD 78/89
28. Agricultural machinery and irrigation technologist — L. 1404/83, PD 109/89
29. Farm administration officer — L. 1404/83, PD 109/89
30. Pisciculturist — L. 1404/83, PD 109/89
31. Glasshouse/floriculture technologist — L. 1404/83, PD 109/89
32. Crop production technologist — L. 1404/83, PD 109/89
33. Animal production technologist — L. 1404/83, PD 109/89
34. Forest technologist — L. 1404/83, PD 109/89

The legally regulated professions concerning university graduates are the following.

1. Lawyer/barrister — L. 3026/1954 FEK 235/A/1954
2. Secondary education teacher — L. 1566/1985 FEK 167/a/1985

3. Elementary education teacher — L. 1268/1982 FEK 87/A/1982 PD 320/1983 FEK 116/A/1983
4. Air traffic controller — RD. 636/1972 FEK 182/A/1972
5. Civil engineer — L. 4663/1930 FEK 149/A/1930
6. Architect — L. 4663/1930 FEK 149/A/1930
7. Mechanical engineer — L. 6442/1934 FEK 412/A/1934
8. Electrical engineer — L. 6442/1934 FEK 412/A/1934
9. Surveying engineer — L. 4663/1930 FEK 149/A/1930
10. Chemical engineer — L. 3518/1928
11. Naval architect engineer — L. 6442/1934 FEK 412/A/1934
12. Metallurgy engineer — PD 85/1987 FEK 49/A/1987
13. Mine engineer — PD 85/1987 FEK 49/A/1987
14. Psychologist — L. 991/1979 FEK 278/A/1979

Iceland

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Abbreviations

BA	Bachelor of Arts
BEd	Bachelor of education
BH	<i>Bændaskólinn á Hvanneyri, Borgarfjordur</i> (The Agricultural College, Hvanneyri)
BS	Bachelor of Science
Cand	Candidatus degree
Dr	Doctor
FÍ	<i>Fósturskóli Íslands</i> (The Icelandic College of Pre-school Teachers)
HA	<i>Háskólinn á Akureyri</i> (The University College of Akureyri)
HÍ	<i>Háskóli Íslands, Reykjavík</i> (The University of Iceland)
ÍKÍ	<i>Íþróttakenmaraskóli Íslands</i> (The Icelandic College of Sport and Physical Education)
KHÍ	<i>Kennaraháskóli Íslands, Reykjavík</i> (The University College of Education)
LÍ	<i>Leiklistarskóli Íslands</i> (The Icelandic College of Drama)
MA	Master of Arts
MHÍ	<i>Myndlista- og handídaskóli Íslands</i> (The Icelandic College of Art and Crafts)
MS	Master of Science
SB	<i>Samvinnuháskólinn Bifrost, Borgarfjordur</i> (The Cooperative College of Iceland)
TÍ	<i>Tækniskóli Íslands, Reykjavík</i> (The Icelandic College of Engineering and Technology)
TR	<i>Tónlistarskólinn í Reykjavík</i> (The Reykjavík College of Music)
TVÍ	<i>Tolvuháskóli Verzlunarskóla Íslands, Reykjavík</i> (The Commercial College of Iceland, School of Computer Science).
ThÍ	<i>Throskathjálfaskóli Íslands</i> (The Icelandic College of Social Pedagogy).

Glossary

BA/BS/BEd próf

First university degree. The most common examination for a degree at the higher education institutions requiring three to four and a half years' of study.

Doktorspróf

A doctoral degree in the Faculty of Arts, University of Iceland. Length of study two or three years' after first class MA. The highest degree awarded by the University.

Fjölbrautaskóli

Upper secondary school, comprehensive school (see *Stúdentspróf*).

Grunnskóli

Primary and lower secondary school.

Háskóli

University.

Idnskóli

A technical vocational school giving basic vocational education courses and apprentice training.

Kandidatspróf

Academic/professional university degree requiring four to six years' of study and in some cases additional practical training.

Kennaraháskóli

University College of Education.

Meistarapróf

MA/MS/MPaed/MEd degree awarded in natural sciences, economics, engineering, biomedicine (research degree), humanities, social sciences and education. Length of study two or three years' after first class BA/BS/BEd.

Menntaskóli

Upper secondary school, gymnasium (see *Stúdentspróf*).

(Náms)eining

A credit unit equivalent to one week of full-time study at an institution of higher education; 30 credit units are equivalent to one year of study.

A credit unit approximately equals two hours' study load per week for one semester in upper secondary schools.

Rannsóknastofnun uppeldismála

The Institute of Educational Research.

Stúdentspróf

The most common higher education admission qualification. It is acquired after four years' of upper secondary education at an upper secondary school (gymnasium/comprehensive school).

Sveinspróf

The journeyman's examination which provides the apprentice with qualifications to pursue the trade concerned. It is acquired after three or four years on the completion of the basic vocational education courses in vocational technical schools (*idnskólar*) and in comprehensive schools (*fjölbrautaskólar*) offering both theoretical and practical education.

Tækniskóli

A technical vocational college for the education of technicians, technical engineers, radiologists and medical laboratory technicians.

Verzlunarskóli

Commercial college offering theoretical education preparatory for employment in the fields of business and commerce and also preparatory for university studies.

I. Higher education system

According to law, the Icelandic education system is divided into the following four levels: (1) pre-school education (*leikskólastig*); (2) compulsory education, primary and lower secondary education (*grunnskólastig*); (3) upper secondary education (*framhaldsskólastig*); (4) higher education (*háskólastig*). The upper secondary level is by law under the direct control of the Ministry of Culture and Education, but the municipalities are responsible for pre-school and compulsory education. Responsibility for the higher education sector rests with the State and is, for the most part, financed with public funds. However, there is no general legislation for the higher education system as a whole. Constitutionally each higher education institution is directly responsible to the Minister of Culture and Education and has its own law defining the main role of the institution in education and research, duration of programmes, the degrees offered, its responsibilities towards higher authorities, its internal organisation and administrative structure. Within the framework of the available appropriations the individual institutions draw up and update curricula, indicating aims, scope and duration, form and content of courses and description of syllabus.

Studies at the higher education level normally presuppose 14 years' of preparatory education (10 years' compulsory education and four years' upper secondary education). However, some lines of study at the upper secondary level take longer than four years. This applies, for example, to certain vocational courses.

I.1. The institutions of higher education

Non-university higher education institutions

There are a few specialised institutions (*sérskólar*), though not defined by law as higher education institutions, which offer a range of different education bridging secondary and university level. These are *Myndlista- og handíðaskóli Íslands* (The Icelandic College of Art and Crafts), *Leiklistarskóli Íslands* (The Icelandic College of Drama), *Tónlistarskólinn í Reykjavík* (The Reykjavík College of Music), *Fósturskóli Íslands* (The Icelandic College for Pre-school Teachers), *Throskathjálfaskóli Íslands* (The Icelandic College of Social Pedagogy), *Íþróttakennaraskóli Íslands* (The Icelandic College of Sport and Physical Education), and *Tolvuháskóli Verzlunarskóla Íslands, Reykjavík* (The Commercial College of Iceland, School of Computer Science).

The non-university higher education institutions offer practical training programmes geared towards specific occupations in the subject fields stipulated by the law of each institution. In most cases they do not carry out research themselves, but the training offered is based on research.

University higher education institutions

There are two types of university higher education institutions in Iceland:

1. *Háskólar* (Universities, the Icelandic term *háskóli* is used in the same sense as the Latin term *universitas*). These are *Háskóli Íslands, Reykjavík* (The University of Iceland), which offers study programmes in the traditional university subjects, *Háskólinn á Akureyri* (The University College of Akureyri) and *Kennaraháskóli Íslands, Reykjavík* (The University College of Education).
2. *Tækniskólar og sérskólar* (Technical and vocational colleges). These are *Tækniskóli Íslands, Reykjavík* (The Icelandic College of Engineering and Technology), *Bændaskólinn á Hvanneyri, Borgarfjörður* (The Agricultural College, Hvanneyri) and *Samvinnuháskólinn Bifrost, Borgarfjörður* (The Co-operative College of Iceland).

Universities are charged with the task of carrying out research and offering higher education programmes in the subject fields stipulated by the law relating to each institution. These institutions must contribute to the expansion of knowledge utilising scientific working methods and results and they themselves decide on the research to be carried out.

Technical and vocational colleges offer practical training in the subject fields stipulated by the law of each institution. They do not usually carry out research themselves, but the training offered is based on research.

I.2. Number of students

The population of Iceland is about 260000. During the academic year 1993-94 the total number of Icelandic students enrolled in higher education was 9356, of whom 7408 were studying in Iceland, 950 in EC Member States, 296 in EFTA Member States and 702 in other countries. The number of foreign students studying in Iceland was 160. These students came from the following EC and EFTA countries:

Austria	0
Belgium	0
Denmark	21
Finland	7
France	4
Germany	15
Greece	0
Ireland	1
Italy	4
Luxembourg	0
Netherlands	1
Norway	20
Portugal	0
Spain	4
Sweden	19
Switzerland	1
United Kingdom	6
Other countries	57
Total	160

I.3. Organisation of course of study

The study period in Iceland is the academic year which is divided into an autumn and a spring semester.

The Icelandic further and higher education system is examination-oriented, i.e. examinations must be taken or projects carried out at the end of the courses in the various disciplines. Examinations are taken and projects carried out throughout the whole course of study. Students can normally enter for resits of examinations once, after which, in certain cases, dispensation may be given for one further resit. Normally a course of study comprises one major subject (two thirds) along with one or more minor subjects (one third).

Non-university higher education

The non-university higher education courses are taught at a number of different educational institutions and have a prescribed duration of between two and four years. Common to most of these training courses is that they qualify students for a particular occupation. The teaching period normally runs from the beginning of September until Christmas, and from the beginning of January until June, with an examination period in December/January and in May/June. The organisation of the academic year is, however, up to the individual institutions, and may vary from course to course. The form of instruction, structure of the study programme and examination requirements, also vary from course to course. The form of the course alternates between lectures, class instruction, groupwork, practical experience or specialised practical work. Class attendance is compulsory. At the end of the course students take oral and/or written examinations.

University higher education

The academic year normally runs from late August or beginning of September until Christmas, and from the beginning of January until June, with an examination period in December/January and in May/June. The organisation of the academic year is, however, up to the individual institutions, and the actual starting and finishing dates of the study programmes and the dates of the examinations vary from institution to institution. The form of teaching, structure of the study programme and examination conditions and requirements, also vary from institution to institution and from course to course.

Degree programmes are from three to six years in duration. In most institutions the studies are divided into study credits (*námseiningar*), 30 credits corresponding to one academic year of full-time studies (one credit equals approximately one week (50 hours) of full-time study). In some faculties within the University of Iceland, such as the faculties of arts and social science, and in some departments of the Faculty of Science, where the degree is normally taken in one major subject along with one or more minor subjects, the order of subjects may be relatively free. In the faculties of medicine, law, economics and business administration and engineering the order of courses is fixed to a considerable extent. The organisation of studies at the University College of Akureyri, the University College of Education, the Icelandic College of Engineering and Technology and the Agricultural College, Hvanneyri, is also fixed to a great extent. In most institutions regulations specify the maximum time limits of certain partial examinations and/or final examinations.

Grading system

The grading scale in all higher education institutions is 0 to 10, though grades can also be expressed with the assessment pass/fail. Course grades are usually given in increments of 0.5, and averages computed to two decimal places. For most higher institution courses a combined average of five, or a minimum grade of five in each subject is required to pass. In some institutions average grade points are not calculated and in individual courses the minimum grade can be higher than five. According to regulations in most institutions, a student may sit for examination in a given course twice. When a student's grade-point average is calculated, failing grades (marked F) are not included in the calculation.

Labels are assigned in the following way to final grade-point averages:

9.0-10:	distinction
7.25-8.99:	first class
6.0-7.24:	second class
5.0-5.99:	third class
< 5:	fail

II. Qualifications and diplomas

II.1. Qualifications for admission to higher education

II.1.1. Qualifications for admission to non-university higher education

The most usual qualifying examination which gives admission to non-university higher education courses is the upper secondary school-leaving examination (*stúdentspróf*). In addition, however, some other courses qualify students for admission to higher education courses at the non-university higher education institutions. Admission to the non-university higher education institutions is restricted to a specific number of students and applicants are admitted on basis of average grades of the upper secondary school-leaving examination and/or on basis of entrance examinations, interviews, work experience, etc.

The leaving examination of the Grunnskóli (primary and lower secondary school)

In Iceland education is compulsory for 10 years, from 6 to 15 years' of age. The leaving examinations of the *Grunnskóli*, the *grunnskólapróf*, is taken at the end of the 10th grade. Having completed the *grunnskólapróf* all pupils are entitled to upper secondary education.

The number of hours of instruction in the primary and lower secondary school varies according to the age of the pupils. The law provides for the following minimum number of hours of instruction:

Grade:	1	2	3	4	5	6	7	8	9	10
Hours per week:	26	27	27	27	30	32	35	35	35	35

There is a common curriculum published by the Ministry of Culture and Education. At the conclusion of 10 years' of compulsory education, the pupil's scheduled school time will have been divided among the various subjects in approximately the following way:

Icelandic and mathematics	33%
Arts and crafts	20%
Foreign languages, science and social studies	25%
Physical education	10%
Optional subjects and miscellaneous extra studies	12%

Icelandic, mathematics, art and handiwork, domestic science, music, social studies, nature study and physical education are subjects which all pupils study all through their primary and lower secondary school years. They begin studying Danish in the sixth grade (11 year-old pupils) and English in the seventh grade. In the 10th grade (the final year) all pupils study Icelandic, mathematics, Danish, English and physical education, while other subjects are optional.

Assessment is not standardised between different schools and teachers. Examinations and other forms of assessment are the responsibility of individual teachers and schools and reports on the progress of pupils can take various forms, i.e. numerical characters (the scale 0-10 is then applied), alphabetic characters, description, either in oral or written form, and may be given at regular intervals throughout the school year and at the end of each year. The purpose of assessment by the school and teacher is first and foremost to support the study and instruction and to provide the pupils and their parents with information on how the studies are progressing.

At the end of the 10th grade all pupils sit the same standardised written examinations in Icelandic, mathematics, English and Danish. These examinations are composed, graded and organised by the Institute of Educational Research (*Rannsóknastofnun uppeldis- og menntamála*). The grading scale applied is 0 to 10. The purpose of these standardised examinations is primarily to offer an indication of the individual's standing at the completion of his compulsory education and to assist him in choosing a course of upper secondary study. This leaving examination of the primary and lower secondary school is the *grunnskólapróf*. According to a new law passed in 1996 there will be standardised examinations at the end of the fourth, seventh and 10th grades.

By law all pupils are entitled to upper secondary education regardless of their achievement in primary and lower secondary school. Upper secondary school principals may require pupils to complete review or refresher courses of study in individual subjects as deemed necessary with regard to their primary and lower secondary school grades.

***Idngreinánám* (basic vocational education and training/apprentice training)**

The basic vocational education courses are offered in vocational technical schools (*idnskólar*) and in comprehensive schools (*fjölbrautaskólar*) and encompass both theoretical and practical education. The education gives training for employment and/or training for studies in specialised schools, colleges or universities (*stúdentspróf*).

All pupils pursuing vocational-technical courses are required to take the following subjects: Icelandic, four credits; foreign languages, eight credits; social sciences, two credits; mathematics, four credits and accounting, two credits. (See II.1.2 for definition of credits.)

Study courses leading to full trade certification take three or four years. Pupils can choose one of three routes: (1) An apprenticeship agreement with a master tradesman; (2) basic study, i.e. the first year of vocational study in school, followed by an apprenticeship agreement with a master tradesman; or (3) basic study, i.e. first year of vocational study in school, further study in the advanced class, followed by an apprenticeship agreement with a master tradesman.

By the apprenticeship agreement the master tradesman accepts responsibility for the practical training of the apprentice. Vocational technical schools or comprehensive schools provide the theoretical instruction and practical instruction apart from that which takes place at the apprentice's place of employment. On the completion of the study period the apprentice takes the journeyman's examination (*sveinspróf*) which provides him with qualifications to work in his trade.

Pupils can choose courses of study in 10 different areas in this sector of upper secondary education and each area is divided into a number of specialised lines of study. A pupil who has completed the journeyman's examination can qualify as a master tradesman after a period of work experience and further study. This qualification gives him the right to take independent responsibility for work in his trade.

Specialised vocational education (*sérnám*)

Specialised vocational schools prepare pupils for specialised employment. In most cases the education is a combination of schooling (theory) and practical training. The main branches of specialised vocational education in Iceland are the following.

Nautical colleges are intended to prepare pupils to work as officers aboard fishing and merchant vessels and to offer instruction and training for workers in the fish processing industry.

Marine engineering and technology colleges prepare pupils for work as engineers on fishing and merchant vessels as well as for various other machine engineering work.

Several fine art schools train pupils both in visual arts and music. In addition to artistic study, pupils can choose certain lines of study which offer employment training.

Agricultural colleges prepare pupils for employment in agriculture and horticulture.

Vocational education for health care professions and commercial education is offered by comprehensive schools.

Commercial colleges offer theoretical education preparatory to employment in the fields of business and commerce and also preparatory to university studies.

II.1.2. Qualifications for admission to university

The *stúdentspróf* (upper secondary school-leaving examination) as a rule gives admission to university courses. Admission to many institutions is restricted to a specific number of students and applicants admitted on the basis of their average grade in the *stúdentspróf* or in certain subjects of the *stúdentspróf* relevant to the study to be followed and/or on the basis of entrance examinations, interviews, and so on.

In some faculties at the University of Iceland admission is restricted by *numerus clausus*, where a competitive examination is held at the end of the first semester and a limited number of students with the highest grades are allowed to continue in the programme.

The *stúdentspróf* (upper secondary school-leaving examination)

The upper secondary level education in Iceland takes place mainly in *fjölbrautaskóli* (comprehensive schools) and *menntaskóli* (gymnasium) offering both theoretical and practical education. The education in *fjölbrautaskóli* gives training for employment and/or training for studies in specialised schools or universities (*stúdentspróf*). Menntaskóli offers theoretical education leading to *stúdentspróf*. *Verzlunarskóli Íslands* (The Commercial College of Iceland) offers theoretical education preparatory for employment in the fields of business and commerce leading to *stúdentspróf*. *Tækniskóli Íslands* (The Icelandic College of Engineering and Technology) and *Samvinnuháskólinn, Bifrost* (The Cooperative College of Iceland) operate a two-year programme of preliminary studies to prepare students (with a vocational background) for studies at university level.

Studies for the *stúdentspróf* take four years (age: 16-20 years) and are open to anyone who has completed *grunnskóli* (primary and lower secondary school, 10 years' schooling, starting at the age of six).

Upper secondary education is general in nature and forms a base for further study. General theoretical education is offered in several divided lines of study all of which lead to the *stúdentspróf* (upper secondary school-leaving examination) after four years. This examination gives the holder the right to apply for admission to universities. All upper secondary schools follow a common curriculum published by the Ministry of Culture and Education. There are eight core education lines in upper secondary schools (according to a new law passed in 1996, taking effect in 2000, there will be four core education lines) and approximately 65% of the courses in these lines are the same for all students (a common curriculum). According to the line chosen the following subjects are taught at various levels: religion, Icelandic, foreign languages (Danish (or Swedish or Norwegian), English, German, French, Latin, Greek), classical civilisation, history, geography, biology, physics, chemistry, mathematics, social sciences, physical education and music. Approximately 35% of the courses are further education in one of the groups of subjects that form the core of the education line or in other specialisations, e.g. art. Courses in each subject have to be taken in a certain order and the student must complete at least 12 to 15 credits in each of the subjects that form the core of his/her education line. One credit is defined as approximately equal to two class-hours study load per week for one semester. The *stúdentspróf* consists of 132 credits plus eight credits in physical education.

Examinations are taken and projects carried out throughout the whole course of study. In the final examination, students sit a number of examinations, oral and/or written, in a range of the subjects central to the course being followed. Grades are awarded according to the 0 to 10 scale (see II.1.1). Course grades are given in increments of 0.5, and averages computed to two decimal places. A combined average of five is required to pass and a minimum mark of four in each individual subject. According to regulations a student may sit for examination in a given course twice. Students who are successful in the *stúdentspróf* receive a leaving certificate which states the examination grade in each course together with an average grade.

II.2. Intermediate qualifications in higher education

There are very few formal intermediate qualifications in higher education in Iceland.

II.2.1. Intermediate qualifications in non-university higher education

The non-university higher education institutions offer two- to four-year practical training programmes geared towards specific occupations in the subject fields stipulated by the law of each institution. In the Icelandic College of Sport and Physical Education the course to gain the teacher of physical education certificate is two years. In the Reykjavík College of Music the course to gain the teacher of music education certificate is three years. On completion of these courses students receive a certificate which is a professional teacher's certificate in the compulsory comprehensive primary and lower secondary school. In the case of the College of Sport and Physical Education the teacher of physical education certificate also gives the right to teach at upper-secondary level.

In the Commercial College of Iceland, School of Computer Science and the Cooperative College of Iceland there are two-year programmes leading to a diploma which in some cases qualifies the holder for immediate employment. However, these are not formal intermediate qualifications. The diploma is complete in itself, and may, in some cases, be used as the basis for further study for either a degree or a professional qualification.

II.2.2. Intermediate university qualifications

In the Faculty of Science at the University of Iceland there are offered two-year programmes in chemical engineering and engineering physics. These are non-degree courses which qualify the students to enter degree programmes abroad with advanced standing. In the University College of Akureyri and the Icelandic College of Engineering and Technology, there are two-year programmes leading to a diploma which in some cases qualifies the holder for immediate employment. However, these are not always formal intermediate qualifications. The diploma is complete in itself, and may, in some cases, be used as the basis for further study for either a degree or a professional qualification.

II.2.3. Academic recognition of intermediate qualifications for purposes of further study

In theory it is possible to change courses between the universities, but in practice the student does not always get full credits for a course taken at another institution. Qualifications from non-university institutions may in some cases be recognised as fulfilling the entrance requirements to particular university studies. The intermediate qualifications from universities and technical and vocational institutions may in some cases be recognised as part of a university degree course, usually as a minor subject. Transfer from one study course to another or one institution to another is always subject to the approval of the academic authorities of the receiving faculty or institution. The intermediate qualifications in chemical engineering and engineering physics from the Faculty of Science at the University of Iceland qualify the students to enter degree programmes abroad with advanced standing.

II.3. Final qualifications in higher education

Higher education courses in Iceland are examination-oriented, i.e. examinations are taken at the end of each course. Degree programmes are from three to six years in duration and in most institutions the studies are divided into study credits (*námseiningar*), 30 credits constituting one academic year of full-time studies (one credit equals approximately one week (50 hours) of full-time study), 15 credits constituting one semester. In order to be awarded the final qualification, students must complete a large number of examinations/tests, projects, written papers, and so on. In some cases, especially in humanities and social sciences where considerable freedom exists in the selection of courses and the order in which they are taken, students do not always complete their studies within the prescribed study period. This is partly due to employment and family responsibilities, partly to study periods abroad and partly because the final project or thesis takes more time to complete than is prescribed.

II.3.1. Final qualifications in non-university higher education

The non-university higher education courses are taught at a number of different educational institutions and have a prescribed duration of between two and four years. These institutions offer practical training programmes geared towards specific occupations in the subject fields stipulated by the law of each institution. The subject fields and occupations are fine and applied arts and crafts, drama, music, pre-school teaching, physical education and education for teachers of handicapped people, the mentally retarded in particular.

The form of instruction, structure of the study programme and examination requirements, also vary from course to course. The form of the course alternates between lectures, class instruction, groupwork, practical experience and specialised practical work. Class attendance is compulsory.

Students take examinations in a wide range of disciplines which are relevant to the course and they carry out a large written main project or special project. All these courses include practical training. At the end of the course students take oral and/or written examinations.

The forms of examinations and assessment vary from course to course but in all cases the course will be assessed by means of oral or written tests which can be arranged either internally or externally. Internal tests are assessed by internal examiner(s) or a combination of internal and external examiners, who are appointed by the educational institution. External examiners are appointed by the Ministry of Culture and Education on the recommendation of the educational institution.

As a general rule grades are expressed on the 0 to 10 scale (see I.3) or with the assessment pass/fail.

On completion of the course a certificate of completion (*prófskírteini*) is issued on which the results of the tests taken, and the assessment thereof, is stated. The title to which the course gives entitlement appears on the certificate (see Appendices I and II).

II.3.2. Final university qualification

The university higher education institutions offer courses which lead to the acquisition of an examination certificate (*prófskírteini*) and/or a degree (*gráðu*) or title (*titill*). Examination results and assessment are stated on the examination certificate as is the degree/title to which the course gives entitlement. These are awarded when the student successfully completes the examinations, projects or thesis prescribed by the subject regulations. A thesis or research project is nearly always a part of the final degree examination, whether it is a first (BA/BS/BEd) or an advanced university degree (Cand/MA/MS/MEd/MPaed/doctorate). A minimum of 90 credits is required for a first university degree, i.e. the bachelors degree. (See Appendix I on the number of credits required for the various university qualifications.)

The university higher education institutions offer a large number of widely varying degree courses of different types and levels in a wide range of subjects. Specialisation in a subject begins right at the start of university studies, i.e. university studies do not include a general studies component. This general studies background knowledge is obtained in upper secondary schools.

The examinations are administered by the institution itself. The forms of examinations and assessment vary from course to course but in all cases the course will be assessed by means of oral or written tests which can be arranged either internally or externally. Internal tests are assessed by internal examiner(s) or a combination of internal and external examiners, who are appointed by the educational institution. External examiners are appointed by the Ministry of Culture and Education on the recommendation of the educational institution.

As a general rule grades are expressed on the 0 to 10 scale (see I.3) or with the assessment pass/fail.

On successful completion, a course of study may in some cases lead directly to a professional qualification, while in other cases additional training specific to the profession is required. In order to qualify for a professional qualification in such cases, additional specialised study programmes are required, sometimes combined with practical training.

BA/BS/BEd próf — Bachelor degrees — BA/BS/BEd

Students who have completed three of four years of study on a degree course at the University of Iceland in the fields of humanities, theology or social sciences, and who have passed the prescribed examinations and the final thesis or research project, are awarded the title *Baccalaureatus artium*, the BA degree. The University College of Education offers a BA degree in Special Education, a three- or four-year (part time) programme for those who have completed a BEd degree or an equivalent professional degree. It also offers a BA degree in Art and Crafts, following a BEd degree, leading to a professional teacher certificate in the upper secondary school.

The BA degree courses are either concentrated on one broad major area of study or two thirds are a major area and one third a minor area of study. In some disciplines practical training in appropriate institutions is a part of the programme. Examinations are taken at the end of each semester. The BA thesis is completed at the end of the programme (or research project) and written (and in some cases oral) subject examinations.

Students who have completed three or four half years' of study on a degree course in the fields of economics, science, medicine, agricultural science or technical engineering subjects, and who have passed the prescribed examinations and the final thesis or research project, are awarded the title *Baccalaureatus scientiarum*, the BS degree.

The BS degree courses are either concentrated on one broad major area of study or two thirds are a major area and one third a minor area of study. In some disciplines practical training in appropriate institutions is a part of the programme. Examinations are taken at the end of each semester. The BS thesis is completed at the end of the programme (or research project) and written (and in some cases oral) subject examinations.

The BS degree is an academic (in some disciplines also professional) degree awarded by the University of Iceland, the University College of Akureyri, the Icelandic College of Engineering and Technology, The Cooperative College of Iceland and the Agricultural College. The disciplines are: at the University of Iceland: sciences (mathematics, computer science, physics, applied physics, geophysics, chemistry, food science, biochemistry, biology, geology, geography), economics, medicine (a special research degree), pharmacy, nursing and physical therapy; at the University College of Akureyri: nursing, fishery studies and management; at the Icelandic College of Engineering and Technology: civil and construction engineering, industrial economic engineering, management, medical technology and radiology technology; at the Cooperative College of Iceland: management; at the Agricultural College: agriculture.

Students who have completed three years' of study on a degree course in teacher education at the University College of Education and who have passed the prescribed examinations and completed the final thesis or research project, are awarded the title *Baccalaureatus educationis*, the BEd degree. The BEd degree is a professional teacher certificate in the compulsory comprehensive primary and lower secondary school.

The professional studies of the University College of Education are divided into five groups: education, social sciences, languages, natural sciences and arts and craft. The BEd programme is divided into professional courses in education and 15 different subject specialisations. Practical training in comprehensive primary and lower secondary schools is a part of the programme.

A general teacher education course of similar content and structure leading to the BEd degree is also offered at the University of Akureyri.

***BPhil Isl próf*-*BPhil Isl* degree**

In the Faculty of Arts at the University of Iceland, a special three year programme is offered in Icelandic for foreign students leading to the degree *Baccalaureatus Philologiae Islandicae*, the *BPhil Isl* degree. This degree programme is on the same level as the BA programme. The first-year course is designed for students with little or no prior knowledge of Icelandic. It is, however, necessary for students to have some experience in foreign language study and some knowledge of general linguistics. The main content of the programme is Icelandic language, grammar, literature and history.

***Kandidatspróf* (candidatus examination/degree)**

The *kandidatspróf* is only offered at the University of Iceland and qualifies the holder for a special office or profession. It is an academic/professional degree in the fields of theology, medicine, pharmacy, law, business administration, engineering and dentistry.

Examinations are taken at the end of each semester in the contents of the courses attended by the student. There are a number of obligatory courses and (in some cases) some courses selected by the student, practical training in appropriate institutions and thesis or research paper at the end of the course and written (and/or oral) subject examinations.

Candidates who have completed a degree course leading to the *kandidatspróf* are awarded the degree *candidatus/candidata* followed by the Latin title for the relevant subject field. The title is abbreviated, e.g. *candidatus/candidata theologiae* is *cand.theol.* The courses leading to *candidatus* degrees have a prescribed length of four to six years, the shortest (four years) being the *cand.oecon.* degree in business administration and the *cand.scient.* degree in civil, mechanical and electrical engineering which is accredited by the Icelandic Society of Chartered Engineers. The longest in duration (six years) is the *cand.med. et chir.* degree in medicine and the *cand.odont.* degree in dentistry. The others are *cand.juris.* degree in law (five years), *cand.theol.* degree in theology (five years) and *cand.pharm.* degree in pharmacy (five years).

Meistarapróf* — Master's degree — *MA/MS/MPaed/MEd

The University of Iceland awards the Master's degree. Students who have completed a degree course leading to the masters are awarded the degree *Magister Artium* and *Magister Scientiarum* followed by the Latin title for the relevant subject field. The title is abbreviated, e.g. MA and MS. The Magister's or Master's degree follows successful completion of a BA or BS degree. In some Master's programmes the admission prerequisite is a first class BA/BS degree and in engineering the admission prerequisite is a *cand.scient.* degree in engineering. The Master's degree is an academic/scientific degree, a research oriented training course with a prescribed length of two or three years after the BA/BS degree (one year after the *cand.scient.* degree in engineering) with courses, seminars, essays, research work and a thesis. There are a number of obligatory courses and a number of courses selected by the student. Examinations and assessments are at the end of each semester throughout the programme in the contents of the courses attended and based on essays written by the student. The MA or MS thesis or research paper is an academic/scientific work that should improve the ability of the student to solve problems in his field of study in a scientific and scholarly manner. There are also written (and in some cases oral) subject examinations. Usually about half of the time, though in some cases two thirds, is spent on the MA/MS thesis or a research project. The disciplines are natural sciences, economics, biomedicine (research degree), humanities and social sciences.

The University of Iceland also offers a degree course in education leading to the degree *Magister Paedagogiae*, the MPaed degree. This programme is only offered in Icelandic studies and follows successful completion of a first class BA degree.

The University College of Education offers a degree course leading to the degree *Magister Educationis*, the MEd degree.

***Doktorspróf* (doctorate degree)**

In Iceland the *doktorspróf* (doctorate degree) is awarded by the University of Iceland. The University College of Education is also allowed by its regulations to award the *doktorspróf*, but it has not yet exercised this right.

There are two types of *doktorspróf* at the University of Iceland. One is a special doctoral programme in Icelandic literature, Icelandic language and Icelandic history leading to an academic degree awarded by the Faculty of Arts. The duration of the doctoral programme is three or four years after an MA degree and the degree awarded is *Doctor Philosophiae, dr. phil.*, a degree comparable to the PhD. Admission prerequisite is a first class MA degree from the Faculty of Arts. Students who have completed a first class MA degree from another faculty at the University of Iceland or from another university abroad recognised by the Faculty of Arts, may apply for admission to the doctoral programme. In such a case the student must pass a special entrance examination before being accepted.

The programme is mainly a research degree leading to the completion of a doctoral thesis. It consists of courses, seminars, essays, major research work and a thesis. There are both obligatory courses and courses to be selected by the student and accepted by the supervisor. One year is devoted to obligatory studies and research abroad at a university recognised by the faculty. Written (and in some cases oral) subject examinations and assessments are at the end of each semester throughout the programme in the contents of the courses attended and essays written by the student. The main work is the preparation of the doctoral thesis based on the research work done during the whole period of studies. At the end of the programme there is an oral defence of the doctoral thesis. The doctoral degree is awarded on the basis of the thesis that is submitted to the Faculty of Arts and judged satisfactory for oral defence by a committee appointed by the faculty. Doctors have the right to use the title doctor and to put *dr.phil.* after their names. Their speciality is not indicated in the name of this degree.

The other type of *doktorspróf* is not a taught or preplanned programme. As a general rule this doctorate degree can only be awarded to those who have completed a candidatus degree, a master's degree or equivalent. It is awarded on the basis of a dissertation that is submitted to one of the university faculties and judged satisfactory for oral defence by a committee appointed by the faculty concerned. This type of *doktorspróf* is the result of intensive independent research and is an expression of recognition of the fact that the recipient possesses significant scholarly insight and maturity and has produced a real step forward for science in his or her dissertation. The award of a doctorate degree is marked by an oral defence open to the public and the issuing of a diploma. It is the highest obtainable academic degree. The degree awarded is doctor followed by the Latin title for the relevant subject field, e.g. *doctor scientiarum, dr. scient., doctor medicinae, dr.med.* etc.

Heidursdoktor (honorary doctorate)

In addition to the earned Master's and doctorate degrees the University of Iceland also awards honorary doctorates to more mature and established individuals who have made recognised contributions to public knowledge. This honorary doctorate is awarded after recommendation by three quarters of the eligible members of the the relevant faculty meeting and with the approval of the University Council. The degree awarded is of two kinds, *Doctor Philosophiae Honoris Causa* and *Doctor Litterarum Islandicarum Honoris Causa*.

The University College of Education also awards honorary doctorates to more mature and established individuals who have made recognised contributions to public knowledge. The degree awarded is *Doctor Educationis Honoris Causa*.

II.3.3. Academic recognition of final qualifications in higher education for the purpose of further study

In general, the majority of higher education qualifications qualify for admission to postgraduate university studies in different subjects. Thus all university first class BA/BS courses qualify for admission to Master's programmes in the relevant field of study where MA/MS programmes are offered. The possession of a first class Master's degree does not necessarily qualify the holder for a doctorate programme. An admission prerequisite is a first class MA degree from the Faculty of Arts. Students who have completed a first class MA degree from another faculty at the University of Iceland or from another university abroad recognised by the Faculty of Arts, may apply for admission to the doctoral programme. The student must then pass a special entrance examination before being accepted.

The faculty or department of the higher education institution concerned acts autonomously in taking each individual decision concerning academic recognition emphasising, as a rule, the quality of the candidate's academic achievements.

III. Special types and forms of final qualifications in higher education

Admission to advanced training depends on the professional recognition of academic degrees, for example, by the medical or engineering professions and by the relevant government authority.

The University College of Education offers a qualifying teacher education course for the secondary school level. This course is organised as a two-year part-time course of 30 credits following a full qualifying course in the relevant subject. The college also offers teacher education courses leading to the upper secondary school teacher's certificate and a professional course for school administrators. It also arranges numerous in-service training courses for teachers. The University College of Akureyri offers teacher training courses leading to the primary and lower secondary school teacher's certificate. The Icelandic College of Sport and Physical Education offers a teacher education course in physical education leading to a teacher's certificate in the compulsory comprehensive primary and lower secondary school and the upper secondary school. The Icelandic College of Art and Crafts offers a teacher education course for upper secondary school teacher's certificate in arts and crafts in cooperation with the University of Iceland. Students who have completed three years' of study in the Instrumental Teacher's Training Departments, the Vocal Teacher's Departments, and the Department of Theory and Composition at the Reykjavík College of Music acquire a professional music teacher's certificate in the compulsory comprehensive primary and lower secondary school.

For those who have already completed a Bachelor's degree, the Faculty of Social Sciences at the University of Iceland offers a two-year course in librarianship leading to the librarian's certificate and a one-year course for certified teachers in librarianship leading to the certificate for school librarian. The faculty also offers one year programmes (after a BA degree) in education, leading to the teacher's certificate, in social work, leading to the social worker's certificate and diploma courses in journalism and mass communication and in school counselling.

Examinations for professional qualifications in accountancy are provided by the Society of Chartered Accountants. Graduates in business administration from the Faculty of Economics and Business Administration, University of Iceland, who have completed the relevant advanced courses in accountancy and worked for two years with a chartered accountant, are eligible to undergo the special examinations for chartered accountants in order to gain the professional qualifications in accountancy recognised by the Ministry of Finance.

In addition to the *cand.juris.* degree from the Faculty of Law, University of Iceland, appointments in many legal professions, for example, within the administration of justice and courts require various practical experience.

Legal or certified translators undergo a special examination for authorised translators provided by a committee appointed by the Ministry of Justice and Ecclesiastical Affairs.

IV. Regulated professions under EC directives

In May 1993, *Althingi* (the Icelandic Parliament) passed a law allowing for the implementation of the first General Directive (89/48) on a general system for the recognition of higher education diplomas awarded on completion of professional education and training of at least three years' duration. The recognition of the regulated professions is authorised by the competent authority, that is, by the ministry concerned. The same applies to work permits. To ensure uniform application and to facilitate implementation, the activities of the designated competent authorities are coordinated by the Ministry of Culture and Education. The second General Directive (92/51) on a complementary general system for the recognition of professional education and training to supplement Directive 89/48, was confirmed in the spring of 1994 by a special law from *Althingi* allowing its implementation.

The following is an updated list of the regulated professions under the first General Directive (89/48).

<i>Starf</i>	Profession	Competent authority
<i>Bókasafnsfræðingur</i>	Librarian	Ministry of Culture and Education
<i>Framhaldsskólakennari</i>	Secondary school teacher	Ministry of Culture and Education
<i>Grunnskólakennari</i>	Primary school teacher	Ministry of Culture and Education
<i>Sálfræðingur</i>	Psychologist	Ministry of Health and Social Security
<i>Sérkennari</i>	Teacher of children with special needs	Ministry of Culture and Education
<i>Endurskodandi</i>	Chartered accountant	Ministry of Finance
<i>Adstodaryfjafræðingur</i>	Associate pharmacist	Ministry of Health and Social Security
<i>Félagsráðgjafi</i>	Social worker	Ministry of Health and Social Security
<i>Heilbrigdisfulltrúi</i>	Health inspector	Ministry of Health and Social Security
<i>Hnykkir</i>	Chiropractor	Ministry of Health and Social Security
<i>Idjuthjálfí</i>	Ergotherapist	Ministry of Health and Social Security
<i>Matvælafræðingur</i>	Food scientist	Ministry of Health and Social Security
<i>Meinataeknir</i>	Medical Laboratory (Pathology) Technician	Ministry of Health and Social Security
<i>Náttúrufr. í heilbr.thj.</i>	Natural scientist working in the health sector	Ministry of Health and Social Security
<i>Næringarfræðingur</i>	Nutritionist	Ministry of Health and Social Security
<i>Næringarráðgjafi</i>	Dietician	Ministry of Health and Social Security
<i>Röntgentæknir</i>	Radiographer	Ministry of Health and Social Security
<i>Sjúkrathjálfari</i>	Physiotherapist	Ministry of Health and Social Security
<i>Talmeinafræðingur</i>	Speech therapist	Ministry of Health and Social Security
<i>Tryggingastærðfr.</i>	Actuary	Ministry of Health and Social Security
<i>Throskathjálfí</i>	Social pedagogue	Ministry of Health and Social Security
<i>Byggingafræðingur</i>	Construction engineer	Ministry of Industry and Commerce
<i>Húsameistari</i>	Architect	Ministry of Industry and Commerce
<i>Innanhússhönnudur</i>	Interior designer	Ministry of Industry and Commerce
<i>Landslagshönnudur</i>	Landscape designer	Ministry of Industry and Commerce
<i>Tæknifræðingur</i>	Engineer	Ministry of Industry and Commerce
<i>Verkfræðingur</i>	Chartered engineer	Ministry of Industry and Commerce
<i>Dómari</i>	Judge	Ministry of Justice and Ecclesiastical Affairs
<i>Logmadur</i>	Advocate	Ministry of Justice and Ecclesiastical Affairs
<i>Nidurjofn.madur sjótj.</i>	Average adjuster	Ministry of Justice and Ecclesiastical Affairs
<i>Saksóknari</i>	Prosecuter	Ministry of Justice and Ecclesiastical Affairs
<i>Syslumadur</i>	District commissioner	Ministry of Justice and Ecclesiastical Affairs
<i>Prestur</i>	Priest	Ministry of Justice and Ecclesiastical Affairs

**Diagram
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Appendix I

Final qualifications

Non-university higher education institutions

The Icelandic College of Sport and Physical Education (*Íþróttakennaraskóli Íslands*)

Faculty/subject	Length	Credits	Degree
Physical education (<i>íþróttakennaramenntun</i>)	two years	62	Certificate

The Icelandic College for Pre-school Teachers (*Fósturskóli Íslands*)

Faculty/subject	Length	Credits	Degree
Studies for pre-school teachers (<i>fóstrumenntun</i>)	three years		Certificate
Professional course for pre-school administrators (<i>nám fyrir leikskólastjóra</i>)	one year		Diploma
Professional course in special education in early childhood (<i>sérkennslufræði</i>)	one year		Diploma

The Icelandic College of Social Pedagogy (*Throskathjálfaskóli Íslands*)

Faculty/subject	Length	Credits	Degree
Studies for educators of the mentally retarded and handicapped people (<i>throskathjálfun</i>)	three years	90	Certificate

The Icelandic College of Drama (*Leiklistarskóli Íslands*)

Faculty/subject	Length	Credits	Degree
Studies for professional actors (<i>leiklist</i>)	four years		Certificate

The Icelandic College of Art and Crafts (*Myndlista- og handíðaskóli Íslands*)

Faculty/subject	Length	Credits	Degree
Foundation course required for admission to departments	one year	35	Certificate
Department of Fine Art (<i>Myndlistardeild</i>):			
Painting (<i>málun</i>)	three years	90	Diploma
Sculpture (<i>skúlpturn</i>)	three years	90	Diploma
Printmaking (<i>grafík</i>)	three years	90	Diploma
Multimedia (<i>fjoltækni</i>)	three years	90	Diploma
Department of Applied Arts and Design (<i>Listidna- og hommunardeild</i>):			
Ceramics (<i>leirlist</i>)	three years	90	Diploma
Textiles (<i>textíll</i>)	three years	90	Diploma
Graphic design (<i>grafísk honnun</i>)	three years	90	Diploma

The Reykjavík College of Music (*Tónlistarskólinn í Reykjavík*)

Faculty/subject	Length	Credits	Degree
Instrumental teachers training departments (<i>Hljóðfærakennaradeildir</i>):			
Piano (<i>píanó</i>)	three years	90	Certificate
Harpsichord (<i>sembal</i>)	three years	90	Certificate
Organ (<i>orgel</i>)	three years	90	Certificate
String (<i>strengjahljódfæri</i>)	three years	90	Certificate
Guitar (<i>gítar</i>)	three years	90	Certificate
Wind Instrument (<i>blásturshljódfæri</i>)	three years	90	Certificate
Recorder (<i>blokkflauta</i>)	three years	90	Certificate
Vocal teachers department (<i>Songkennaradeild</i>)	three years	90	Certificate
Department of Music Education			

<i>(Tónmenntakennaradeild)</i> Department of Theory and Composition	three years	90	Certificate
<i>(Tónfræðadeild)</i> Soloist Department, Instrumental and Vocal	three years	90	Certificate
<i>(Einleikara- og einsongvaradeild)</i>	two to four years	90	Dipl./Solo/ Perf.

The Commercial College of Iceland, School of Computer Science
(Tölvuháskóli Verzlunarskóla Íslands)

Faculty/subject	Length	Credits	Degree
Computer Studies (<i>kerfisfræði</i>)	two years		Diploma

Appendix II

Final qualifications

University higher education institutions

The University of Iceland (*Háskóli Íslands*)

Faculty/subject	Length	Credits	Degree
Faculty of Theology (<i>Gudfræðideild</i>)			
BA studies in theology	three years	90	BA
Theology (<i>gudfræði</i>)	five years	150	<i>cand.theol.</i>
Deacon studies (<i>djáknanám</i>)	three years	90	Certificate
Deacon studies	+ one year ⁽¹⁾	30	Certificate
Faculty of Medicine (<i>Læknadeild</i>)			
Medicine (<i>læknisfræði</i>)	six years		<i>cand.med.et.chir</i>
BS studies in medicine (<i>research</i>)	+ one year ⁽²⁾		BS
Pharmacy (<i>lyfjafræði lyfsala</i>)	five years	150	<i>cand.pharm.</i>
Nursing (<i>hjúkrunarfræði</i>)	four years	120	BS
Physiotherapy (<i>sjúkrathjálfun</i>)	four years	120	BS
<i>Postgraduate studies:</i>			
MS-studies in Biomedical sciences	+ two years	60	MS
Faculty of Law (<i>Lagadeild</i>)			
Law (<i>logfræði</i>)	five years		<i>cand.juris.</i>
Faculty of Economics and Business Administration (<i>Vidskipta- og hagfræðideild</i>)			
Business Administration (<i>vidskiptafræði</i>)	four years	120	<i>cand.oecon.</i>
Economics (<i>hagfræði</i>)	three years	90	BS-econ.
<i>Postgraduate studies:</i>			
MS studies in economics	+ one year	30	MS-econ.
Faculty of Arts (<i>Heimspékideild</i>)			
Comparative literature (<i>almenn bókmenntafræði</i>)	three years	93 ⁽³⁾	BA
Linguistics (<i>almenn málvísindi</i>)	three years	93	BA
Danish (<i>danska</i>)	three years	93	BA
English (<i>enska</i>)	three years	93	BA
Finnish (<i>finnska</i>)	three years	93	BA

French (<i>franska</i>)	three years	93	BA
Greek (<i>gríska</i>)	three years	93	BA
Philosophy (<i>heimspeki</i>)	three years	93	BA
Icelandic (<i>íslenska</i>)	three years	93	BA
Italian (<i>ítalska</i>)	one year	30	second subject
Latin (<i>latína</i>)	three years	93	BA
Norwegian (<i>norska</i>)	three years	93	BA
Russian (<i>rússneska</i>)	three years	93	BA
History (<i>sagnfræði</i>)	three years	93	BA
Spanish (<i>spænska</i>)	three years	93	BA
Swedish (<i>sænska</i>)	three years	93	BA
German (<i>thyska</i>)	three years	93	BA
Icelandic for foreign students	three years	90	<i>BPhilIsl</i>
<i>Postgraduate studies:</i>			
Danish	+ two years	60	MA
English	+ two years	60	MA
Icelandic literature	+ two years	60	MA
Icelandic language	+ two years	60	MA
Icelandic studies	+ two years	60	MA
History	+ two years	60	MA
Icelandic	+ two years	60	<i>MPaed</i>
Icelandic literature	+ two or three years		dr.phil.
Icelandic language	+ two or three years		dr.phil.
History	+ two or three years		dr.phil.
Faculty of Dentistry (<i>Tannlæknadeild</i>)			
Dentistry (<i>tannlækningar</i>)	six years		<i>cand.odont.</i>
Faculty of Engineering (<i>Verkfræðideild</i>)			
Civil engineering (<i>byggingarverkfræði</i>)	four years	120	<i>cand.scient.</i>
Mechanical engineering (<i>vélaverkfræði</i>)	four years	120	<i>cand.scient.</i>
Electrical engineering (<i>rafmagnsverkfræði</i>)	four years	120	<i>cand.scient.</i>
<i>Postgraduate studies:</i>			
Engineering	+ one year	30	MS
Faculty of Science (<i>Raunvísindadeild</i>)			
Engineering physics (<i>edlisverkfræði</i>)	two years	60	Diploma
Chemical engineering (<i>efnaverkfræði</i>)	two years	60	Diploma
Mathematics (<i>stærðfræði</i>)	three years	90	BS
Computer science (<i>tolvunarfræði</i>)	three years	90	BS
Theoretical physics (<i>edlisfræði</i>)	three years	90	BS
Applied physics (<i>tæknileg edlisfræði</i>)	three years	90	BS
Geophysics (<i>jardedlisfræði</i>)	three years	90	BS
Chemistry (<i>efnafræði</i>)	three years	90	BS
Food science (<i>matvælafræði</i>)	three years	90	BS
Biochemistry (<i>lífefnafræði</i>)	three years	90	BS
Biology (<i>líffræði</i>)	three years	90	BS
Geology (<i>jardfræði</i>)	three years	90	BS
Geography (<i>landafræði</i>)	three years	90	BS

Postgraduate studies:

Mathematics	+ one year	30	Diploma
Physics/geophysics	+ one year	30	Diploma
Biochemistry	+ one year	30	Diploma
Biology	+ one year	30	Diploma
Geology/geography	+ one year	30	Diploma
Physics	+ two years	60	MS
Geophysics	+ two years	60	MS
Chemistry	+ two years	60	MS
Biochemistry	+ two years	60	MS
Food science	+ two years	60	MS
Biology	+ two years	60	MS
Geology	+ two years	60	MS

Geography + two years 60 MS

Faculty of Social Sciences (*Félagsvísindadeild*)

Library and information sciences (<i>bókasafns-og upplýsingafræði</i>)	three years	90	BA
Sociology (<i>félagsfræði</i>)	three years	90	BA
Social anthropology (<i>mannfræði</i>)	three years	90	BA
Psychology (<i>sálarfræði</i>)	three years	90	BA
Political science (<i>stjórnnálafræði</i>)	three years	90	BA
Pedagogy and education (<i>uppeldisfræði</i>)	three years	90	BA
Ethnology (<i>thjóðfræði</i>)	three years	60 + 30	BA

One-year programmes after BA degree:

Journalism and mass communication (<i>hagnyt fjolmidlun</i>)	+ one year	30	Diploma
Social work (<i>félagsráðgjöf</i>)	+ one year	30	Certificate
Teacher education (<i>kennslufræði</i>)	+ one year	30	Certificate
School counselling (<i>námsráðgjöf</i>)	+ one year	30	Diploma

Postgraduate studies:

Library and information sciences	+ two years	60	MA
Sociology	+ two years	60	MA
Social anthropology	+ two years	60	MA
Psychology (<i>sálarfræði</i>)	+ two years	60	MA
Political science	+ two years	60	MA
Pedagogy and education	+ two years	60	MA

The University College of Education (*Kennaraháskóli Íslands*)

Faculty/subject	Length	Credits	Degree
Qualifying teacher education course for the secondary school level (part-time) (<i>uppeldis- og kennslufræði fyrir framhaldsskólakennara</i>)	two years	30	Certificate
General teacher education (<i>almennt kennaranám</i>)	three years	90	BEd

Postgraduate studies after BEd degree:

Special education (part-time) (<i>sérkennslufræði</i>)	three or four years	60	BA
Professional course for school administrators (<i>Stjórnendanám fyrir starfandi skólastjórnendur</i>)	one and a half years	15	Diploma

The University College of Akureyri (*Háskólinn á Akureyri*)

Faculty/subject	Length	Credits	Degree
Industrial Management (<i>idnrekstrarfræði</i>)	two years	70	Diploma
Management (<i>rekstrarfræði</i>)	two years	70	Diploma
Total quality management (after industrial management or equivalent) (<i>gæðastjórnun</i>)	+ two years	50	BS
General education (<i>almennt kennaranám</i>)	three years	90	BEd
Fisheries studies (<i>sjávarútvegsfræði</i>)	four years	120	BS
Nursing (<i>hjúkrunarfræði</i>)	four years	120	BS

**The Icelandic College of Engineering and Technology
(*Tækniskóli Íslands*)**

Faculty/subject	Length	Credits	Degree
Department of Health Care (<i>Heilbrigdisdeild</i>)			
Pathology (<i>meinataekni</i>)	three and a half years	120	BS
Radiology (<i>rontgentækni</i>)	three and a half years	120	BS
Department of Construction (<i>Byggingadeild</i>)			
Technician's diploma (<i>byggingaidnfræði</i>)	one to one and a half years	42-62	Diploma
Construction technology (<i>byggingatæknifræði</i>)	three and a half years	134	BS
Department of Electronics/ Electrical Engineering (<i>Rafmagnsdeild</i>)			
Technician's diploma (<i>rafidnfræði</i>)	one and a half year	60	Diploma
Electrical/Electronics Engineering Technology (<i>rafmagnstæknifræði</i>)	one year ⁽¹⁾	40	

Management Department (*Rekstrardeild*)

Industrial Management (<i>idnrekstrarfræði</i>)	two years	72	
Industrial Engineering Technology (<i>idnadartækni</i>)	+ two and a half years ⁽¹⁾	90	BS
Department of Mechanical Engineering Technology (<i>Véladeild</i>)			
Technician's diploma (<i>vélidnfræði</i>)	three years ⁽²⁾	124	Diploma
Mechanical Engineering Technology (<i>véltækni</i>)	one year ⁽³⁾	40	

The Agricultural College, Department of Agricultural Science (*Bændaskólinn á Hvanneyri, búvísindadeild*)

Faculty/subject	Length	Credits	Degree
Agricultural science (<i>búvísindi</i>)	three years	90	Diploma
Agricultural science, special studies (<i>sérnám og rannsóknathjálfun</i>)	+ one year	30	BS

The Cooperative College of Iceland (*Samvinnuháskólinn, Bifrost*)

Faculty/subject	Length	Credits	Degree
Management (<i>rekstrarfræði</i>)	two years	70	Diploma
Management (<i>rekstrarfræði</i>)	+ one year	30	BS

Ireland

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Abbreviations

CAO	Central Applications Office
DIT	Dublin Institute of Technology
GCE	General Certificate of Education
GCSE	General Certificate of Secondary Education
HEA	Higher Education Authority
NCEA	National Council for Educational Awards
NUI	National University of Ireland
PhD	Doctor of Philosophy
RTC	Regional Technical College
VEC	Vocational Education Committee

Glossary

Ab initio

Literally, 'from the beginning'; for instance, a national diploma course which is of three years' duration and does not require candidates for admission to hold a relevant national certificate.

Academic autonomy

The freedom of staff in an institution of higher education to carry out teaching and research within their field of study without external interference.

Academic standards

Standards which must be met if the student is to be successful in gaining admission to, or passing, a course of higher education.

Academic year

The annual period in which the work of higher education takes place. It is divided into three terms, or two semesters.

Certificate

Award granted usually after successful completion of a course of one or two years' study in higher education.

Compulsory subject

Subjects which all students are obliged to study in order to meet the requirements of a course.

Continuing education

Educational programmes designed by higher level institutions to provide upgrading of qualifications or additional courses.

Continuous assessment

Assessment of a student's achievement on the basis of work done throughout the course of study instead of merely at its conclusion.

Credit

Certification that a course or a part of a course has been successfully completed.

Degree

Title awarded to a graduate of higher education in recognition of successful completion of certain specific programmes of study.

Department

An academic unit based on an individual subject and its subdivisions.

Diploma

Award usually granted after successful completion of a course of two or three years' study in higher education.

Distance education

Study conducted by the transmission of specially prepared teaching materials to the student through the postal services, radio or television. It does not require the physical attendance of the student at an educational institution.

Faculty

A group of academic subjects or disciplines comprising a defined area of study in which a degree is awarded (e.g. arts, science, education, engineering) or a term used to refer to academic staff.

General degree

A degree programme at pass level, usually requiring less specialisation than an Honours degree. It may also be of shorter duration.

Graduate

A person who has completed a degree in an institution of higher education.

Modes of evaluation

Different methods of evaluating students' work, such as examinations, essays, continuous assessment etc.

Modular credit system

An approach to curricular organisation that divides courses into 'modules' or sections which can be organised in a more flexible way than traditional academic programmes, including the possibility of periods of industrial experience and a gradual accumulation of credits towards a certificate, diploma or degree.

National certificate

A two-year course of study validated by the National Council for Educational Awards.

Pontifical university

A privately controlled institution established by the Catholic Church. It shares a campus at St Patrick's Maynooth, which is a recognised College of the National University of Ireland.

Postgraduate

A student in higher education following a course of study of a higher level following that of a basic degree.

Postgraduate degree

A higher degree, at Master or doctorate level, to be taken following the first or Bachelor degree. Other educational awards at postgraduate level include certificates and diplomas.

Primary degree

Bachelor or undergraduate degree.

Sandwich course

A course in which periods of study in an educational institution alternate with periods of practical experience in an appropriate work situation in industry, commerce or a profession.

School

A grouping of certain departments within a faculty with a view to promoting and coordinating interdisciplinary research and teaching on a particular topic.

Semester

A subdivision of the academic year, one of the two parts into which it has been divided.

Seminar

Study group of students in a particular field of study under the leadership of a teacher.

Thesis

A long dissertation presented in or by institutions of higher education

Third-level education

All forms of education provided in or by institutions of higher education.

Undergraduate

Student in higher education undertaking a course leading to a basic degree, or to a lower qualification.

University

A higher education institution committed to teaching and research in the major disciplines of knowledge and professions. It may comprise one or several colleges. The university will have the power to confer degrees.

I. Higher education system

Higher education in Ireland is funded to a significant degree by the State. A number of administrative bodies with coordinating and planning functions exist. In practice, however, each institution has a considerable amount of autonomy, especially in relation to academic matters. Courses of higher education are provided at over 50 institutions.

The level of autonomy varies not only between the different groups of institutions, but also from college to college within any single group. Overall, however, the concept of college autonomy is recognised by the State with the development of a higher education system carried out in a spirit of cooperation between the two partners.

A number of bodies, listed below, have been established by the Government, each of which has a specific role or function in the administration of higher education.

The Department of Education

The Department of Education has overall responsibility for the administration of public education. Most State subsidisation of universities and other third-level educational colleges is channelled through this department.

The Higher Education Authority (HEA)

The HEA is a State body with both executive and advisory functions in relation to the support and development of higher education by the State.

The advisory powers of the HEA apply throughout the whole of the third-level sector. Its funding role is limited to the universities and specifically designated institutions.

Vocational Education Committees (VECs)

While the VECs are no longer responsible for the administration of technical and continuing education, they do have an input into overall policy in this area.

The National Council for Educational Awards (NCEA)

The NCEA is the body that validates the majority of courses available in the National College of Art and Design and the Regional Technical Colleges and it confers many of their certificates, diplomas and degrees. It also validates a wide number of courses in the Dublin Institute of Technology. Awards in a number of independent (private) colleges are also made by the NCEA.

The Central Applications Office (CAO)

The CAO rationalises the admission procedures for the universities and operates the Central Admissions Service for the Regional Technical Colleges and Dublin Institute of Technology, and the Teacher Training Colleges.

Admission is based on the attainment of minimum academic standards in second-level education. The standard for each course is set by the colleges themselves. The CAO's processing system is designed to offer applicants the highest preference course to which they are entitled.

I.1. The institutions of higher education

The third-level teaching institutions may be divided into different groups according to the responsible authority.

Those under the statutory governing body:

the universities

the National College of Art and Design
the regional technical colleges (RTCs)
the Dublin Institute of Technology (DIT).

Those under private management:

the colleges of education
other colleges/institutes/schools.

The universities

The universities provide a full range of courses leading to primary degrees and postgraduate educational awards. A strong emphasis is also placed on research, especially by staff and postgraduate students. Courses in the arts and humanities, commerce and business studies, science (natural and applied), medicine, dentistry and paramedical studies, engineering, agricultural science, veterinary medicine, architecture, dairy science and law, are offered. (Not all of these specialisations will be available at each university.)

At present, there are five universities in Ireland. They are:

(1) *National University of Ireland (NUI);*

Constituent colleges of the NUI:

University College, Dublin

University College, Cork

University College, Galway

Recognised colleges of the NUI:

St Patrick's College, Maynooth

St Angela's College of Education for Home Economics

Royal College of Surgeons in Ireland;

(2) *University of Dublin;*

(3) *Pontifical University*, which is a privately controlled institution established by the Roman Catholic Church;

(4) *University of Limerick* (formerly the National Institute for Higher Education, Limerick);

(5) *Dublin City University* (formerly the National Institute for Higher Education, Dublin);

Regional technical colleges (RTCs)/colleges of the Dublin Institute of Technology

The regional technical colleges and some of the colleges of the Dublin Institute of Technology focus on applied studies, especially in the areas of business, engineering and science. The RTCs provide a comprehensive range of courses, including second-level craft and apprenticeship programmes and third-level certificate, diploma and degree courses.

The Dublin Institute of Technology (DIT) and other colleges within the vocational sector also provide education which is oriented towards vocational and professional needs. The provision of third-level part-time evening courses is a very important function of the DIT. Many part-time students who are already in employment pursue courses which are relevant to their fields of work.

The colleges of education

There are eight colleges of education located throughout the country, three of which offer degree courses leading to qualification as teachers of specialised subjects at secondary school level. The five remaining colleges of education provide approved degree courses which lead to qualification as a primary school teacher.

(The Education Departments in the universities each offer a one-year postgraduate diploma course in education. The award — higher diploma in education — is recognised for the purpose of teaching students at secondary level.)

National Distance Education Centre (NDEC)

The NDEC was established in 1982 to develop distance education programmes and is operated under the governing body of Dublin City University. Teaching programmes are provided at diploma, degree and postgraduate levels in such areas as information technology, humanities and accounting and are accredited by Dublin City University or the university which is acting as study centre. Short-term programmes in computing and continuing professional education courses are on offer and are accredited by the relevant professional bodies.

Other institutes, colleges, schools

Other institutions of higher education, mainly specialist in nature, also exist. The fields of study provided for, include art and design, music, business studies, accounting, professional legal studies and hotel and catering management. The institutions which do not receive State subsidy are in this sector.

Forms of post-school education not previously mentioned include secretarial and office skills courses, training for the *Garda Siochana* (police force), and religious instruction in seminaries. A broad range of post-leaving certificate courses has emerged covering business skills, computing, languages and other related subjects. Not all of these are classified as 'higher education'. For further details, see Section III.

I.2. Number of students

In 1992/93, there were 84140 full-time students in higher education in Ireland. The current rate of participation among the national 17-19 age cohort is 42%. This rate has risen sharply in the past decade and reflects the rapid growth in demand for higher education. Fees for higher education courses are, however, quite high; and a further weighting of approximately 100% is applied for students from outside the EC (1).

I.3. Organisation of courses of study

The academic year generally runs from September/October to finish with examinations in May or June. For some courses, final examinations are taken in September, although teaching finishes in May or June. The remainder of the time is for reading and individual study. The year is organised into three terms (trimesters) or, less commonly, two semesters.

Student statistics 1992/93

Number of persons receiving full-time education by gender and type of school or college attended

Type of school or college attended	Male	Female	Total
FIRST LEVEL			
<i>Aided by Department of Education:</i>			
National schools:	268449	253082	521531
ordinary classes	261637	248375	510012
special schools	4977	3107	8084
special classes	1835	1600	3435
<i>Non-aided:</i>			
Private Primary Schools	4295	3985	8280
Total — First level	272744	257067	529811
SECOND LEVEL			
<i>Aided by Department of Education:</i>			
Junior cycle:	105556	102348	207904
secondary	59823	72327	132150
community and comprehensive	15636	12288	27924
vocational	30097	17733	47 830
Senior cycle (general): ⁽¹⁾	62884	65893	128777
secondary	39163	47800	86963
community and comprehensive	8200	7225	15425
vocational	15518	10840	26358
preparatory colleges	3	28	31
Senior cycle (vocational): ⁽²⁾	7813	13915	21728
secondary	653	1 401	2054
community and comprehensive	722	1 106	1 828
vocational	6438	11 408	17846
Other courses:	228	349	577
Regional Technical Colleges	228	349	577
technology colleges	—	—	—
<i>Aided by other departments (agriculture/defence)</i>			
<i>Non-aided commercial</i>	1337	204	1541
<i>Non-aided commercial</i>	565	1138	1703
Total second level	178383	183847	362230
THIRD LEVEL			
<i>Aided by Department of Education:</i>			
HEA institutions:	22933	25191	48124
universities	22164	24376	46540
other HEA institutions	769	815	1584
Teacher training:	62	666	728
primary ⁽³⁾	61	462	523
home economics	1	204	205
Vocational training:	18395	13803	32198
Regional Technical Colleges	12 990	9374	22364
other vocational technological	5405	4429	9834
<i>Aided by Department of Defence</i>			
<i>Non-aided</i>	1 574	1453	3027
Religious institutions	574	341	915
Other	1 000	2112	3112
Total third level	43017	41123	84140
Grand total	494 144	482037	976181

⁽¹⁾ Includes leaving certificate, leaving certificate vocational programme, senior certificate and transition year option.

⁽²⁾ Includes vocational preparation and training 1 (VPT1) and post-leaving certificate (VPT2).

⁽³⁾ Includes students (male: 9, female: 78) of the Froebel College of Education.

Most courses are taught but many postgraduate degrees are available through research. The taught courses offer a combination of lectures, exercises and practical work, tutorials, and seminars; in addition, the student is expected to read widely outside the set texts, especially in arts subjects. Students will also be given time for independent study. The combination of teaching elements adopted will depend on the subject which is studied; e.g. geography would involve field trips outside the institution, while history would involve substantial independent research and reading. Some courses, such as the undergraduate degree programmes at the University of Limerick, Dublin City University and some regional technical colleges involve a substantial amount of work experience as part of the programme.

The following are the main types of courses available:

Duration

Undergraduate certificate	one or two years
Undergraduate diploma	three years
Postgraduate diploma	one or two years
Degree: • Undergraduate	three to six years
• Postgraduate	one to six years

Duration of undergraduate degree courses varies according to faculty and field of study. The minimum duration of an undergraduate degree course is three to four years. Some courses are longer: for example, undergraduate degree courses in medicine are of six years' duration. Most students complete their courses in the minimum time allowed. A small percentage repeat one year.

Examination procedures and results

In general, there is an examination at the end of each academic year of a third-level course. For the final year, most of the marks are awarded for the final examination; often a proportion of the marks will be awarded for presentation of a thesis or project, or some practical work. In colleges which have adopted a modular credit system, the method of grading may be close to continuous assessment, with marks awarded on completion of each module.

As mentioned, there will generally be an examination in each subject following completion of each academic year. Where there is a choice between Honours and general degrees (see below), selection for Honours is often made on the basis of first- or second-year examination results.

Within the marking system of the universities there is a differentiation made between general and Honours degrees. This differentiation is made in some faculties, notably arts and science.

The choice between general and Honours degrees is with Bachelor degrees only. Thus, a Bachelor degree may be conferred as either a general degree or an Honours degree:

General degrees

These do not involve as much specialisation as Honours degrees, and may therefore cover a broader range of subjects. They are awarded in the following classes:

- distinction
- credit
- pass.

A general degree is normally of three years in duration.

Bachelor (Honours) degree

The Honours degree generally necessitates a more in-depth study of a particular subject; it may involve more optional courses, project work or a dissertation and possibly a longer course duration, usually four years. It is also possible to obtain an Honours degree from certain three year courses. Honours degrees may be awarded in the following classes:

- First Class Honours
- Second Class Honours, grade I
- Second Class Honours, grade II
- Third Class Honours
- Pass.

An undifferentiated Class II grade is awarded in some degrees. Very few formal preliminary programmes exist — entrance is most commonly to the first year of the degree or diploma. In arts and science, a further specialisation will usually take place after the first or second year, and frequently the student will take only one subject to Honours degree level. In other faculties, the student can generally specialise after two or more years' study, and a range of options is available in areas such as commerce and business studies.

Rules relating to repeating examinations will differ from college to college, but in general, the student will be allowed at least one opportunity to repeat an examination.

Provision has been made for the establishment of NCEA diplomas and certificates in continuing education, and for single subject certification, a method of assessment and evaluation in single subjects, which provides a structure which allows part-time students to study one or more subjects at a time, and receive national certification on successful completion of their studies. It is now possible for part-time students to qualify for national certificate, diploma and degree awards through the accumulation of single subject certificates.

For final examinations, and for many others, external examiners are used in addition to the staff of the university or college.

II. Qualifications and diplomas

The following section details the different qualifications which are available within the university sector and outside it. In general, the levels of award are similar, although outside the universities there is a greater degree of emphasis placed on sub-degree awards such as undergraduate certificates and diplomas. But first, the admission requirements to higher education institutions will be discussed.

II.1. Qualifications for admission to higher education

The final secondary school examination — the leaving certificate — is provided after a two- or three-year course at second-level schools. Pupils must sit the leaving certificate in at least five subjects, though most pupils take seven. There are higher and ordinary level papers in all subjects. The higher papers cover the same ground as the ordinary course, but with greater depth and broader detail. As there are over 30 subjects available at leaving certificate level, no one school will be able to offer a full range of subjects.

Most students will be automatically entered by their schools for the leaving certificate, although it is also possible to sit the examination outside the school system. It is a State examination, mainly written, although there will be oral tests in Irish and foreign languages, and subjects such as art are tested practically. No particular subjects are compulsory, although a recognised course of study for the examination would involve at least five subjects, including Irish.

Each candidate is awarded a mark for each subject in the range as follows:

A1: 90-100%

A2: 85-89%

B1: 80-84%

B2: 75-79%

B3: 70-74%

C1: 65-69%

C2: 60-64%

C3: 55-59%

D1: 50-54%

D2: 45-49%

D3: 40-44%

E: 25-39%

F: 10-24%

No grade: less than 10%

This marking system applies to subjects taken at both higher and ordinary levels.

II.1.1. Qualifications for admission to non-university higher education

The leaving certificate (see above) is the main qualification for admission to non-university higher education. Other examinations which may be acceptable are:

the GCE/GCSE (general certificate of education/general certificate of secondary education) examinations taken by candidates in Great Britain and Northern Ireland (for further details, see chapter on the United Kingdom);

the senior trade certificate of the Department of Education. This is acceptable for some courses only. It is an apprenticeship-based course, taken after the junior trade certificate and involving a minimum of one year's study. This course is offered at some vocational schools and technological colleges which provide second-level programmes.

In general, the technological colleges require a leaving certificate in five subjects including English and mathematics, or equivalent. A pass (¹) in a science subject is also required for a few courses.

For the colleges of education, a grade C on higher level leaving certificate paper in Irish, and passes in English, mathematics and three other subjects are the minimum requirements for entry.

Interviews, aptitude tests and practical tests are also used by some colleges. For instance, applicants for physical education teacher training must undergo tests of movement ability, and most art colleges require a portfolio of work.

Admission to a number of courses is competitive and a points system may be used. In most colleges, however, there may be provision for admitting a small number of students who do not meet the formal course requirements.

Summary qualifications for admission to non-university higher education:

1. Leaving certificate
2. Senior trade certificate — some colleges and courses only
3. GCE 'A'-levels or equivalent.

II.1.2. Qualifications for admission to university

In general, admission to university education is on the basis of the matriculation certificate or certain grades in the leaving certificate. In the colleges of the National University of Ireland (NUI), all students who wish to register for a course of study leading to a degree must hold a matriculation certificate.

Up until 1992 students could matriculate by taking the matriculation examination. Students now matriculate on the results of the leaving certificate or other equivalent examination. The leaving certificate is the examination which is most commonly presented for admission to universities and is acceptable to all colleges in this sector.

Most institutions in this sector operate a points system for undergraduate courses. Places are allocated in order of merit on the basis of qualifications in the final school-leaving examination. The best six results of the leaving certificate are counted for points purposes. The maximum that can be gained by a student is 600 points (¹).

The points system is particularly important in areas where a high number of applicants are competing for a limited number of places, such as medicine, physiotherapy or pharmacy.

Many courses also have special subject requirements; to qualify for admission, students must have passed, or obtained certain grades in, certain subjects in the leaving certificate or other examination. For instance, in the University College Dublin, mathematics and a laboratory science subject are required for admission to courses in medicine, veterinary medicine, science, engineering, architecture, agricultural science, physiotherapy and radiography, in addition to the normal requirements of Irish, English and another language in order to matriculate.

The minimum entry standard in universities is a leaving certificate in at least six subjects, with grade C or better in at least two subjects on higher level papers.

Competition for places is, however, intense, so it is almost invariably necessary to present educational attainments well in excess of those listed above. A small number of places is usually given to students who do not meet the formal entry requirements, e.g. mature students.

Summary of qualifications for admission to university:

1. Leaving certificate
2. GCE A-levels or equivalent.

II.2. Intermediate qualifications in higher education

There are no formal intermediate qualifications in higher education in Ireland. However, in the NCEA award system, it is often possible to progress from one level to another. For example, within a given field of study, a student could progress from completing a one-year Certificate to the second year of a national certificate programme; from that, on to the third year of a national diploma programme; and from there on to a degree programme.

A good academic achievement in an undergraduate certificate or diploma might also enable the student to transfer to the second or third year of a university degree programme. A limited number of students may gain entry on the grounds of mature years, 23 plus years for degree courses and 22 plus years for sub-degree programmes.

II.3. Final qualifications in higher education

II.3.1. Final qualifications in non-university higher education

Outside the university system, most courses are validated by the National Council for Educational Awards (NCEA). Many of the academic awards are made by the NCEA.

In addition to degrees, a wide range of certificates, diplomas and higher diplomas are available at institutions of higher education.

In the universities, only a few diplomas are available at undergraduate level, although there is a wide variety of postgraduate specialisms on offer. In the regional technical colleges and colleges of technology, undergraduate diplomas and certificates offer training in applied fields at technician and basic level. Postgraduate programmes are also available.

In the colleges whose courses are validated by the NCEA the established levels are the following.

Sub-degree courses:

One-year certificate courses: basic course in a specified subject area which is of one year's (full-time) duration.

Two-year national certificate courses (post-leaving certificate): a national certificate may be obtained after a two-year full-time course.

Three-year national diploma or national certificate plus one year: a national diploma may be taken in two ways; either through a year's study following the national certificate or through a three year *ab initio* course. These awards may also be obtained through a comparable period of part-time study.

Degree courses

Bachelor degree: This is generally obtained after a three- or four-year full-time course, or comparable period of part-time study. Projects and work experience are commonly required.

Graduate diploma: This is generally obtained after a one year postgraduate course or comparable period of part-time study.

Master degree: A Master degree can be obtained through course work and examination, through research, or through a combination of the two methods. The normal entry standard for a Master degree should be an Honours Bachelor degree in a field of study directly related to the subject matter of the Master's thesis proposal.

Doctoral degree: Normally admission to the Doctoral register is confined to candidates who have been admitted at least 12 months previously to the Master's register and who have been recommended for transfer to the Doctoral register. There may be exceptions to this rule where a candidate with a first class Honours Bachelor's degree may be recommended for transfer to the Doctoral register without first registering for a Master's degree.

These awards are made by the NCEA; in addition, some colleges or institutions may award certificates and diplomas themselves.

(For examinations procedure and results, see I.3.)

II.3.2. Final university qualifications

Bachelor degree

The first degree at universities is the Bachelor or primary degree. This degree provides a basic grounding in a particular subject or field of study. The Bachelor degree seldom amounts to a professional qualification.

Duration of primary degree courses varies according to faculty or field of study. At the constituent colleges of the national university there are three types of Bachelor degrees: general degree, Honours degree and special degree (one subject taken at general degree level and one subject taken at Honours degree level).

The Bachelor of Arts (BA) programme requires three or four years' study, while primary degrees in medicine and dentistry take six years. The Bachelor (Honours) degree at Trinity College requires four years' study. Most students complete their courses in the minimum time allowed. A small percentage may repeat one year.

A course description and sample diploma follow at the end of this chapter (see Appendix I).

Master degree

A Master degree can be obtained through course work and examination, through research, or through a combination of the two methods. The normal duration of study is from one to three years following the Bachelor degree. A Master degree is available in most fields of study.

A good Bachelor (Honours) degree is generally required for admission.

A course description and sample diploma follow at the end of this chapter (see Appendix I).

Doctoral degrees

The Doctor of Philosophy degree (PhD) may be obtained in most fields of study at universities. The degree, which is gained through research only, is generally not taken until six terms after the Master degree, but in special cases candidates may be permitted to take it six terms after the primary degree.

A minimum of three years' study is generally required for completion of the PhD degree, and candidates will be allowed six years from the date of registration in which to complete their thesis. The degree will not be awarded unless the examiners report that the work is worthy of publication as a whole or in part.

The standard required for acceptance to the PhD is generally a high level of academic attainment in the primary degree and evidence of aptitude for research.

Higher doctorates are awarded to candidates who have distinguished themselves by original research in their field.

(For the examinations' procedures and results, see I.3. For a list of the degrees available from each of the main awarding bodies, see Appendix II.)

II.3.3. Academic recognition of final qualifications in higher education for further study

To proceed to postgraduate education in Ireland, the student must hold a primary degree. In exceptional circumstances, it may be possible for holders of professional qualifications, or those who are not formally qualified but have substantial experience in a particular field, to be admitted to postgraduate study.

For admission to a postgraduate diploma courses, a pass in the primary degree is required. For a Master degree, it is generally necessary to have attained a good Honours standard in the primary degree. As noted above, candidates must also display evidence of aptitude for research if they wish to register for the PhD degree.

In recent years, there has been an increased tendency for universities and institutes of higher education to offer in-service programmes, available to graduates working in particular fields. Some of these carry diploma or certificate awards, others are non-award courses.

It may also be possible for graduates to train in various professions.

There are no State examinations, and various professionals — doctors, dentists, veterinary surgeons, pharmacists, etc. — must attend university and obtain a Bachelor degree (and in some cases a Master degree) before gaining formal entry to their professions.

Entry to the legal profession is governed by two separate institutions: the Honourable Society of King's Inns (for barristers) and the Incorporated Law Society (for solicitors). Each institution sets its own examinations, and a Bachelor degree is usually required for initial entry to both establishments.

Examinations for professional qualifications in accountancy are provided by the separate accountancy bodies. It is sometimes possible for graduates in business studies to be exempted from one or two of these professional examinations.

A degree is required for both primary and post-primary teaching in Ireland. Post-primary teachers generally have an undergraduate degree of three or four years' duration and then must obtain the higher diploma in education from one of the universities.

III. Special types and forms of final qualifications in higher education

As mentioned earlier, various forms of post-school training exist outside the formal higher education sector. These include programmes sponsored by the State industrial training authority (FAS), classes in office skills, and training for the *Garda Siochana* (police force).

These programmes vary in length and may be up to one academic year's duration.

Apprenticeship programmes may be of several years' duration. These are provided at RTCs and the colleges of the DIT. They are mostly formally classified as second level, although some programmes may provide a means of entering higher education (see II.1.1 on the senior trade certificate).

In addition, post-school training (of several years' duration) forms an essential part of the requirements for a vocation to the ministry or religious life in both Christian and non-Christian creeds. In a substantial number of cases, students are required initially to have reached matriculation standard in the final examinations at secondary school level, and to undertake subsequently certain prescribed courses of further study (for example, in theology or philosophy). Some such courses receive dual recognition from both the State itself and the church concerned; the courses themselves may be offered by institutions, such as universities, which are State supported or may be offered in institutions such as seminaries or special theological colleges, which receive little or no funding from the State.

IV. Regulated professions under EC directives

Regulated professions covered by Directive 89/48/EEC

Physiotherapist
Speech therapist
Social worker
Psychologist
Physicist
Orthoptist
Optician
Occupational therapist
Microbiologist
Medical laboratory technician
Environmental health officer
Dietician
Therapeutic radiographer
Diagnostic radiographer
Biochemist
Analytical chemist
Primary school teacher
Vocational school teacher
Teacher/lecturer in regional and technological colleges
Registered secondary school teacher
Community and comprehensive school teacher
Barrister
Solicitor
Patent agent
Certified public accountant
The Institute of Certified Public Accountants in Ireland
Chartered Association of Certified Accountants

The Institute of Chartered Accountants in Ireland

Royal Town Planning Institute, Irish branch (Southern section)
Irish Planning Institute, MIPI

Ordinary Member (MICI) and Licentiate (LICI) of the Institute of Chemistry of Ireland
The Institution of Engineers of Ireland

Chartered surveyor

Member of the Institute of Taxation in Ireland

Bibliography

Central applications office handbook. Available free of charge from the CAO. This handbook gives information on how to apply for admission to full-time undergraduate courses in the institutions for which applications are dealt with by the CAO.

CAO college guide 1988. Careers and Educational Publishers, Claremorris, Co. Mayo. This contains information on all aspects of the CAO applicants' scheme in addition to other helpful information for students.

Higher education in the European Community: Student handbook (Sixth Edition), European Commission.

The NCEA directory of approved courses in higher education 1994 (11th edition). This is a detailed guide to degree, diploma and certificate courses approved by the NCEA.

Getting into college. Mary O'Donnell, The Desmond Press 1987. This is a guide to getting a place at college and outlines the relevant application procedures. Each college produces a handbook or brochure providing general information for students: these are usually provided free of charge. In some of the colleges there are, in addition, more detailed booklets on specific matters, e.g. courses of study, scholarships, etc.

**Diagram
system**

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Appendix I

Samples of study programmes

National certificate in computing

The national certificate in computing is aimed at preparing students for a career in commercial software production and related activities.

The course emphasises project and practical work reflecting current practice in industry. Students have access to different types of advanced multi-uses mini- and micro-computer systems. A wide variety of sophisticated applications software packages and programme and system development tools are used.

Employment prospects range from taking charge of computing in smaller firms to being a member of a software development team involved in international contracts.

Computing career opportunities are varied and the increasing use of information technology means that the future will hold even greater prospects for those with a good theoretical and practical foundation.

On completion of the certificate, it is possible to continue on to the national diploma in computing and other higher level courses.

National diploma in computing

The diploma equips students with additional knowledge and expertise in programming both for commercial applications and for computer operating systems and develops systems analysis and design to a high level.

Throughout the course there is an emphasis on individual and group projects and case-study, culminating in a three-month study with a firm.

Students are encouraged to gain a high level of initiative and self-reliance and are equipped to keep up with developments in a rapidly changing area. Applicants must have a national certificate in computing at credit level or alternatively have one year's post-certificate experience in appropriate employment.

National certificate in computing

Year one

problem solving and Pascal
COBOL
computer science
accounting
mathematics
communications
business information
processing
practical computer systems
analysis and design
Structure (through C).

Year two

RPG
COBOL
computing practice
computer technology
communications
practical software
systems
systems
algorithms and data.

National diploma in computing

Year three

software engineering

database management systems
assembly language programming
Unix programming
systems software and networks
business management
artificial intelligence and expert systems.

Bachelor of Commerce BComm (University College Cork)

Regulations for the degree of BComm

The Bachelor of Commerce may be awarded as a pass degree or with Honours. Courses in all subjects are common, i.e. both pass and Honours courses. Courses are based on a unit system. A unit consists of approximately 25 one-hour lectures or the equivalent. Subjects to make up 17 units are taken in the first year, 16 units in the second year, 14 units in the third year and 12 units in the fourth year. A schematic outline of the overall programme of study is given below.

First year: first university examination in commerce

To be admitted to the Faculty of Commerce for the programme of study leading to the degree of Bachelor of Commerce an applicant must have matriculated in the Faculty of Commerce.

To be admitted to the first university examination in commerce a student must have satisfactorily attended, for at least three terms (i.e. the first year), the following courses comprising 14 units.

Compulsory:

accounting I, the market economy, principles of economic analysis,
business communication skills, introduction to business law,
sociology, mathematics for business, foundations of public administration I, business statistics.

Optional:

One course must be selected from:
English, German, French, Italian, Spanish (A) or (B).

Selection of courses:

The selection of any language course is conditional on the Head of Department concerned being satisfied that the student is capable of benefiting by attendance at that course.

Two-year rule:

A student must pass the first university examination in commerce within two academic years from the date of entering the faculty.

Second year: second university examination in commerce

No student may register for the second year programme of study until the first university examination in commerce has been passed.

To be admitted to the second examination a student must have satisfactorily attended, for at least three terms (i.e. second year), the following course comprising 14 units.

Compulsory:

accounting II, business finance, economics of enterprise,
the law of business transactions, organisational behaviour,
introduction to food business management and marketing,
MIS I — introduction to management information systems,

foundations of public administration II.

Optional:

One course must be selected from:

English, French, German (A) or (B), Irish, Italian, Spanish, economic history.

Selection of courses:

A student may not select a subject which has already been taken in the previous year.

Two Year Rule:

A student must pass the second university examination in commerce within two academic years from the date of passing the first university examination.

Third year: third university examinations in commerce

No student may register for the third year programme of study until the second university examination in commerce has been passed.

To be admitted to the third examination a student must have satisfactorily attended, for at least three terms (i.e. the third year), the following courses comprising 14 units.

Compulsory:

Accounting III, the macroeconomic environment, principles of management, principles of marketing, MIS II — systems analysis and design.

Optional:

Courses to make up four units must be selected from:

business finance and taxation, quantitative methods for management, semi-State organisations, company law and the law of business organisation, French, German (A) or (B), Irish, Italian, Spanish.

Selection of courses:

A student may not select a course which has already been taken in the previous year.

Fourth year: BComm degree examination

No student may register for the fourth year programme of study until the third university examination has been passed.

To be admitted to the BComm degree examination, a student must have satisfactorily attended, for at least three terms (i.e. the fourth year), this course comprising 12 units selected from the list of specific subject groups.

1. Courses comprising at least six units and not more than eight units chosen from one of the major subject groups — accounting, economics, management information systems, law, management, marketing and public administration;
2. Courses to make up 12 units, chosen from the remaining major subjects groups above or a language.

Selection of courses:

A student may not select a course which has already been taken in the previous year. Where a course is available as part of more than one subject group, credit for taking it may only be obtained once.

Master of Arts (MA) (University College Cork)

Regulations for the degree of MA

The degree of MA will be awarded on satisfactory completion of a dissertation and/or on passing a written examination. Additional practical or oral examinations may be held in some cases.

The minimum number of terms for a full-time student is three terms, the norm for a full-time student is a maximum of six terms. The number of terms for part-time students is determined on a pro rata basis.

The MA degree is available in the following areas:

applied psychology, archaeology, Celtic studies, computer science, early and medieval Irish, economics, education, English, European studies, folklore, French, geography, German, Greek, Greek and Roman civilisation, history, Italian, Irish cultural studies, Latin, mathematics, mathematical physics, modern Irish, music, philosophy, sociology, Spanish, statistics.

Music

A candidate for the MA degree in music must have obtained the BMus degree or equivalent, and have obtained at least a second class Honours in the relevant technical or historical part of the examination in which he/she wishes to proceed to the Master degree.

The degree of MA in Music may be obtained either by completing a dissertation and/or by passing a written examination. By dissertation only, a programme of study not involving formal tuition will be devised and supervised by a member of teaching staff of the department in accordance with the candidate's ability, interests, and progress.

The candidate will be examined mainly by dissertation or portfolio, which may not be submitted until at least three terms have elapsed since first registration. The candidate may also be required to undergo oral examination.

By dissertation and examination, the candidate will follow a programme of formal tuition and study chosen from those offered by the department. Each programme will consist of several courses taken concurrently; tuition in each course will consist of lectures, classes, seminars, or tutorials given during the first three terms (full-time) or six terms (part-time) of the candidate's registration.

The candidate will be assessed largely on the evidence of written papers and/or submissions; certain programmes may also involve practical examinations. Written papers and practical examinations will usually be taken in September; submissions will usually be presented during the programme. The candidate may also be required to undergo oral examination.

Programmes

Programme I: Music before 1800:

- studies in the history of music in a period before 1800;
- studies in the analysis of music of the chosen period;
- palaeography, notation, and principles of editing in music of the chosen period;
- detailed study of an individual genre, source, composer, technique, or other suitable topic within the period.

Programme II: Early 20th century music:

- studies in the history of music from c. 1890 to c. 1950;
- studies in the analysis of music from c. 1890 to c. 1950;
- detailed study of an individual genre, composer, technique, or suitable topic.

Programme III: The interpretation of Baroque music:

- studies in the history of music from c. 1600 to c. 1750;
- studies in repertory and interpretation relevant to the candidate's chosen instrument(s);
- practice in *basso continuo*;
- performance on the candidate's chosen instrument(s);
- a special project: either detailed study of an approved topic, or the preparation of an edition of relevant music.

Programme IV: Composition and analysis:

- composition;
- studies in the history of 20th-century music;

studies in the analysis of 20th-century music.

Programme V: Conducting:

practical studies in conducting technique, rehearsal technique and score reading;

studies in musical analysis;

orchestration;

repertory studies in a prescribed period and/or genre.

Appendix II

University Education Awards and the National Council for Educational Awards

Bachelor degree

The bachelor degrees awarded by each institution are as follows

Dublin City University

	Duration
Bachelor of Arts (BA)	three or four years
Bachelor of Business Studies (BBS)	four years
Bachelor of Engineering (BEng)	four years
Bachelor of Science (BSc)	four years

National University of Ireland

Bachelor of Agricultural Science (BAgr Sc)	four years
Bachelor of Architecture (BArch)	five years
Bachelor of Arts (BA)	three years
Bachelor of Civil Law (BCL)	three years
Bachelor of Commerce (BComm)	three to four years
Bachelor of Dairy Science (BSc Dairying)	four years
Bachelor of Dental Surgery (BDS)	five years
Bachelor of Education (BEd)	three years
Bachelor of Engineering (BE)	four years
Bachelor of Financial Services (BFS)	three years
Bachelor of Laws (LLB) ⁽¹⁾	one to three years
Bachelor of Medicine (MB), ⁽¹⁾	six years
Bachelor of Music (BMus)	four years
Bachelor of Nursing Studies (BNS)	three years
Bachelor of Obstetrics (BAO)	six years
Bachelor of Public Administration (BPA)	four years
Bachelor of Physiotherapy (BPhysio)	four years
Bachelor of Radiography (BRadiog)	four years
Bachelor of Science (BSc)	three to four years
Bachelor of Social Science (BSocSc)	three years
Bachelor of Surgery (BCh), ⁽¹⁾	six years
Bachelor of Technology (BTech)	four years
Bachelor of Veterinary Medicine (MVB)	five years

University of Dublin

Bachelor in Architectural Science (BArchSc) ⁽²⁾	five years
Bachelor in Arts (BA)	four years
Bachelor in Business Studies (BBS)	four years
Bachelor in Computer Science (BSc(Comp))	four years
Bachelor in Dental Science (BDentSc)	six years
Bachelor in Divinity (BD) ⁽³⁾	
Bachelor in Education (BEd)	four years
Bachelor in Education (Home Economics) (BEd (Home Econ))	four years
Bachelor in Engineering (BAI)	four years
Bachelor in Laws (LLB)	four years
Bachelor in Music Education (BMusEd)	four years
Bachelor in Medicine (MB)	six years

Bachelor in Obstetrics (BAO)	six years	
Bachelor in Science (Applied Sciences) (BSc(Applied Sciences)) ⁽²⁾	four years	
Bachelor in Science (Engineering) (B Sc(Eng)) ⁽²⁾	four years	
Bachelor in Science (Environmental Health) (BSc(EnvHealth)) ⁽²⁾	four years	
Bachelor in Science (Human Nutrition) (BSc(HumNut)) ⁽¹⁾	four years	
Bachelor in Science (Management) (BScMgmt) ⁽²⁾	four years	
Bachelor in Science (Occupational Therapy) (BSc(CurOcc))	four years	
Bachelor in Science (Pharmacy) (BSc(Pharm))	four years	
Bachelor in Science (Physiotherapy) (BSc(Physio))	four years	
Bachelor in Science (Remedial Linguistics) (BSc(RemLing))	four years	
Bachelor in Science (Surveying) (BSc(Surv)) ⁽²⁾	four years	
Bachelor in Social Studies (BSS)	four	years

Bachelor in Surgery (BCh)	six years
Bachelor in Theology (BTh)	four years

University of Limerick

Bachelor of Arts (BA)	three to four years
Bachelor of Business Studies (BBS)	four years
Bachelor of Design (BDes)	four years
Bachelor of Education (BEd)	four years
Bachelor of Engineering (BEng)	four years
Bachelor of Technology (BTech)	four years

Pontifical University

Baccalaureate in Canon Law (BCL)	two years
Baccalaureate in Philosophy (BPh)	three years
Baccalaureate in Theology (BD)	three years
Baccalaureate in Theology and Arts (BATH)	three years

National Council for Educational Awards

Bachelor of Arts (BA)	three to four years
Bachelor of Business Studies (BBS)	three to four years
Bachelor of Design (BDes)	four years
Bachelor of Engineering (BEng)	four years
Bachelor of Science (BSc)	four years
Bachelor of Technology (BTech)	four years

Master degree

The Master degrees which are available from the various awarding bodies follow

Dublin City University

Master of Arts (MA)			
Master of Business Administration (MBA)			
Master of Business Studies (MBS)			
Master of Engineering (MEng)			
Master	of	Science	(MSc)

National University of Ireland

Master of Agricultural Science (MAgrSc)
Master of Animal Science (MAnSc)
Master of Applied Science (MApplSc)
Master of Architectural Science (MArchSc)
Master of Architecture (MArch)
Master of Arts (MA)
Master of Business Administration (MBA)
Master of Business Studies (MBS)
Master of Commerce (MComm)
Master in Counselling (MCoun)
Master of Dairy Science (MScDairying)
Master of Dental Surgery (MDS)
Master of Economic Science (MEconSc)
Master of Education (MEd)
Master of Engineering (ME)
Master of Engineering Design (MED)
Master of Engineering Science (MEngSc)
Master of Industrial Engineering (MIE)
Master of Information Technology (MIT)
Master of Laws (LLM)
Master of Library and Information Studies (MLIS)
Master of Management Science (MMangtSc)
Master of Medical Science (MMedSc)
Master of Obstetrics (MAO)
Master of Philosophy (MPhil)
Master of Psychological Science (MPsychSc)
Master of Public Administration (MPA)
Master of Public Health (MPH)
Master of Regional and Urban Planning (MRUP)
Master of Rural Development (MRD)
Master of Science (MSc)
Master of Science (Agriculture) (MSc(Agr))
Master of Social Science (MSocSc)
Master of Social Work (MSW)
Master of Surgery (MCh)
Master of Urban and Building Conservation (MUBC)
Master of Veterinary Medicine (MVM)

University of Dublin

Master in Agriculture (AgrM)
Master in Agriculture (Forestry) (Agr(Forest)M)
Master in Arts (MA)
Master in Business Administration (MBA)
Master in Dental Science (MDenSc)
Master in Economic Science (MSc(Econ))
Master in Education (MEd)
Master in Engineering (MAI)
Master in Letters (MLitt)
Master in Obstetrics (MAO)
Master in Philosophy (MPhil)
Master in Philosophy (Ecumenics) (MPhil(Ecum))
Master in Science (MSc)

Master in Science (Management) (MSc(Mgmt))
Master in Surgery (MCh)
Master in Veterinary Medicine (MVM)

Pontifical University

Licentiate in Canon Law (LCL)
Licentiate in Philosophy (LPh)
Licentiate in Theology (STL)
Master in Theology (MTh)

University of Limerick

Master of Arts (MA)
Master of Business Studies (MBS)
Master of Business Administration (MBA)
Master of Education (MEd)
Master of Engineering (MEng)
Master of Science (MSc)
Master of Technology (MTech)

National Council for Educational Awards

Master of Arts (MA)
Master of Business Studies (MBS)
Master

of

Engineering

(MEng)

Master of Science (MSc)
Master of Technology (MTech)

Doctoral degree

The list of Doctoral degrees available from each awarding institution is contained below

National University of Ireland

Doctor of Celtic Studies (DLittCelt)
Doctor of Economic Science (DEconSc)
Doctor of Laws (LLD)
Doctor of Literature (DLitt)
Doctor of Medicine (MD)
Doctor of Music (DMus)
Doctor of Science (DSc)
Doctor of Philosophy (PhD)

University of Dublin

Doctor in Divinity (DD)
Doctor in Laws (LLD)
Doctor in Letters (LittD)
Doctor in Medicine (MD)
Doctor in Music (MusD)
Doctor in Philosophy (PhD)
Doctor in Science (ScD)

Pontifical University

Doctor in Canon Law (DCL)
Doctor in Philosophy (DPh)
Doctor in Theology (DD)

University of Limerick

Doctor of Philosophy (PhD)

National Council for Educational Awards

Doctor of Philosophy (PhD)

Italy

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Abbreviations

<i>CL</i>	<i>Corso di laurea</i>
<i>CP</i>	<i>Corso di perfezionamento</i>
<i>CUD</i>	<i>Consorzio università a distanza</i>
<i>CUN</i>	<i>Consiglio universitario nazionale</i>
<i>DL</i>	<i>Diploma di laurea</i>
<i>DR</i>	<i>Dottorato di ricerca</i>
<i>DU</i>	<i>Diploma universitario</i>
H. Ed.	Higher education
<i>ISEF</i>	<i>Istituto superiore di educazione fisica</i>
<i>ISIA</i>	<i>Istituto superiore per le industrie artistiche</i>
<i>MURST</i>	<i>Ministero dell'università e della ricerca scientifica e tecnologica</i>
<i>SDAFS</i>	<i>Scuola diretta a fini speciali</i>
<i>SS</i>	<i>Scuola di specializzazione</i>
USE	Upper secondary education

Glossary

The so-called ‘maturity diploma’ is a school leaving qualification awarded on completion of upper secondary education. It has different designations depending upon the type of upper secondary institutions attended. Any type of maturity diploma grants access to any faculty of any university provided it has been acquired after a five-year upper secondary course (following five years of primary and three years of lower secondary school). At present the *diploma di maturità magistrale* (teaching orientation) and the *diploma di maturità artistica, I e II sezione* (artistic orientation) take just four years but they give admission to only two university faculties. A supplementary fifth year (*anno integrativo*) of upper secondary studies entitles previous holders of the four-year diploma to enroll in all university faculties.

Dottore/Dottoressa

The academic title conferred on everyone who has completed a *laurea* degree course. Therefore, there is the *dottore in architettura, in ingegneria, in lettere*, etc., depending on the *Laurea* degree course taken.

Esame di laurea

Every student who has passed all the examinations included in a *laurea* curriculum is admitted to the *esame di laurea*, which consists of the defence of a *tesi* (thesis) before the Faculty Council.

Istituti superiori di educazione fisica

Institutes granting degrees which entitle their holders to teach physical education at Italian schools of every type and at all levels, provided they have also passed the relevant State professional examination (*esame di abilitazione all'insegnamento*).

Istituto universitario

University institutions normally including only a very limited number of faculties (one or two), e.g. the *istituto universitario di architettura di Venezia-IUAV*, with only a faculty of architecture; the *istituto universitario di lingue moderne-IULM*, in Milan, with the faculty of foreign languages and literature; the *istituto universitario navale*, in Naples, with the faculty of transport economics and international trade and that of naval studies.

Laurea

Second level university degree. It is awarded when the prescribed number of study years has been completed and all the examinations of the curriculum plus the *esame di laurea* have been passed.

Perfezionamento (corsi di)

Advanced study courses run by universities in a variety of fields, on the basis of local cultural needs. They are generally reserved for graduates with a *laurea* degree (*post-Lauream* studies), but at times may also be open to holders of a lower qualification, provided it is at university level (e.g. a first university degree, like the new *DU* or a *SDAFS* university diploma). They aim at providing opportunities for deeper study of and competence in certain subjects, or for updating as well as retraining for certain professions. Admission may be subject to limitations. They do not result in the award of a formal qualification: at the end of each course only a certificate of attendance is issued.

Politecnico

Technical university specialising in the two faculties of architecture and engineering. In Italy there are three *politecnici*, in Bari, Milan and Turin.

Scuole dirette a fini speciali

The *scuole dirette a fini speciali* are an integral part of the university they belong to. They are meant to complement the theoretical knowledge and competence usually offered by universities with the kind of professional training needed by the different local contexts. After a two- or three-year course students are awarded a university diploma (*diploma universitario*) entitling its holders to enter professions for which a *laurea* is not necessary, but which nevertheless require specific professional training at university level.

Specializzazione (scuole di)

Post-Lauream schools awarding diplomas which enable their holders to qualify as specialists in certain professions. They are designed to provide *laurea* graduates with advanced technical education and competence in specific professional areas. Admission is subject to restrictions. Simultaneous enrolment in two specialisation schools or in a specialisation school and a *corso di perfezionamento* or a doctoral course (*dottorato di ricerca*) is forbidden by the current university legislation. Students enrolled in *SS* must sit annual examinations, and finally a degree examination as indispensable conditions for the achievement of the *diploma di specialista*.

I. The higher education system

In the Italian context higher education (H. Ed.) is to be considered as largely synonymous with university education.

Until 1990 Italian university education was traditionally marked by a strong academic character: universities predominantly offered *laurea* degree courses, a type of studies falling in the category of long cycle, second level academic education. Actually, universities also offered short cycle, first level studies: in addition to a very few university diploma courses, characterised by a traditional theoretical approach to disciplines, they used to run two to three year diploma courses basically meant for vocational training (see I.3(b) *SDAFS* courses). But such vocational studies were organised on a rather small scale and concerned a limited number of professions, mainly in the paramedical sector. Therefore, until the end of the 1980s, a short cycle, H. Ed. channel of a less academic and more professional character had not developed on a large scale in the majority of disciplinary areas, either within or outside the universities ⁽¹⁾.

A bill passed by parliament in 1990 (*legge 19 novembre 1990, n. 341*), while reforming various aspects of the university system, also reorganised the whole sector of first cycle university education by introducing the new university diploma courses, which combine academic instruction with vocational training, as well as by restructuring the already existing ones along with all study and training opportunities offered by the *scuole dirette a fini speciali (SDAFSs)*.

The non-university sector of higher education covers the two areas of artistic and physical education. Teaching/learning activities are characterised by quite a practical approach to the various disciplines; in general terms, it can be said that the basic purpose of this type of education, compared with university studies, consists of the training for specific professions in these two areas.

I.1. The institutions of higher education

Non-university higher education institutions

The types of institutions conferring non-university H. Ed. qualifications are the Academies of Fine Arts, the Higher Institutes for Artistic Industries, and the Higher Institutes for Physical Education.

Accademie di belle arti

The Academies of Fine Arts are the natural step upwards from the art schools at upper secondary level, with which they share and further develop the basic methodological trends. The academies aim at preparing their students for practical artistic activity by attendance at and work in an artist's studio. They offer four-year diploma courses in painting, sculpture, decoration and scenography.

The Higher Institutes for Artistic Industries are educational institutions providing instruction and training in the applied arts, i.e. those artistic fields which are connected with industrial production.

ISIAs run four-year diploma courses, predominantly in such sectors as graphics, graphic design, industrial design, technologies and design of pottery articles ⁽¹⁾.

Syllabuses vary considerably from one institute to another in relation to each specific sector of industrial application; however, they always include theoretical disciplines along with the elaboration of feasible projects and participation in workshop activities.

Istituti Superiori di Educazione Fisica — ISEFs

The main objectives of the Higher Institutes for Physical Education consist of promoting the knowledge of all sciences related to physical education and of developing the scientific and technical culture needed to train people who intend to teach physical education or to become sports technicians.

ISEFs offer three-year diploma courses, based on a combination of scientific and cultural education with technical and practical training.

University institutions

Italian university education — whose fundamental purpose consists ‘in promoting the progress of science and supplying the general culture as well as the specific scientific knowledge which is afterwards needed for the practice of the professions’ — is based on a centralised system of regulations and provisions, the responsibility for university education policy and planning being shared between parliament and government.

In 1989 all university institutions were granted a considerable degree of autonomy thanks to the passing of parliamentary act No 168, which, while establishing the *Ministero dell’Università e della Ricerca scientifica e tecnologica (MURST)* as a separate ministry, entirely independent of the Ministry of Education, also indicated the various university functions falling within the competence of individual institutions (¹).

Act 168/1989 states that universities enjoy didactic, scientific, organisational and financial autonomy; they are individually responsible for laying down their own statutes as well as study regulations.

Therefore, Italian universities may be described as public law corporations endowed with autonomy in the management of their own affairs, even if they still have to comply with a few general rules fixed by the relevant central authorities: it is a way of harmonising institutional and organisational diversity within a national framework.

University institutions may be called *università* (universities) or *politecnici* (technical universities) or *istituti universitari* (university institutes). The division into three typologies does not imply any difference in the quality of education or in the types of degrees which may be awarded; it simply makes reference to a different number of faculties within the institutions themselves: universities normally embrace the full range of studies, whereas *politecnici*, which are specialised in technical subjects, comprise the two faculties of engineering and architecture. University institutes generally offer only a particular area of learning, which means just one or two faculties.

In relation to their legal status and financial resources, there are two main categories of university institutions, i.e. those which have been directly established and are almost exclusively supported by the State (that is to say State universities, usually called *università degli studi*), and those which have been set up by independent entities and do not rely on public funding, except for some contributions which may be granted by the State for teaching in them (they are generally named *libera università*, meaning non-State, i.e. private, and independent universities). State universities are created by parliamentary acts, whereas those independent universities which have been legally recognised by State authorities are granted the status of public law corporations by individual decrees of the President of the Republic, which also approve their statutes. The teaching activity of such free universities is therefore subject to the general university regulations; consequently, all their degrees, when falling within the official university system, rank equal to those awarded by State universities.

A few university institutions set themselves certain particular objectives, defined in their statutory rules along with the general university legislation. Such institutions have therefore also to comply with specific regulations which are unique to them. For example, the specific objective of the Oriental University Institute in Naples is the teaching of African and Asiatic languages, while the Naval University Institute (Naples) provides its students with education and training for the practice of those professions which are directly related to the maritime industry and trade.

A special standing in the Italian university tradition is enjoyed by two renowned institutions at Pisa, the *Scuola normale* and the *Scuola superiore di studi universitari e di perfezionamento*, which set themselves the objective of training young academics for advanced scientific research and teaching (¹).

Finally, to complete the picture of university education one more sector should be mentioned, that of *educazione a distanza* (distance tuition), which has been developing for the last 13 years. Distance courses, so far implemented, fall within the category of short-cycle studies at first university level (i.e. university diploma courses) or that of *post-Lauream* short programmes (e.g. refresher courses for professional teachers, advanced annual courses in specific disciplines).

At present, there are two official organisations developing the necessary technologies and teaching-learning tools to be employed in distance tuition: *Consorzio università a distanza-CUD* (Consortium for distance university education), and *Consorzio Nettuno*, both being constituted by a number of universities associated with some public and private enterprises.

The *CUD*, established in 1984 under the patronage of the Ministry of Education, was endowed with legal status by Presidential Decree No 1015 of 19 November 1986. It has prepared all necessary instruments for a university diploma course in informatics, while developing materials for a few more degree courses (e.g. university diploma course in foreign languages, *Laurea* course in economics). The *CUD* mainly makes use of informatic technologies as well as of printed and audiovisual teaching materials.

The *Consorzio Nettuno*, founded in November 1991, started its educational activities in the academic year 1992/93 by providing tools and technologies for the setting up of a university diploma course in information and automation engineering; in 1993/94 it also produced what was necessary for the establishment of a university diploma course in telecommunications engineering. The *Consorzio Nettuno* exploits radio-television networks, telematic and informatic technologies and multimedia teaching materials.

Being awarded by one of the member universities, the educational qualifications conferred at the end of the distance courses have legal validity on national territory.

I.2. Numbers of students (1)

Since the approval of the parliamentary act of November 1990 (No 341), which, in particular, reformed the whole sector of first level degrees, new trends have been slowly developing as far as the students' choices of university studies are concerned: a few students, previously enrolled in *laurea* courses, have decided to change to the corresponding *DU* studies, while a larger number of *maturati* (holders of the school leaving diploma) have decided to immediately enter *DU* courses (i.e. the new first level university studies) instead of the so far better known *Laurea* degrees.

In 1992/93 the total number of Italian students who were matriculated in university courses at first and second level amounted to 348432: 334273 in *Laurea* courses and 14159 in first level studies, of which, 6848 obtained matriculation in the newly-established *DU* courses, while 7311 were matriculated in other degree courses at first university level (*SDAFS*, *ISEF*, and former university diploma courses).

In comparison with the previous academic year, statistical data show an increase in the numbers of students deciding to enter first level university studies; it may not yet be marked but, taking into account that the new university diploma courses were only established by ministerial decree in January 1992 and were started in 1992/93, growth is expected to become more significant in the near future.

In 1994/95 the number of Italian students who enrolled in *DU* courses amounted to 58874 (28825 women); 20119 of them were admitted to the first year of *DU* studies (*DU* matriculation).

In the same academic year (1994/95), 1601873 Italian students (833164 women) were registered in *laurea* degree courses, including both regular students (*studenti in corso*) and the so-called *studenti fuori corso* ⁽¹⁾, who made up about the 30% of the total number of enrolled students. The students matriculated in *laurea* courses (i.e. admitted to the first year) were 335499 (175 746 female students).

Between 1987 and 1991 the percentage of students who obtained the *laurea* hovered around 27-30% of the total number of enrolled students. Such a low proportion reflects the very high drop-out rate of the Italian university system; this is expected to gradually decrease thanks to the establishment of the new *DU* courses, which brought about quite a number of new study opportunities at first academic level.

In 1993, some 92467 students were awarded the *laurea* degree, while 6 522 obtained the *DU* (1st degree). In 1994, the number of *laurea* holders amounted to 98057 (51784 women), whereas the *DU* was conferred on 6879 students (4360 women).

With reference to such third level degree studies as specialisation schools, statistical data say that in 1994/95 they were attended by 36 708 postgraduates (17605 female students); in 1994, some 14 803 postgraduates (6350 women) were awarded the final third level degree (*diploma di specialista*).

In the academic year 1994/95 only 363 foreign students enrolled at Italian universities in *DU* courses: some 222 came from European countries (86 from EU Member States), the rest mainly from Africa and Asia.

As for *laurea* courses, 21859 foreign students (9521 women) enrolled in 1994/95; some 13931 of them came from European countries; in particular, 9660 (4309 female students) belonged to the EU, with Greece as the best represented Member State (6960 students), while 4271 (2571 female students) came from other European countries, including the EFTA area.

The main areas in which foreign students traditionally enrol are medicine, architecture, engineering and pharmacy.

The total number of foreign students who were awarded a *laurea* degree in 1994 amounted to 1288 (503 female students).

I.3. Organisation of courses of study

Even if the Italian university system has retained some of its traditional features — such as its typical rhythm based on an annual teaching module — it must be stressed that quite a number of innovations have taken place in the last two decades, all of them connected with the organisation of individual degree courses, the general institutional management, and university life in a broader sense. Said innovations, at first introduced on an experimental basis, have been adopted by way of consolidated practice, if not always with the force of law.

Moreover, a few significant reforms — such as the establishment of the new Ministry of Universities and Scientific and Technological Research, the creation of new institutions to avoid the overcrowding of university sites in the largest cities, the increase in institutional autonomy, the renewal and rearrangement of course contents and study organisation at all levels, and the adoption of new provisions to improve students' welfare services — have brought about considerable changes in the whole system.

A parliamentary act which has greatly affected university studies and organisation is the reform of 19 November 1990, No 341.

First of all, the above act clearly states that Italian university education is organised on different levels, each offering one or more typologies of final degrees (¹). Then, with reference to first level studies, it defines the nature and purpose of the new university diploma courses, describing also the possible evolution of university schools for special purposes. Finally, it makes provisions related to the quality and effectiveness of teaching and learning at all levels: e.g. it states that a *laurea* degree must be the minimum compulsory requirement for access to the teaching profession in elementary schools; it also establishes new specialised *post-Lauream* courses for the training of secondary school teachers; determines that tutorial assistance is to be granted to both undergraduate and graduate students, and so on.

With reference to university autonomy, Article 11 of the Reform Act 341/1990 determines that it is up to the academic senate of the individual universities, on the advice of the faculty councils concerned, to provide for the curricular organisation of each degree course at any level. Within the general framework of the national university legislation, therefore, faculty councils autonomously decide on the typology of subjects to be adopted (if annual or semestral), on study plans with the traditional subdivision of the disciplines into fundamental ones and electives, on study modules, teaching methodologies, class attendance, types of exams, criteria for the assessment of their students' performance, possible introduction of a credit system, etc.

It seems convenient to illustrate the most typical elements of the various university degree courses considered by study level and type of degree.

First level studies ⁽¹⁾

These include: (a) *corsi di diploma universitario-DU* (university diploma courses), (b) courses run by the *scuole dirette a fini speciali-SDAFSs* (schools for special purposes), both resulting in the award of a *diploma universitario*, and (c) *scuole di ostetricia* (schools for midwives' training).

Both *DU* and *SDAFS* courses are short-cycle academic studies with a vocational feature, resulting in the award of more or less professionally-oriented degrees.

In comparison with *DU* and *SDAFS* studies, midwives' courses are based on an even more marked professional approach.

The main purpose of all first level studies is to provide students with a type of university education and training which, after two or — more frequently — three years, may enable them to enter certain professions in the public or private sector.

The holders of *DU* and *SDAFS* diplomas may also be admitted to second level studies (*corsi di laurea*), but, since *SDAFS* programmes more particularly emphasise the vocational features of the various disciplines, the relevant university authorities normally grant a different kind of academic recognition to these two categories of qualifications (see II.3.3).

(a) *DU courses*

The new *DUs* have been currently defined as *laurea breve* by most Italian and foreign mass media; such definition appears inappropriate when taking into account not so much their length — shorter than that of *laurea* courses — but the nature and contents of studies, which, answering to different aims from the *laurea* sector, are less complex from a theoretical point of view and more professionally oriented.

The latest statistical data (*CIMEA*, October 1996) register 664 *DU* courses, grouped in 102 national types. Being set up by the relevant university faculties, they cover almost all the basic disciplinary areas such as agriculture, architecture, economics, engineering, foreign languages, humanities, law, mathematics, medicine and surgery, natural sciences, pharmacy, philosophy, physics, political science, sociology, veterinary medicine.

All *DU* courses which have been established so far last three years, full time. As for study organisation, it combines academic lectures with practical activities to be regularly distributed over the academic year. Each *DU* course encompasses a group of obligatory disciplines, and a number of optional ones, which are left to the student's choice within a predetermined list. Class attendance has been made compulsory by most faculties.

According to the legal regulations in force, the basic teaching unit is the module made up of a fixed number of teaching hours, cover various disciplines. Individual subject courses within a module may be annual or semestral (for details, see description of *CLs* under second level studies, in the present section); in practice, a large number of faculties at the various institutions have adopted the semestral option or even a combination of the two ⁽¹⁾.

When formulating his or her study plan, a student may decide to adopt the so-called *piano di studi statutario* (statutory plan), which corresponds with the official curriculum included in the university statute, or to build up a *piano di studi individuale* (personal study plan), to be submitted to the approval of the faculty council. Personal study plans are usually accepted, provided they are based on the subjects actually taught at the university site concerned and include the full number of compulsory subjects.

A period of practical training (*tirocinio*) is often included in the *curriculum studiorum*.

(b) *SDAFS courses*

The schools for special purposes are university institutions depending on the relevant faculties.

First established in 1933 ⁽²⁾ and subsequently reorganized in the 1980 ⁽³⁾, *SDAFSs* had the essential purpose of granting diplomas that could enable their holders to take up jobs and professions which did not need the study level of a *laurea*, but, at the same time, required both scientific knowledge and sound cultural background along with practical training of university kind.

Being set up by specific faculties, these types of unit form an integral part of the universities they belong to. Therefore, when a *SDAFS* is established, the fact must be recorded in the university statute; moreover, it is the relevant university faculty that lays down proposals for the school curriculum, entry requirement, study organisation, examination procedure, and so on.

SDAFSs' general regulations are determined by the Ministry of Universities on the advice of the *CUN* (National University Council).

As concerns *SDFASs* that have to conform to EC regulations, and those which award degrees permitting the practice of certain professions, the official rules must be agreed upon by two ministries, the one for universities and the one competent for the profession concerned; so, for instance, in the case of *SDAFSs* related to the sanitary sector, responsibilities are shared between the Ministry of Universities (always in conjunction with *CUN*) and the Ministry of Health.

According to the 1990 reform ⁽¹⁾, a few universities are modifying their statutes so as to transform some *SDAFSs* into *DU* courses, whereas others are confirming their *SDAFSs* as such. The reason for this choice is that some institutions, in order to adequately meet specific requirements of the local labour market, while continuing to ensure the general cultural background of their first level degree courses, at the same time do not want to renounce their typical professional orientation, which is stronger and more specific in *SDAFS* courses than in *DU* ones.

SDAFSs' main purpose is — and has always been — to prepare students for specific professions, meeting the market demand for an emerging class of trained technicians.

Most *SDAFSs* operate in the health, agricultural, technical and economic sectors. According to the latest statistics (*CIMEA* 1996), 100 *SDAFS* degree courses are presently available, grouped in 38 national types.

The average duration of their degree courses varies from two to three years, full time.

Study organisation is generally modelled on the *CL* pattern; nevertheless, *SDAFS* studies still retain a few typical features, which distinguish them from both *CL* studies and *DU* courses:

- class attendance is always compulsory;
- syllabuses are normally more vocationally-oriented than in *DU* courses;
- a period of practical apprenticeship (*tirocinio*) is compulsory: it is meant to provide students with a practical training which, together with the indispensable purely academic education, should enable them to enter the work world in the full sense, with no need for further professional experience.

(c) *Schools for midwives*

University faculties of medicine and surgery may run courses for the professional training of prospective midwives: to such an end, individual universities take advantage of the obstetric and gynaecological departments of their teaching hospitals.

Courses for midwives' education and training were first regulated by Royal Decree 2128/1936 and then reformed by *RD 24 luglio 1940, n. 1630*. New legal provisions were made in 1957 in order to better determine admission requirements and study length.

In the 1980s ⁽¹⁾ the curricula of all schools for midwives were transformed so as to update their scientific content and ensure that their education and training conformed to the indications contained in the specific EC sectoral directive.

Second level studies ⁽¹⁾

Corsi di laurea — CL

Consisting exclusively of *laurea* degree courses, second level studies are intended for the students to acquire cultural, scientific and methodological knowledge at a higher level so that, thanks to deep theoretical investigation of the most varied questions and initial training in research, they may subsequently take up greater professional responsibilities.

Altogether, the *CLs* presently set up at the various university sites are 1181, covering 87 national types (*CIMEA*, October 1996).

As a rule, the legal length of *CLs* is four to five years (full time), depending on individual faculties and study courses; only for the faculty of medicine and surgery does the duration fixed by law amount to six years. The tendency has recently emerged to extend the length of some *CLs* in order to grant new recruits the necessary basic culture along with deeper academic education. With such a view in mind, in recent years a reorganisation of some curricula took place, according to which certain four-year *CLs* were transformed into five-year ones.

All educational activities are still officially organized by academic years, each beginning on 1 November and ending on 31 October of the following year; but quite a number of faculties at the different university sites have definitively adopted the semestral system, especially in the case of medical, scientific and technological degree courses. As a consequence, the subjects taught in *corsi annuali* (annual courses) start classes in early November and finish at the end of May, whereas classes of subjects taught in *corsi semestrali* (semestral courses) meet from mid-September to January (first semester) and from February to mid-June (second semester).

As concerns annual courses, classes usually meet three hours per week. In the case of *corsi semestrali compattati o intensivi* (compact or intensive semestral courses), teaching is compressed into just one semester by doubling the weekly timetable (five to six weekly contact hours or more), so that total contact hours and syllabuses dealt with may correspond to those of annual courses.

There are also semestral courses based on three contact hours per week, as is customary in other countries: the *CL* in agronomy, for instance, is modelled on the most common semestral pattern, i.e. in teaching modules smaller than the traditional annual subject courses; following to one of the recent rearrangements, the same change has also occurred in the six-year *CL* in medicine and surgery.

The most common teaching method is that of traditional lectures, but classes may also take place in the form of seminars on restricted subject matters related to an individual discipline, of *esercitazioni* (activities consisting of the application of rules and principles for the solution of specific problems), laboratory practice, etc. By their practical and applied aspect, seminars and *esercitazioni* form a useful support the theoretical notions of a specific course; at the same time, seminars also promote the students' training in scientific research.

Class attendance is often optional, even if it is strongly recommended especially in the case of scientific and technological subjects, since it eventually becomes indispensable for success in the related examinations.

The *regolamento didattico di ateneo* (university teaching regulations) — that is to say the whole of the legal dispositions regulating the organisation and development of each degree course at each individual institution ⁽¹⁾ — fixes the length of each *CL*, defines as *annualità* ⁽²⁾ the complete number of courses necessary for the attainment of the final degree, determines the subdivision between the courses regarded as *fondamentali*, whose exams are compulsory, and *complementari*, that is optional, which comprise the study plan. As in the case of *DU* courses, students may choose to follow the official study plans, advised by the faculties concerned, or to formulate their personal ones: by 31 December every year, the latter are to be submitted to the proper faculty council for approval.

The curricula of a few *CLs* include a subdivision into two phases: a first *biennium* (two-year period), which is considered as a preliminary stage since it is characterised by basic disciplines, and a subsequent *triennium* (three-year period), consisting of a specialised application stage and generally articulated in various *indirizzi*, i.e. groups of more specific disciplines, purposely selected for specialisation. Also the reverse is possible (a first general *triennium* followed by a specialised *biennium*), but it occurs less frequently.

Third level (*post-Lauream*) studies ⁽¹⁾

Italian third level university studies essentially consist of: (a) courses run by *scuole di specializzazione* — *SS* (specialisation schools); (b) *corsi di dottorato di ricerca* — *DR* (research doctorate programmes), the former aiming at professional training and academic education at a very high degree of theoretical complexity in specialised disciplinary sectors, the latter at an advanced training in scientific research.

Also *corsi di perfezionamento* — *CP* (advanced courses) may rank — and often do — at third university level.

(a) *SS* courses (*courses at specialisation schools*)

Legal dispositions in force state that all *SS* must be characterised by definite professional features so as to answer the needs of the productive world for highly-qualified professionals. Their specific role therefore consists in the advanced training of professionals resulting in postgraduate qualifications, which enable prospective managers and staff in the different occupational fields — both public and private — to acquire legitimate titles as *specialisti*.

SS have to comply with uniform regulations in cases where harmonisation with EC directives is required, or in the case of schools connected with the national health service. The harmonised rules for such *SS* are laid down by a decree of the Minister for Universities on the advice of the *CUN*; in the case of schools operating in the health sector, the Minister for Health also has to provide advice and cooperation in drawing up the definitive legal provisions.

The Reform Law 341/1990 determined the redefinition and study reorganisation of all existing *SS*. With reference to *SS* in the medical sector — which had already been partly reorganised to conform to Directive 75/362/EEC — further provisions were made requiring a full time engagement (38 weekly hours for at least 11 months a year) of all postgraduate students attending specialised medical courses (*legge 22 gennaio 1978, n. 115* and subsequent *decreto legislativo 8 agosto 1991, n. 257*).

This reform also defined the setting up of proper *SS* for the training of qualified teachers at secondary level.

According to our latest statistical survey (*CIMEA*, October 1996), the number of *SS* established by law at Italian universities amounts to 1593; they are grouped in 208 national types.

The legal length of *SS* degree courses may vary from two to five years (full time), depending on the area of specialisation.

As concerns *SS* study organisation, it is important to note that, whereas once — prior to the enactment of *DPR 162/1982* — students were allowed to remain enrolled even if they had not completed all the subject examinations within the legal duration of studies, this is no longer possible: stricter criteria have been adopted for the organisation of courses and the passing of related examinations so as to prevent students from taking up the status of *fuori corso*. Therefore now, when a new *SS* is instituted, the university statute prescribes its legal course length, a list of compulsory courses, and their distribution over the years; it also gives suggestions for optional subjects; finally, it fixes requirements and procedures regulating admission, attendance, *esami di profitto* (subject examinations) and the final *esame di diploma* (degree examinations).

Courses in each discipline are annual, class attendance being compulsory. Classes consist of lectures, seminars, practical sessions called *esercitazioni* and laboratory experiments. A period of practical training is normally included in the *curriculum studiorum*, along with a certain amount of research work.

(b) *DR* programmes (*research doctorate programmes*)

The institutional enactment of the Italian *dottorato di ricerca* took place relatively recently, in 1980 ⁽¹⁾. The national law provides for *DR* programmes to be set up autonomously — within the framework of a national scheme — by university consortia or by individual universities whose departments or faculties have proved to be qualified for the purpose, which is essentially the organisation of high level academic activities of scientific or scholarly investigation specifically designed for the advanced training in research of young postgraduate students.

The Italian *DR* — similar, in many respects, to other doctorate models throughout the world — has a few typical characteristics which deserve to be mentioned: entrance depends on very competitive examinations; the granting of the final titles is determined by national examining boards composed of suitably qualified university teachers; and the training is full time and fully subsidized with the allocation of study grants.

The first cycle of *DR* studies actually started in 1983. In July 1996 ⁽²⁾, the number of existing *DR* programmes amounted to about 1100 involving nearly 3800 postgraduate students in 11 main subject areas: agriculture; architecture; economics; pharmacy; law; engineering; humanities, modern languages and education; biomedicine; medicine and veterinary science; natural sciences, physics and mathematics; political science. In their turn, the subject areas include 741 disciplinary sectors along with 70 sub-sectors.

The minimum legal length of *DR* studies may vary between three and four years: it is determined in the yearly official notification of the public competition giving access to the new *DR* programmes.

As for study organisation, prospective *dottori di ricerca* are essentially required to elaborate individual research projects and then carry out all the connected activities so as to produce an innovative thesis, which must make a significant contribution to scientific knowledge on a worldwide dimension.

DR studies are regularly supervised by specifically appointed teachers of the university faculty or department concerned.

Attendance at and active participation in courses/seminars, specially created for certain *DR* programmes, may also be required.

Corsi di perfezionamento — CPS (advanced courses)

Advanced courses ⁽¹⁾ form a particular branch of university studies which deserves to be mentioned separately: actually, in relation to their specific purpose — the advanced study of specialist subjects — they should be classified as *post-Lauream* (postgraduate) courses, but such a definition is not always applicable since, sometimes at least, their basic admission requirement may be an academic qualification lower than a *laurea* degree.

First designed to meet the cultural need for in-depth academic study of certain specific fields, *CPs* often also offer good opportunities for professional updating or retraining, and for continuing education. They are essentially meant to satisfy local requirements.

According to Article 16 of Presidential Decree of 10 March 1982, No 162, which provides for *CPs*' reorganisation, an advanced course is established by decree of the university Rector on the proposal of the faculty concerned, subject to the approval of the university board of directors.

It is the responsibility of the faculty council to lay down criteria for admission requirements, course length and organisation, class attendance, and so on. *CPs* maximum length, however, should not exceed one year.

II. Qualifications and diplomas

Non-university sector

The three types of institution for non-university higher education already discussed (Fine Arts Academies, *ISIAs* and *ISEFs*) exclusively operate in vocational areas which are not included in the university sector. This fact implies that their qualifications do not enter into competition with university degrees, but, at the same time, that no academic recognition of such diplomas is possible in order to pursue further studies by transferring from a non-university to a university institution.

Anyhow, most non-university higher education qualifications, when awarded by State or legally recognised institutions, have legal validity as basic requirements for access to related occupational opportunities.

University sector

University qualifications, provided they are conferred by State or legally recognised institutions and fall within the national regulations system, may entitle their holders either to enter the labour market or to pass on to more advanced university studies; some of them lead to both academic and professional opportunities at the same time.

The *laurea*, for instance, which still is the best-known Italian university degree, especially abroad, has legal validity for the following: eligibility for postgraduate studies; admission to competitive examinations for appointment to the highest careers in the civil service; admission to State examinations for the practice of self-employed professions.

II.1. Qualifications for admission to higher education

Diploma di maturità

As a rule, the basic requirement for access to higher education — both university and non-university — is a *diploma di maturità* (school-leaving or maturity diploma) i.e. the Italian upper secondary school leaving qualification which is generally awarded after the completion of 13 years of schooling (five at primary level in *scuole elementari*, three at lower secondary level in *scuole medie inferiori*, five at upper secondary level in *scuole medie superiori* or *istituti secondari superiori*) and the successful passing of the so-called *esami di maturità* (maturity examinations). When based on a five-year course of upper secondary education (USE), the diploma is also referred to — in speech, at least — as *maturità quinquennale* ⁽¹⁾.

At present, there are just three exceptions to the the rule of the five-year maturity: namely, the *maturità artistica, I sezione* (artistic maturity, first section), the *maturità artistica, II sezione* (artistic maturity, second section), and the *maturità magistrale* (i.e. the qualification entitling the student to teach in primary schools), all of them awarded on completion of a four-year upper secondary course (at a *liceo artistico* and at an *istituto magistrale*, respectively). The corresponding diplomas are conferred only if the relevant examinations have been successfully passed.

In accordance with their traditional purposes, USE institutions used to be divided into two main categories: the first one included institutes aiming exclusively at preparing students for university studies, whilst the second offered vocational courses to those who would take up a job immediately after completion of USE. The first category consisted of the classical and scientific secondary institutes; the second was made up of the teacher training schools, the technical institutes and the vocational ones. In the 1970s, however, the above distinction disappeared almost completely in the sense that the possibility of access to H. Ed., university and non-university, became almost general.

There is considerable diversity in the structure of USE as regards its institutions, the corresponding curricula and the way in which its final qualifications are accepted by the business world.

All the following USE institutions are entitled to award a *diploma di maturità*:

licei classici: their main purpose is to teach the classics (Latin and Greek) and prepare their students for access to university education in any disciplinary area; the *maturità classica* is awarded after the completion of a five-year course;

licei scientifici: they are mainly meant for the teaching of scientific subjects to young people wishing to study science at university level; the *maturità scientifica* is awarded after the completion of a five-year course;

licei linguistici: these institutes aim at combining the teaching of foreign languages with that of Italian and foreign civilizations (literature, history, art history, philosophy); the *licenza linguistica* ⁽¹⁾ is awarded after the completion of a five-year course;

istituti magistrali: their fundamental purpose is to train the young for teaching in elementary schools; the *maturità magistrale* ⁽²⁾ is awarded after the completion of a four-year course and entitles its holders both to participate in the competitive State examinations qualifying for posts as primary teachers (*concorsi magistrali*) and to matriculate in the teacher training university faculty (*facoltà di magistero*) so as to take one of its degrees;

istituti tecnici: these types of institute train for certain skilled professions (e.g. accountants, surveyors,...) or for technical and administrative posts in such occupational areas as agriculture, industry, trade, navigation, social and health services; the *maturità tecnica* is awarded after the completion of a five-year course; the final diploma often bears the word *perito* (i.e. skilled person), accompanied by an indication of the specific training sector;

istituti professionali: vocational institutes which train prospective workers for practical activities in such fields as agriculture, industry and craft, commerce, seacraft, tourism, hotel trade and the caring professions. The *istituti professionali* used to offer only three-year courses leading to vocational qualifications called *diplomi di qualifica*; since 1969, however, by force of a legislative initiative passed in the same year, it has become possible to set up two-year complementary courses or, alternatively, full courses lasting for five years. In both cases a diploma di *maturità professionale* can be issued after the successful passing of the relevant State examinations;

licei artistici: these institutes have two sections: the first one (*1^a sezione*) offers education and training in painting, sculpture, decoration and scenography so that students can afterwards pass on to higher education within the artistic academies; the second (*2^a sezione*) prepares its students for the subsequent study of architecture at university level; in both cases, the *maturità artistica* — *1^a sezione*, or *2^a sezione* is awarded after the completion of a four-year course;

istituti d'arte: students are trained in the arts and crafts for the production of artistic objects according to the demands of tradition, raw materials and industry in the region where they are located; these institutes used to offer only three-year courses resulting in the issue of the *diploma di maestro d'arte* (diploma of master in the arts); since 1969 their curriculum may also be extended to five years, thus leading to the *maturità d'arte applicata* (diploma in applied arts).

It is important to state that the *diploma di maturità* is legally effective not only for the purpose of further studies but also as a means of obtaining employment: as a matter of fact, it is a formal proof of acquired education and competence that is accepted as a basic condition for access to specific positions within the civil service and for enrollment in certain professional registers.

Esami di maturità (school-leaving examinations)

They are State examinations which, according to the legislator's intentions, were designed first of all to provide an overall evaluation of the students' maturity rather than to ascertain how much they know about each individual subject.

The present structure of the *esami di maturità* was introduced in the late 1960s — early 1970s (*DL 15 febbraio 1969, n. 9; legge 5 aprile 1969, n. 119; Legge 15 aprile 1971, n. 146*).

The national rules regulating the school-leaving or maturity examinations apply to all the existing types of USE institutions.

The examinations, institutionally separated from the upper secondary schools where education and training have been given, are generally taken at the end of the fifth and final year of USE, usually starting in the third week of June, i.e. a few days after the conclusion of the scholastic year. Examination activities must be over within 10 to 15 days and final results must be officially published by the middle of July.

The examinations are administered by special *commissioni d'esame* (boards of examiners), appointed by the *Ministero della Pubblica Istruzione* (Ministry of Education). The same Ministry is responsible for the annual tasks of fixing the exam schedule, selecting the exam subjects in relation to the different types of USE institutions, deciding which USE institution have to act as examination centres, and so on.

The boards of examiners are external: they are made up of qualified teachers who, coming from Italian cities or districts other than those of the candidates, have no previous acquaintance with them: such a criterion has been adopted as a guarantee of greater impartiality and strictness. The number of examining boards may amount to one or more at each institute previously chosen as an examination centre, depending on the number of students to be tested there.

Only those students who have regularly attended the last year of USE at State or State-recognised institutes and have successfully passed the final internal assessment (*scrutinio finale*) in all subjects are allowed to take the maturity examinations. The internal assessment — which is meant to evaluate the candidates' knowledge and understanding of the individual subjects included in the final year's curriculum — consists of formulating an analytical judgment on the students' performance in each subject. This evaluation is given by the teachers who taught the subjects themselves; they also give a numerical rating, using a scale from 0 to 10 with 6 as the minimum pass mark; since 10 is never — or very rarely — attributed, 9 is usually regarded as the highest mark.

Students admitted to the maturity examinations are tested on six subjects, two in writing and four orally. The general organisation is as follows.

(a) *Written exams*

First day

Italian (compulsory for all students, independently of their type of USE): candidates are requested to write an essay on a given theme within a fixed time. Themes are determined at national level, four for each type of USE institution (first: Italian literature and civilisation; second: world history; third: topical subject; fourth: topic related to the specialistic area of each USE). The titles are officially announced on the morning of the exam and each student may choose one out of four.

Second day

the test varies with the type of USE institution, as it must concern one of its characteristic subjects; it may consist of a translation from a classical or modern language into Italian (or vice-versa), in the case of classical or foreign language institutes; in the solution of maths/physics problems (scientific institutes), etc., to be carried out within a fixed time.

(b) *Oral exams*

Under the supervision of the whole examiners' board, each candidate is interviewed by teachers of the four disciplines determined by the Ministry, in the following order:

- first — Italian literature and civilisation;
- second — discipline chosen by the candidate;
- third and fourth — the remaining two disciplines, at the board's discretion.

The oral interview also includes some discussion about the student's written work.

When expressing their final evaluation, examiners must primarily take into account the examinees' general competence and maturity; then, they also consider the students' knowledge of the exam subjects, and, finally, their previous study performance (e.g. the grades obtained in the last year's assessment) as well as any other information made available to the board.

Each examiner awards marks, from 1 to 10, 6 being the minimum passing grade. The sum of all the marks attributed to each student corresponds to the final grade quoted in his/her *diploma di maturità*. Therefore, as each examining board is made up of six members, the examinees' performance is ultimately evaluated out of 60, according to a scale where 36/60 and 60/60 are the minimum and the maximum passing grades respectively.

As State examination certificates, maturity diplomas are issued by the Ministry of Education. In addition to the name of the Ministry, each diploma mentions the type of USE institution attended by the student and/or the study course followed together with the final mark (results obtained in the examination subjects are not quoted).

Maturity diploma for adults

The *diploma di maturità* is a sine qua non condition for admission to university studies. Under Italian law, no reason whatever allows the disregard of this rule, not even in the case of people already employed who, through this job experience, might have matured sufficiently to be able to pursue studies at university level.

However, there are no significant obstacles — at least from the formal point of view — to the acquisition of the maturity diploma by adults who intend to resume their studies. The *privatista*, i.e. the person who takes the maturity examination without attending conventional secondary education courses, is a characteristic of an education system which separates the final examination from the study course leading up to it.

Italian law states that any citizen who is aged at least 18 and gives evidence of having completed compulsory education may apply to take the maturity examination (*L. 5 aprile 1969, n. 119, art. 3*). Candidates with no previous educational qualifications may also take the examinations, providing they are aged at least 23 (*RD 6 maggio 1923, n. 1054, art. 74*).

Therefore, employed students can prepare themselves privately for the examination, which in such cases includes also oral tests in the subjects forming part of the relevant USE course.

At their discretion, employed candidates may make available to the examining board their employment cards and/or individual statements by their employers giving details of their positions, tasks, working hours as well as an evaluation of their work skills and experience. The board may take this information into account when assessing the candidates' maturity.

Other USE qualifications

Among the existing USE leaving certificates mention should also be made of the following:

diploma di abilitazione magistrale (old designation for the four-year *maturità magistrale*; see under *istituti magistrali*, in this section);

diploma di maestro d'arte (see *istituti d'arte*, in this section);

diploma di abilitazione all'insegnamento nelle scuole di grado preparatorio, issued at the end of three-year study courses run by *scuole magistrali* (institutions for teacher training); this diploma is specifically meant for prospective teachers in nursery schools; colloquially, it is often referred to as *diploma di maestro/a d'asilo*;

diploma di qualifica professionale (see under *istituti professionali*, in this section).

They may all be accepted as basic requirements for access to certain non-university higher education studies (see II.1.1.

Academies of Fine Arts).

II.1.1. Qualifications for admission to non-university higher education

Accademie di Belle Arti (Academies of Fine Arts)

Direct access (i.e. with no need for any entrance examination) is granted to the holders of the following qualifications:

diploma di maturità artistica di 1^a sezione (diploma of artistic maturity, first section; for more details, see *licei artistici*;

diploma di maestro d'arte (three-year diploma of master in the arts; for more details, see the description of *istituti d'arte*;

maturità di arte applicata (five-year maturity in the applied arts; for more details, see the description of *istituti d'arte*).

All other candidates — including the holders of any other five-year maturity as well as of lower secondary qualifications, ranging from *licenza di scuola media* to *diplomi di qualifica professionale*, up to the 4-year *maturità magistrale* have to pass an entrance examination.

The said examination might therefore involve candidates who possess a school leaving certificate at upper secondary level or who, aged over 18, have only completed compulsory education (eight years of schooling, five at primary level plus three at lower secondary).

The entrance examination consists of some artistic aptitude tests, connected with the specialised sector chosen by each candidate, along with a written essay and an oral exam on general cultural subjects (art history, history, Italian literature, anthropological, astronomical and physical geography).

ISIAs (Higher Institutes for Artistic Industries)

The basic requirement for access to *ISIA* diploma courses is the Italian maturity diploma or an equivalent foreign qualification. Since admission to these institutes is subject to *numerus clausus* restrictions, applicants also have to pass an entrance examination, consisting a few aptitude tests related to the particular specialised area of the chosen *ISIA* as well as in an oral interview on general cultural topics.

During the oral part of the examination, candidates are also requested to show and illustrate some of the artistic work they have completed in previous years in connection with the specialised field of that *ISIA*.

ISEFs (Higher Institutes for Physical Education)

In order to be admitted, candidates must:

- possess a *diploma di maturità quinquennale* or an equivalent foreign qualification;
- be under 28 years of age;
- successfully pass a selective entrance examination, since access is subject to *numerus clausus* regulations.

The number of students to be admitted to the diploma courses in physical education is fixed annually by the Ministry of Universities (¹).

The competitive entrance examination consists of: (a) a series of practical tests meant for ascertaining the candidates' aptitudes for physical activities and sports; (b) a written essay on educational and cultural subjects of a general character; (c) a thorough medical check-up.

When drawing up the grading list of successful candidates, the examiners' board takes into account not only the examinees' performance in the public competition but also their previous educational qualifications.

II.1.2. Qualifications for admission to university

On the whole, Italian USE presently appears very homogenous in respect of the legal validity of its final qualifications granting access to university studies: actually, while vocationally-oriented USE careers were once more or less complete and admission to university studies — if at all — was possible only in the case of certain degree courses (²), since 1969, access to university faculties has been liberalised, meaning that all types of five-year *maturità* entitle students to enroll in any of the existing degree courses, either at first or second university level.

The faculties of *magistero* and *architettura* also admit holders of diplomas awarded after a four-year course, namely *maturità magistrale*, in the first case; *maturità artistica-2^a sezione*, in the second (¹).

In order to be admitted to any other university faculty, holders of the above-quoted four-year maturity diplomas must attend an additional secondary school year, called *anno integrativo*, thus completing the five-year period which is the study module most frequently offered by the great majority of USE institutions. On completion of the one-year complementary course, they too may enroll in any first or second level degree course of their choice.

Whereas access to first level degree courses (*SDAFSs* and *DUs*) has always been subject to *numerus clausus* regulations, since 1969 all entry limitations to graduate courses (*CLs*) have been abolished, at least at State universities.

Owing to various factors, however, the situation has gradually changed in the last 15 years: at present, entry restrictions apply to a number of *laurea* courses, and the trend is to extend them to all overcrowded *CL*.

Numero chiuso (or *programmato*) consists in predetermining a maximum number of places available on the basis of the number of teachers and the scope of existing facilities; since enrollment applications beyond the fixed number must be rejected, applicants are selected on the basis of their previous study qualifications (e.g. marks obtained in the maturity examinations), and, if applicable, on the quality of their performance in the entrance examinations for a specific *DU* or certain *CLs*.

Entry requirements for all degree courses are given below, according to the usual division into three levels.

First level studies

Access has always been subject to *numerus clausus* limitations; the number of available places is determined annually by the Academic Senate of the individual universities, on the advice of the faculty council concerned.

Admission requirements are therefore as follows:

(a) DU courses

Italian five-year *maturità* (or an equivalent foreign qualification) plus entrance examinations. Entrance examinations generally include written tests (usually, multiple choice and/or similar tests) and an oral interview on general education as well as on subjects more closely related to the *DU* in question.

(b) SDAFS courses

Italian five-year *maturità* (or an equivalent foreign qualification) plus entrance examinations, which are generally based on written tests followed by an oral interview.

(c) Courses for midwives

Since 1957 requirement for admission may be the possession either of a *diploma di infermiere professionale* (diploma of professional nurse) ⁽¹⁾ or of a certificate testifying to the completion of the first three years of the *CL* in medicine and surgery (*legge 23 dicembre 1957, n. 1252*).

Second level studies

Laurea courses

The basic admission requirement is the possession of a five-year maturity diploma or of an equivalent foreign qualification.

As for *numerus clausus*, at present it is legally in force to regulate access to the following *laurea* courses:

architecture, dentistry, environmental sciences, international studies, medicine and surgery, veterinary medicine, at both older and newly-established institutions;
all newly-established *CLs* at all institutions;
all *CLs* at recently-established institutions, such as the *Università della Calabria, Tor Vergata* (Rome II), Rome III, Naples II, etc.

Entrance examinations for admission to *numerus clausus CLs* usually consist of a few written tests followed by an oral interview; they may vary considerably from one institution to another and from one *CL* to another.

Third level studies

(a) *SS courses*

They are all subject to *numerus clausus* regulations, therefore, prospective students must hold a *laurea* or an equivalent second level foreign qualification; they must also pass a selective entrance examination.

As for foreign degrees, to avoid the time-consuming, bureaucratic complications of formal academic recognition, their holders may take advantage of a simplified procedure by requesting the evaluation of their degrees 'to the end of admission only to the *SS*' of their choice. The university authority responsible for such a procedure is the director of the *SS* concerned who normally takes the advice of the teaching staff.

This procedure, however, cannot be considered the usual, legal form of academic equivalence: as a matter of fact, in such cases the teachers' purpose is not to analyse and compare curricula in detail, looking for a high level of correspondence between courses and syllabuses, but rather to globally evaluate — in terms of content and level — the foreign degrees in order to verify their holders' suitability for the advanced studies in question. That is why this type of evaluation does not result in the awarding of the comparable Italian *laurea* degrees and therefore does not produce the juridical effects inherent in them.

The entrance exam includes a written paper and an oral interview. When assessing the candidates' performance, the relevant board also evaluates their previous academic work and qualifications (e.g. a *laurea* thesis on a subject closely related to the specialisation field of the school concerned; grades obtained in the final *laurea* examination; marks obtained in those disciplinary exams of their *laurea* curricula which are connected with the new specialist studies).

(b) *DR programmes*

They are open only to postgraduate students, i.e. holders of a *laurea* degree (or an equivalent foreign qualification at second university level).

In addition to the possession of an adequate academic qualification (that is, second level), admission is also subject to a *concorso*, a public competition organised on a national basis, which consists of a very selective written and oral examination. Candidates must also give evidence of mastering a foreign language, both orally and in writing.

Both the written and the oral part of the competitive admission examination are graded on a 0 to 60 scale, with 40 as the lowest passing mark.

The national *concorso*, announced in May or June every year, takes place in the following November or December.

Italian and foreign holders of foreign degrees are allowed to participate in *DR* competitive entrance examinations only after their degrees have been recognised as comparable to the relevant Italian *laurea*; to such an end, they too may ask for the application of the simplified recognition procedure already described in relation to enrolment in *SS* courses.

The university authority responsible is the director of the *DR* programme concerned, who consults the teaching staff.

Being requested and given 'to the end of admission to the *DR* entrance competitive examinations only', that sort of recognition does not produce the same legal effects as formal academic recognition (called *equipollenza*).

CPs (advanced courses)

The most frequent condition required for admission to a *CP* is a *laurea* degree in a related field; there are also *CPs* accepting holders of lower or even different qualifications (e.g. a first degree like a *DU*, or a post-secondary non-university qualification), provided they rank at university level.

II.2. Intermediate qualifications in higher education

The Italian university system does not provide for an intermediate educational qualification to signal the completion of a first academic stage as a condition for admission to the second and last phase of certain university studies. Therefore, only final qualifications are conferred, and these, at three different levels (see I.3., under ‘Organisation of course of study’).

Notwithstanding, most graduate courses (*CLs*) are divided into two stages, the first being preparatory to the second.

Such an internal subdivision occurs more frequently in scientific and technological *laurea* courses, such as biology, chemistry, engineering, physics, etc.

Before 1969, entry to the second phase of the *CLs* was linked to the results obtained at the end of the first preparatory phase: a good example was the two-year preliminary stage of the engineering *laurea* course, which, common to all *laurea* courses in the same field, was a difficult preparatory phase before proceeding to the second three-year specialised phase of the degree.

With the liberalisation of 1969 all kinds of internal obstructions were swept away, leaving students free to defer the examinations in the preliminary subjects until later.

In the 1980s, the principle of preparatory education gradually reappeared, more or less officially. Nowadays, at least in the case of certain degree courses, the relevant educational authorities — at ministerial or academic level — issue the basic rules on the order in which the examinations are to be taken.

Obviously, such regulations apply to those subjects whose teaching is more sequence-structured and progresses more methodically; and it is interesting to point out that, on closer inspection, most of the provisions concerning preparatory education are connected with those subjects that outside Italy form the core required for preliminary academic qualifications (e.g. the *DEUG* in France, the *Vordiplom* in Germany).

II.3. Final qualifications in higher education

II.3.1. Final qualifications in non-university higher education

Licenza in... di Accademia di belle arti

The basic regulations concerning the Academies of Fine Arts have not been revised since the beginning of the century; therefore, they do not reflect the numerous changes that have subsequently occurred in the overall education system. In the absence of general reforms which may better adapt course organisation and teaching methods to the constant progress of artistic culture and the availability of new technologies, individual academies have established their own provisions, thus creating quite a heterogeneous situation in this educational field.

The four-year courses run by the Academies of Fine Arts each award a qualification called *licenza* (licence); the name of the qualification is followed by the specialised sector chosen by the individual student out of the four offered by each Academy: painting, sculpture, decoration, scenography. Therefore, the official document generally bears a phrase such as ‘*diploma di licenza in... (e.g. pittura) di questa accademia di belle arti*’ (licence in painting awarded by this Academy of Fine Arts).

Each diploma course is made up of basic subjects, which are taught throughout the whole four-year period, and of ‘special’ subjects, taught in one-year subject courses: all basic subjects are obligatory, while the special ones are optional.

At the end of each academic year students usually sit for an examination in each of the subjects they have studied during that year. In the case of failure, they have to repeat the year, just as in secondary schools.

According to the old official regulations, the yearly assessment should be expressed in 10ths (same scale as in secondary schools: 0 to 10, with 6 as the minimum qualifying grade); as a matter of fact, however, most academies have gradually adopted the university grading system in 30ths, with 18/30 as the lowest passing grade.

On completion of the four-year course each student has to defend a written thesis on an art history topic: such discussion forms the essential part of the final diploma examination.

Grading for the diploma — which takes into account all previous subject examinations as well as the final thesis — may once again be expressed either in 10ths or in 30ths, with 6/10 or 18/30 as the lowest pass grades.

Diplomas issued by Academies of Fine Arts are exclusively academic qualifications. As such, they are the basic — but, in certain cases, not exclusive — requirements for access to certain professions. In the case of teaching, for instance, their holders — provided they also possess a maturity diploma — have additionally to pass the competitive State examinations entitling them to corresponding positions in public schools or institutes (they may teach such subjects as art education, art history and design).

Diploma di... (ISIA)

Examinations are held annually in each discipline, students' performance being graded on a 0-30 scale, with 18/30 and 30/30 as the lowest and the highest pass mark respectively.

Before sitting for the final diploma examination, students must have passed all the subject examinations of their curriculum; additionally, they have to present a thesis each, normally consisting of a practical project.

The diploma examination involves the presentation of the thesis and is graded in 30ths once again.

The final qualification is called *diploma di...*, followed by the specialised field of the *ISIA* concerned (e.g. *diploma di disegno industriale*,
diploma in industrial design). i.e.

The Italian law attributes to any *ISIA* diploma the same legal validity as the *licenza* awarded by the Academies of Fine Arts.

Diploma di educazione fisica

The only State *ISEF*, training teachers of physical education, is the one located in Rome. The others are all legally recognised, as their study organisation conforms with that of the State institute.

According to Article 19 of the new statute, in force since the academic year 1990/91, the curriculum of the diploma at the *ISEF* in Rome includes 24 subject courses, of which 19 are compulsory and 5 optional.

Optional subjects may belong to three different areas (i.e. that of applied biological studies, the historico-juridical area, and the technical-educational one).

With reference to their more or less specific contents, subjects may be defined as basic (*discipline di base*) or specialised (*discipline di indirizzo*). Basic courses may last one or two years, whereas the specialised ones are always organized on an annual basis. Class attendance is compulsory.

The different subject courses imply corresponding examinations, usually including written and/or practical tests as well as oral interviews. Subject examinations are graded according to a 0-30 scale, with 18/30 as the minimum qualifying mark.

At the end of the three-year diploma course, only those students who have successfully passed all the subject examinations can take the final diploma examination, mainly consisting of the defence of a written thesis.

Grading for the diploma — all subject examinations as well as the final examination are taken into account — is based on 110ths, with 66/110 as the minimum pass grade.

The *Diploma di ISEF* is a purely academic qualification. In order to be entitled to teach physical education in state or legally-recognised schools, its holders have to pass the relevant State examination (*esame di abilitazione all'insegnamento*) at the required level.

II.3.2. Final university qualifications

First university level

(a) *Diploma universitario* (since 1992)

The final qualification awarded on completion of a newly-established *DU* course is called *diploma universitario* (university diploma) ⁽¹⁾: it is a first level university degree comparable to the majority of European as well as overseas first degrees.

Most university courses leading to *DUs* cover a three-year period. They may therefore be regarded as pertaining to the category of short-cycle university studies.

There are a few exceptions to the above definition: as a matter of fact, some *DU* courses require as special entry condition the successful completion of the preliminary two-year period of a specific *laurea* course, or even the possession of the specific *laurea* itself (e.g. the university diploma conferred by the special school for archivists and librarians of the *La Sapienza* University in Rome). In such cases — the whole period of university studies covering four years at least — the university diploma can no longer be classified as a short cycle qualification: it is rather the second stage of a longer, more complex educational itinerary resulting in a professional degree at second academic level.

Back to proper *DUs* (i.e. first level degrees, open to holders of the maturity diploma), they may be divided into two main categories in relation to connected *CLs*: *DUs* belonging to the first can be described as 'in series' courses, the others as 'in parallel' courses.

Holders of a diploma from 'in series' *DUs* are entitled to enter the labour market, or, if they choose, to pursue higher academic studies by joining a related *laurea* course with full recognition of their *DU* (e.g. the two-year *DU* in statistics allows admission to the third year of the *CL* in statistics).

Holders of a so-called 'in parallel' *DU* may also pass on to a related *CL* but with only partial recognition of their previous studies.

The university diploma in a specific sector is conferred on the student who has complied with all the connected legal obligations: therefore, he or she must have regularly attended all subject courses, successfully passed the corresponding examinations, satisfactorily completed — if that is the case — the practical training; finally, he or she may also have to undertake a project or to carry out some research work, whose written report (*tesi*) is to be defended in the final diploma examination.

As for the assessment of a student's performance, the same grading systems are employed as in the case of *CLs* (0-30, with 18/30 and 30/30 as the minimum and the maximum passing grades for subject examinations; 0-110, with minimum 66/110 to maximum 110/110 passing grades for the diploma examination).

DU holders have a right to the title of *diplomato (universitario) in...* (the name of the specific field follows).

So far, *DUs* have juridical validity as academic qualifications, which means that they are just the basic requirements for access to certain employment or professions at intermediate level; all necessary conditions for transition to work have not yet been fully defined.

(b) *Diploma universitario delle SDAFS*

Only *SDAFS* undergraduates who have regularly attended all the subject courses included in their curricula, passed the corresponding exams, and then completed the compulsory apprenticeship period with a favourable evaluation are finally admitted to the diploma examination, for which they have to prepare a written thesis.

Both subject examinations and the diploma examination follow similar procedures to those of *CLs*; grading systems are exactly the same (0-30, with 18/30 and 30/30 as minimum and maximum passing scores; 0-110, with 66/110 and 110/110 as the lowest and the highest passing grades).

The holders of university diplomas conferred by *SDAFSs* are also *diplomati (universitari)* to all legal effect. Certificates testifying to the award of these qualifications frequently bear such phrases as '*esperto di...*' or '*tecnico in...*', followed by the designation of the *SDAFS* involved.

National rules in force determine that university diplomas issued by *SDAFSs*, if confirmed by a decree of the President of the Republic — on a recommendation of the Council of Ministers — directly entitle their holders to practise the professions concerned or get access to specific civil service careers. These legal dispositions, however, have so far been applied on a very limited scale. Therefore, in the majority of cases, university diplomas conferred by *SDAFSs* still retain juridical validity as simply academic qualifications.

(c) *Diploma di ostetrica*

University courses for midwives last two years ⁽¹⁾, combining theoretical-scientific classes with practical training in the obstetric, gynaecology and paediatric departments of the relevant university hospitals. Students' knowledge of the theoretical subjects studied is evaluated at the end of each year in examinations, both written and oral, covering the full syllabuses.

The *diploma di ostetrica* (diploma of midwife) is conferred on those students who have obtained favourable assessments in all scientific disciplines and practical activities throughout the study period as well as in the final diploma examination.

In addition to the usual annual check of the candidate's competence in all the subjects of the second year, the diploma examination implies the defence of a thesis: this may consist of the presentation of two clinical cases personally attended by the candidate during the diploma course.

Annual subject examinations — the final diploma examination of the second year included — are graded in 50ths (scale 0-50, with 10 as the minimum passing mark), whereas the thesis is assessed in 30ths (scale 0-30, with 18 as the lowest qualifying mark) ⁽²⁾.

The numerical assessment obtained in the diploma examination is normally quoted in study certificates but not in the actual diploma.

Second university level

Diploma di laurea

In conformity with the current national regulations on the attainment of second level university degrees, each *laurea* course is made up of a fixed number of subject courses, conveniently distributed over the whole period of four to six years ⁽¹⁾.

Students must pass an examination for every discipline included in their study plans. Subject examinations, generally oral, may also include written and/or practical tests, depending on the individual discipline.

Once enrolled in the various subject courses, students may take the related exams when they consider themselves ready; if rejected, they may present themselves again in subsequent sessions. As a consequence, the total length of studies may be notably longer than the official length of the various *CL*.

Esami di profitto, i.e. the examinations related to individual subjects, are meant to ascertain the intellectual maturity of the candidate and his or her fundamental knowledge of the discipline; this implies that examinees may be asked questions which are not exclusively limited to the syllabuses dealt with by the teachers during the corresponding courses. Usually, these examinations take place in two *sessioni ordinarie* (ordinary sessions), held in summer and autumn as well as in the so-called *sessione straordinaria* (special session) in the month of February.

In the case of *esami di profitto*, the *commissione di esami* (examiners' board) is appointed by the *preside di facoltà* (faculty dean) and consists of three members: the full professor of the subject (president of the board), a professor of a related discipline and a *cultore* (estimator) of the subject itself, who is usually a university researcher.

Each member may award 10 points (0-10, 6 being the minimum passing mark); the final mark attributed to a candidate results from the sum of the examiners' points and may therefore vary between 0 and 30:

18/30 is the minimum pass grade;

27/30, corresponding to 9/10ths of all available points, means promotion by *pieni voti legali* (legal full marks);

30/30, which implies the attainment of the total number of available points, determines approbation by *pieni voti assoluti* (absolutely full marks). A distinction (*lode*) may be added to the maximum grade of 30 as a mention of special merit.

To be awarded the final *laurea* degrees — once all the examinations on their curricula have been completed — individual students have to carry out a research work or project (*tesi di laurea*) under the supervision of a university teacher. The research activities and the drawing up of the final report may take from a minimum of six months up to two years. The final written report must be submitted well in advance of the degree examination. Theses often differ remarkably from each other, since no official rules exist fixing exact times of preparation and determining the nature of the research work. So, a thesis might simply consist of a reasonable compilation from various sources, involving only a few meetings with the supervisor, or it may be based on very in-depth inquiries into possible theories, supported by detailed logic demonstrations; finally, it may include a series of individual experiments, implying regular laboratory work for a very long period. Normally, it takes a minimum of six months to draw up an acceptable thesis, whereas research work based on laboratory experiments may require up to two years.

On the occasion of the final examination, each candidate has to defend his or her dissertation in front of an examiners' board made up of 11 members.

No uniform procedure is laid down for the candidate's overall assessment, i.e. how the marks obtained in individual subject exams should combine with the evaluation of the quality of the thesis and its defence in the degree examination. When deciding the final grade, examiners generally take as a starting point the examinee's *media universitaria* (average of the grades obtained by the candidate in the previous subject examinations); then they lower or raise that figure according to their evaluation of the dissertation. A customary rule, almost always observed, is not to increase the average grade by more than 10 points on account of the thesis.

Each examiner evaluates both the written work and the related discussion according to a 0-10 scale; the final grade consists of the sum of all the 11 partial marks and therefore may range from 0 to 110:

66 is the minimum pass grade (it consists of 6/10 of the total which may be attributed by the board);

99 means that the student is approved by legal full marks, obtaining 9/10 of the available points;

110 indicates promotion by absolutely full marks: this is the case when the board may also grant a *lode*, provided it is unanimously determined.

No grades appear on the diploma: only the *lode* is mentioned, if applicable. However, on written request by the individual *laureato*, the university concerned can issue a certificate quoting either the final grade only or including the marks obtained in all subject examinations. The topic of the final thesis may be mentioned as well.

On passing the final *laurea* examination the candidate is awarded the title of *dottore/dottoressa*, abbreviated to *dott./Dott.ssa* in front of the surname (¹).

The *laurea* is an exclusively academic qualification. To practise one of the self-employed professions or to enter certain careers in the civil service *laurea* holders have additionally to pass specific State examinations.

Third university level

(a) *Diploma di specialista*

This is a third level degree awarded *at the end of postgraduate courses* run by SS (specialisation schools).

SS diplomas confer on their holders the title of specialists in specific branches of their professional activities.

Before obtaining the final diploma, postgraduate students must fulfil all the obligations of the SS concerned. At the end of each year they have to pass an oral comprehension examination as well as a practical test in order to qualify for promotion to the next year. Should a student fail, he or she may be granted the opportunity to repeat the final annual examination, but only once.

The examiners' board, made up of the director of the SS and the teachers of the various annual subjects, expresses an overall assessment on the level attained by the candidate in the individual theoretical disciplines as well as in the prescribed practical activities of that year.

After successfully taking the theoretical-practical examination of the previous year, postgraduates must also pass the final diploma examination: it includes the defence of a dissertation which has previously been written on one or more of the subjects studied throughout the specialisation period.

The grading scale used by SS teachers when assessing both their students' yearly performance and their diploma dissertations ranges from 0 to 70, 42 being the lowest qualifying grade.

(b) *Titolo di dottore di ricerca*

At the end of each year participants in individual *DR* programmes have to each submit a detailed report on the studies and research activities carried out in that year. On the basis of the quality and accuracy of the report as well as continuous assessment of participants' application and proficiency, *DR* teachers may suggest to the university president the exclusion of some of them from completing the programmes concerned.

At the end of the whole study period, individual participants must demonstrate — by means of a final written dissertation or a graphic project — having achieved results of significant scientific value.

A national board, made up of three full professors, is responsible for the assessment of the final *DR* dissertation. The evaluation is expressed in the form of a detailed written judgement; no numerical grade is attributed.

The title of *dottore di ricerca* — an academic qualification valuable only in the context of scientific research — is conferred by a decree of the Minister for Universities and Scientific and Technological Research.

Qualifications comparable to the research doctorate are awarded by three advanced schools with special statutes — the two higher schools in Pisa and the advanced one in Trieste — at the end of courses involving highly qualified scientific education. The quoted *DPR* 382/1980, under which the *DR* was established, makes provision for formally equating with university research doctorates the qualifications conferred by such special schools as well as those conferred by other Italian postgraduate institutions running courses similar to *DR* programmes.

Attestato di corso di perfezionamento

Attendance at a *CP*, along with the fulfilment of the connected academic obligations, does not result in any educational degree with legal effect. At the end of the study period, which may vary from a few months to a year, the *CP* director just issues an attendance certificate which cannot be regarded as a formal qualification either in connection with scientific research or for employment ends.

II.3.3. Academic recognition of final qualifications in higher education for further study

An 'in series' two-year *DU* is fully recognised to enable its holder to pass on to the corresponding *laurea* course by joining the *CL* third year.

All 'in parallel' *DUs* are partly recognised for enrollment in a related *CL*, with a reduction in the length of the *CL* itself (e.g. two years out of three may be recognised; recognition practice is based on the comparison of subject syllabuses, looked upon in terms of complexity, quality and quantity).

Holders of university diplomas awarded by the *SDAFSs* may be admitted to the second year, at best, of a related *CL*, thus obtaining a reduction of a maximum of one year.

A *laurea* degree is fully recognised as the basic necessary requirement for access to all postgraduate university studies such as the third level courses of *scuole di specializzazione*, *dottorato di ricerca*, *corsi di perfezionamento*.

III. Special types and forms of final qualifications in higher education

(a) Master's courses

Due to their autonomy, Italian universities, both State and independent but legally-recognised, may run courses and award qualifications different from those regulated by national law.

A few institutions, for example, organise *post-Lauream* programmes which they frequently call Master's courses. Originally modelled on the British or US pattern, the Italian Master's courses have been conveniently adapted to the local situation.

In the setting up and management of such degree courses, Italian academic institutions often operate autonomously, but at times they avail themselves of the cooperation of outside qualified bodies. For instance, consortia have been established between universities and industrial and/or commercial concerns with the purpose of jointly running Master's courses (or similar ones) which may better answer the market demand for young professionals provided with both in-depth theoretical education and a more practically-oriented training.

Since all Master's courses are subject to *numerus clausus* restrictions, to gain admission applicants must not only possess a related *laurea* (or an equivalent foreign qualification) but also pass a selective entrance examination.

Course length may vary from one to two years. Attendance is compulsory. As for study content, Master's courses mostly concern such fields as business management, corporate administration, mass communications, and so on.

Teaching alternates traditional university lectures with case-studies and other active methodologies.

Even if the Italian Master's degrees often enjoy considerable popularity among employers — especially in connection with the private industrial and commercial context — they have no legal validity on the national territory, since they do not fall within the official university system.

Anyhow, they are generally well accepted on the labour market as additional, more professionally-oriented qualifications obtained after an official Italian degree.

(b) Continuing university education

Italian universities — on their own or in cooperation with public as well as private enterprises within the legal framework of purposely created consortia — are also involved in initiatives of *istruzione continua o permanente*, that is to say continuing or lifelong education.

It seems important to specify that in Italy most activities connected with continuing education are set up and developed outside the national educational system, either by the regions or by private organisations.

Continuing education has fundamentally developed along two different channels. The first, which could be referred to as 'second-chance education', covers a number of initiatives essentially designed to offer new education and training opportunities to people who have previously had very limited ones because of definite social reasons; it mainly consists in courses for adult education, the majority at secondary level.

The second channel is that of 'continuing higher professional education', including different types of educational offerings: they are meant for professionals who, already provided with a high degree of education and/or experience, need to update or extend their professional competence.

It is within the second channel described above that Italian universities are making their contribution, generally consisting of a variety of *post-Lauream* courses, with different names, duration and contents but sharing the common objective of professional upgrading.

(c) Post-secondary and post-tertiary courses within the framework of vocational training

A type of education, which is becoming widespread and significant, also deserves mentioning: it consists of the post-secondary courses established within the framework of the vocational training system falling under the responsibility of the regions.

To give a clearer idea of this educational offering it seems necessary to explain how and at what level regional vocational courses are established and function compared with the national education system.

Vocational training courses have traditionally attracted young people who, on completing their compulsory school period and having no intention of carrying on further studies, want to be employed as soon as possible. In this context, vocational training appears to be an educational stream alternative to the upper sector of State secondary education; alternative not only as concerns its purpose but also from an institutional point of view, since it falls — as already said — under the responsibility of the regions.

In conformity with the national legislation, State technical and vocational upper secondary institutes also offer such knowledge as required for jobs in industry and trade, but the primary aim of such institutes still remains their students' overall cultural education.

It must be stressed, however, that the boundaries between State and regional responsibilities in matters of vocational training are not clearly laid down in the Italian Constitution.

The basic concept which seems to make reference to the specific powers of the regions is that vocational education is directly designed to provide the type of competence needed at an operative level in order to adequately take up technical positions in industrial and commercial concerns. The Constitutional Court itself has repeatedly expressed this type of evaluation.

In any case, whenever vocational training results in a formal educational qualification, it lies outside the powers of the regions.

At the end of most regional training courses only attendance certificates are issued; even if, in a few cases, *attestati* may be supplied, i.e. statements testifying to the completion of certain vocational courses, they have no legal validity at national level either for further study within the State education system or as a prerequisite for access to self-employed professions and to the civil service. Obviously, such limitations are the primary cause of the slow and only partial development of the regional vocational training system, especially at higher levels.

Notwithstanding this, the last few decades have witnessed the setting up and development of training courses designed for a new type of applicant, namely students with an upper secondary education diploma. These courses usually last no longer than one year, their main purpose being to integrate the type of education provided in certain upper secondary schools (i.e. technical and vocational institutes) with more specialist operative skills.

In a few local contexts, two-year courses are also evolving on an experimental basis. They, however, are quite different from the previous ones, since they offer well-balanced vocational training based on specific subject courses in such areas as building, industrial production, business administration, and so on, which remain generally uncovered by the type of professional education offered by *SDAFSs* within universities.

These two-year courses which, once again, come under the responsibility of regional or provincial administrations, are generally set up thanks to the cooperation of a great variety of institutional bodies: technical institutes, universities, local authorities, and the organisations responsible for the regional training system. Study organisation, based on a combination of theoretical lessons with applied exercises and practical activities, are generally modelled on the pattern of university education.

Even if their qualifications fall within the regional, and not the national official system, the above one- or two-year courses of vocational training at post-secondary level may be compared to those offered in other countries by certain institutions of non-university higher education.

Also training courses at a higher professional level — comparable to the *post-Lauream* programmes of continuing professional education run by universities — have been rapidly expanding in the last 20 years, once again set up on the initiative of the regions, either on their own, or, more frequently, in cooperation with industries and commercial firms.

(d) Istituti superiori di scienze religiose — ISSRs

Finally, the Higher Institutes for Religious Sciences should be mentioned, a type of institutions — outside the official university system — offering education and training for prospective teachers of the Catholic religion in Italian schools of every type and level.

ISSRs are run by the Italian Catholic Church authorities, under the supervision of the Holy See. The first were established in 1986, immediately after the passing of Act No 121 of 25 March 1985, ratifying the new agreement between the Holy See and the Italian Republic (8/02/1984).

ISSRs run three- and four-year courses leading to different qualifications, both connected with the knowledge and teaching of the Catholic religious doctrine.

The basic admission requirement for both the three- and four-year courses in religious studies is the Italian *diploma di maturità*.

Studies are organized after the university pattern: subject courses, annual or semestral, may be fundamental (compulsory) or optional; class attendance is obligatory; as for teaching methodology, traditional lectures alternate with seminars and teamwork. The approach to the various subjects is rather a theoretical one, as is typical of the Italian academic tradition.

Each subject course implies the passing of the corresponding examination, usually oral; semestral subject courses may result in written examinations. Before the relevant academic degrees may be conferred, in addition to all the subject exams included in their curricula, students have also to pass a final comprehensive examination — always oral — and finally prepare and defend a thesis.

The two courses result respectively in the following qualifications: *diploma in scienze religiose* (three years), and *magistero in scienze religiose* (four years). When tuition is based on distance technologies, the above courses are extended to four and five years respectively.

According to point 4.3 of the agreement between the Italian Minister for Education and the President of the Italian Bishops' Conference (14 December 1985), the degree called *magistero in scienze religiose* (four or five years) is recognised by the Italian State as a university second level qualification entitling the teaching of the Catholic religion in all Italian schools, at all levels (primary, lower secondary and upper secondary).

In conformity with the same legislative Act of 1985, the *diploma in scienze religiose* entitles its holder to teach the Catholic religion in Italian primary schools; only if it is combined with an Italian *laurea*, does it allow the teaching of the same subject

(¹) in institutes of secondary education.

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**Diagram
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Abbreviations

BA Bachelor of Arts

Dipl.-Arch. (FH) Diplom-Architekt (FH) — architect degree granted at the *Fachhochschule*

Dipl.-Ing. (FH) Diplom-Ingenieur (FH) — engineer degree granted at the *Fachhochschule* for all engineering subjects

D.Phil. Doctor of Philosophy

EEA European Economic Area

EU European Union

FHL Fachhochschule Liechtenstein

IAP Internationale Akademie für Philosophie

M.Phil. Master of Philosophy

Glossary

Abitur

Official certificate in Germany for admission to any university.

Baccalaureate

Secondary school leaving certificate; it permits its bearer to enter an institution of higher education.

Berufsmatura

Official certificate in Switzerland awarded on completion of a vocational education and additional general training; necessary for admission to the *Fachhochschule Liechtenstein (FHL)*.

ECTS — European credit transfer system

Credit system implemented by the European Community for a better recognition of learning achievements of students, especially when studying abroad.

Fachhochschulreife

Official certificate in Liechtenstein after a vocational education and additional general training; equivalent to the German *Fachhochschulreife* certificate and the Swiss *Berufsmatura*.

Matura

Official certificate in Liechtenstein and Austria for admission to any university.

Rigorosum

Final extended examination after a graduate or doctorate programme.

Privatissimum

Qualifying seminar for the doctoral degree, wherein a doctoral candidate presents material from his or her dissertation for approval by the faculty.

Vordiplom

Certificate and examinations at the end of the undergraduate programme.

I. Higher education system

The system of higher education in Liechtenstein is officially regulated by the government. There are official and non-official forms of institutions of higher education. All of them are recognised by the government.

I.1. The institutions of higher education

Of the two higher education institutions in Liechtenstein one is public and one private. The private institution is mostly sponsored by foundations. Characteristic of higher education institutions is their right to self-administration, their right to administer academic examinations and to award academic degrees, as well as the right to recruit academic staff.

Institutions of higher education are supposed to cultivate and promote science and the arts by means of research, teaching and study. They prepare students for careers which require scientific and/or practical knowledge.

Liechtenstein has two institutions of higher education which award academic degrees.

Non-university level

Fachhochschule Liechtenstein (FHL)

Fachhochschulen have the task of preparing students for professional activities on the basis of application-related teaching involving the practical application of scientific knowledge and methods or ability in artistic skills. They carry out research and development tasks in the framework of this educational mandate.

The *FHL* is structured and organised in the same way as other higher education institutions and is the equivalent of the German *Fachhochschulen*. As a result of the academically based and application-related higher education training, the graduates of the *FHL* are usually employed in industry and by the authorities. All professors and lecturers have proved their academic qualifications in research and teaching as well as through practical qualifications acquired outside the academic sphere.

The courses which are offered fit in around the students' working hours and are alongside the students' work.

Long-term programmes (four years/eight semesters)

Architecture

Civil engineering

Information management and information technologies

Mechanical engineering

Post-graduate programmes (one and a half years/three semesters)

Environmental engineering

Environment and economy

Economy and engineering

Land architecture — landscaping — land protection

Logistics

All programmes are structured as modules. Credits are allocated to course units (modules) according to the European credit transfer system (ECTS) to describe the student workload required to complete them. The complete workload of a long-term programme is described by 200 credits. The workload of postgraduate programmes is described by 60 credits. Credits are only awarded if the modules are successfully passed by the students.

University level

Internationale Akademie für Philosophie (IAP)

The International Academy of Philosophy is a private, independent institution of higher education learning which offers a full course of studies in philosophy. This institution is organised and structured around four full professors, some distinguished visiting professors, two assistant professors and about 30 guest professors.

I.2. Number of students

In 1996, 40 students were matriculated at the *IAP* and 250 students at the *FHL*. About 70% of all students at the *FHL* came from abroad, mainly from Switzerland and Austria. At the *IAP* all students are from foreign countries, approximately half from western Europe, the United States and Latin America and half from eastern Europe.

I.3. Organisation of course of study

The academic year for long-term studies is divided into semesters, the first beginning no later than the end of October, the second beginning in April. The summer break is in July and August. Courses and postgraduate studies have flexible timetables and are organised when considered necessary. The official teaching language is German. Several seminars and special lectures are also held in English or French.

At the *FHL* students have to pay a tuition fee per semester of about ECU 460 for long-term studies and ECU 7000 for postgraduate studies at the *FHL*. At the *IAP* students pay ECU 1650 per semester, auditors ECU 170 per event.

Grading system

The grading systems are the following.

<i>FHL</i>	6: very good 5: good 4: passing 3, 2, 1: insufficient sub-grades are possible	<i>ECTS</i> grading scale A-B-C-D-E-F-FX is used in parallel	
<i>IAP</i>	1: very good 2: good 3: satisfactory 4: passing 5:		failing

II. Qualifications and diplomas

II.1. Qualifications for admission to higher education

II.1.1. Non-university level

FHL

One may be admitted to long-term studies at the *FHL* if one holds an officially approved certificate from Liechtenstein (e.g. *Matura*, *Fachhochschulreife*). Applicants from an EU/EEA country have free access to all subjects if they hold an officially approved certificate which allows them to enter a higher educational institution in the EU/EEA country where they received the certificate. Swiss nationals may be admitted if they hold the certificate of the *Matura* or *Berufsmatura*. Other applicants may be admitted if the advisory senate of the *FHL* approves their certificate for admission to a higher education institution. In such cases, additional examinations may be required. In addition, all applicants must show a certificate of active employment in one subject-related field (at least a 50% part-time employment). The courses which are offered fit in around the students' working hours and are undertaken alongside the students' work.

II.1.2. University level

IAP

Because of the international character of the student body of the *IAP*, there are three different types of entry qualification:

1. for students educated according to European educational systems, admission for *Baccalaureate* studies requires the completion of the *Matura*, *Abitur* or its equivalent;
2. for students educated according to the United States educational system, admission to *Baccalaureate* studies requires the completion of a United States high school diploma or its equivalent and a further two years of study at the *Baccalaureate* level at a United States university;

3. students educated according to other systems are admitted on a case-by-case basis, with the above two types of admission qualifications as guidelines.

While acceptance for the *Baccalaureate* degree in philosophy for United States students is, in principle, possible according to number 2 above, the normal route for American students wishing to study at the *IAP* is the completion of a United States BA degree or its equivalent, followed by admission into the Master's (M.Phil.) programme.

II.2. Intermediate qualifications in higher education

II.2.1. Non-university level

FHL

At the *FHL* students must pass each course unit (module) and two levels of qualification in the four-year long-term studies programme. After four semesters (two years) a *Vordiplom* examination has to be passed which is similar to the final undergraduate examination. This qualification is necessary to continue the studies. This cycle consists mainly of basic subjects.

II.2.2. University level

IAP

Education at the *IAP* is in three cycles, the *Baccalaureate*, the Master's, and the doctorate.

After the initial cycle of two years or four semesters, the *Baccalaureate* is awarded. The *Baccalaureate* programme is carefully planned in order to give the necessary introductory courses and basic tools for advanced study in philosophy and is completed when 48 Baccalaureate-level credits have been passed, plus an oral examination covering significant themes in the history of philosophy, chosen by the candidate and approved by the rector of the *IAP*.

II.2.3. Academic recognition of intermediate qualifications for purposes of further study

FHL

Students holding the *Vordiplom* can enter the graduate programme.

IAP

Admission to advanced study in philosophy (Master's level study) at the *IAP* requires the attainment of a *Baccalaureate* degree, as well as the attainment of the grade of *good* or 'B' as described above under I.3. The *Baccalaureate* should normally be in philosophy. However, outstanding candidates with the *Baccalaureate* or its equivalent in an allied field in the humanities (e.g. political science) or the natural sciences (e.g. physics or medicine) may be admitted immediately into the Master's programme, provided they also have a sufficient number of credits in philosophy. In the latter case, a carefully planned programme is outlined for the Master's candidate, in collaboration with the director of studies, in order to ensure a sufficient knowledge of philosophy by the time of the student's completion of the Master's degree. The admission of a student to Master's level study without a *Baccalaureate* in philosophy is the decision of the faculty committee. Such admission may be provisional, in which case the student is evaluated at the end of the first year of advanced study, in order to ensure that he or she is capable of continuing advanced study in philosophy.

II.3. Final qualifications in higher education

II.3.1. Non-university level

FHL

The graduate programme lasts two years or four semesters and leads to a full diploma. In the final semester of the cycle a pre-diploma thesis has to be worked out followed by a diploma thesis. In addition, a diploma examination has to be passed which is supervised by a diploma committee.

Degree titles which are granted include:

Diplom-Ingenieur (FH) — *Dipl.-Ing. (FH)*

Diplom-Architekt (FH) — *Dipl.-Arch. (FH)*

II.3.2. University level

IAP

The second cycle of education at the *IAP*, the Master's degree, lasts for two years or four semesters. This programme aims at deepening the knowledge of the main disciplines of philosophy, as well as the freedom to specialise in these or other fields of philosophy. Advanced courses in philosophical anthropology, theory of knowledge, ethics, social philosophy and ideology critique, metaphysics and ontology, logic, and the history of philosophy are required. Approximately half the courses for the Master's are elective, leaving the student free to specialise in particular areas.

The degree Master of Philosophy (*Mag. phil.*) is granted when the following conditions are met:

(a) a sufficient number of credits (48) are earned at least at the Master's level;

- (b) fulfilment of the language requirements (reading knowledge of German, English and Latin and ability to speak and write in German or English);
- (c) a Master's thesis approved by the candidate's director, is handed in to the director of studies;
- (d) a five-hour written examination on a question concerning one of four topics proposed by the candidate and approved by the chairman of the board of examiners is completed;
- (e) a one- to two-hour oral examination on four questions and on the written examination is taken and passed.

II.3.3. Academic recognition of final qualifications for purposes of further study

FHL

No doctorate studies are available at the *FHL*. However holders of an *FHL* diploma can enter the graduate programme in the same subject at an Austrian technical university. Those who obtain a diploma can also be admitted to postgraduate studies as described under section I.1. These short-term studies are also open to students holding a diploma in architecture, engineering, natural sciences or computer sciences which they received at other higher education institutions. The course programmes are completed with the presentation of a diploma thesis. A certificate is granted.

IAP

In order to enter into the final cycle of studies, the studies for the doctorate, the possession of a Master's degree in philosophy, or its equivalent, is required.

The doctoral programme is estimated to take three years (although in practice it may take longer). The programme includes one year or two semesters of courses designed to facilitate the writing of the doctoral dissertation. The programme of studies for the doctorate includes 24 credit hours (two semesters) beyond the Master's degree. Four credit hours are given for preliminary research on the doctorate, the results of which must be presented orally in two doctoral seminars or *Privatissimum*. Admission to the doctoral programme is subject to approval by the rector and the faculty committee of the *IAP*, who ascertain whether the applicant possesses the capacity for independent research, a necessary condition for admission.

The required doctoral dissertation must be an original contribution to knowledge. The final examination for the doctorate follows the completion of all course requirements, the completion of a doctoral dissertation (approximately 200 pages in length), approved by the director and handed in to the director of studies.

The final examination consists of:

- (a) an oral *Rigorosum*, a two-hour oral examination ranging over themes from systematic philosophy and from the history of philosophy;
- (b) an oral, public defence of the dissertation.

It is expected that the dissertation will be published as original research.

The Doctor of Philosophy (*Dr. Phil.*) is granted.

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**Diagram
in Liechtenstein**

of

study

programmes

Luxembourg

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Abbreviations

CC Cycle court d'études supérieures en gestion

Cunlux Centre universitaire de Luxembourg

ISERP Institut supérieur d'études et de recherches pédagogiques de Luxembourg

IST Institut supérieur de technologie de Luxembourg

IUIL Institut universitaire international de Luxembourg

IEES Institut d'études éducatives et sociales

Glossary

Certificat

Generally used for intermediate qualifications in the education system of Luxembourg.

Cours complémentaires

The two departments for practical work and training at the *Centre universitaire*:

Department of Judicial Training (*formation juridique*);

Department of Educational Training (*formation pédagogique*).

Cours universitaires

The three departments of teaching at the *Centre universitaire*:

Department of Law and Economics (*droit et sciences économiques*);

Department of Art and Humanities (*lettres et sciences humaines*);

Department of Sciences (*sciences*).

Département de droit et des sciences économiques

One of the three departments of the *cours universitaires*.

Département de formation juridique

One of the two departments of the *cours complémentaires*, which offers complementary courses for students with a final diploma in law who wish to become lawyers.

Département de formation pédagogique

One of the two departments of the *cours complémentaires*, which offers practical training for students with a final university diploma who wish to become secondary school teachers.

Division administrative et commerciale

One of the divisions of a technical secondary school-leaving certificate.

Division technique générale

One of the divisions of a technical secondary school-leaving certificate.

Élèves libres

Student in the *cours universitaires*, who may enrol in one or more courses of his/her choice. His/her enrolment requires the approval of a department professor.

Élèves réguliers

Student in the *cours universitaires*, eligible to register for the final examination in his/her department. He/she is required to attend the lectures in his/her subject area regularly.

I. Higher education system

The system of higher education in Luxembourg is officially regulated by the government. The government is represented by the Ministry of Education and Vocational Training, which alone is responsible for policy planning.

All higher education in Luxembourg is public. However, the creation of private institutions of higher education is possible. The conditions are determined by law.

All sectors of education are governed by regulations and directives drawn up and administered by the Ministry of Education and Vocational Training.

Higher education in Luxembourg is basically limited to:

(a) a first year university course (*cours universitaires*) at the *Centre universitaire de Luxembourg (Cunlux)*.

(b) non-university courses of three years at:

the *Institut supérieur de technologie de Luxembourg (IST)*

the *Institut supérieur d'études et de recherches pédagogiques de Luxembourg (ISERP)*

the *Institut d'études éducatives et sociales (IEES)*;

non-university courses of two years at:

the *cycle court de Luxembourg*

the *lycée technique 'école de commerce et de gestion'* and the *'lycée technique des arts et métiers'*, Luxembourg (BTS);

(c) postgraduate training at the *Institut universitaire international de Luxembourg (IUIL)* as well as postgraduate courses for future secondary school teachers (at the *département de formation pédagogique*).

I.1. The institutions of higher education

Institutions of higher education are supposed to cultivate and promote science and the arts by means of research, teaching and study. They prepare students for careers which require scientific knowledge or artistic creativity.

Luxembourg has one academic institution of higher education, six colleges for advanced vocational training and one institution providing post-university education. There are no special art colleges or music academies.

Institutions of higher education can therefore be divided into three groups.

University

The *Cunlux* includes the *cours universitaires* and the *cours complémentaires*. Students are offered the first year of university courses in most academic disciplines.

Post-university

The one institution providing post-university education is the *Institut universitaire international de Luxembourg (IUIL)*. The *IUIL* has a joint programme of lectures and seminars. Specialised and general training courses are offered regularly.

Courses at the *département de formation juridique* and the *département de formation pédagogique* are offered at the *Centre universitaire*.

Non-university

The non-university higher education institutions offer advanced vocational training for technical engineers, primary and pre-school teachers, teachers and instructors of special education classes and for bankers, and higher technician training courses.

There are six non-university higher education institutions:

IST (Institut supérieur de technologie)
ISERP (Institut supérieur d'études et de recherches pédagogiques)
IEES (Institut d'études éducatives et sociales)
CC (cycle court) of the Centre universitaire
LTECG (lycée technique 'école de commerce et de gestion')
LTAM (lycée technique des arts et métiers).

The *cycle court d'études supérieures en gestion* is part of the *département de droit et des sciences économiques des cours universitaires*.

I.2. Number of students

For the academic year 1996/97, the enrolment of students at the different institutions was as follows:

(a) <i>Centre universitaire:</i>	658
<i>département de droit et des sciences économiques</i>	151
<i>département des lettres et des sciences humaines</i>	138
<i>département des sciences</i>	120
<i>cycle court</i>	249
(b) <i>IST</i>	301
(c) <i>ISERP</i>	336
(d) <i>IEES</i>	505
(e) <i>LTECG and LTAM (BTS)</i>	324

There is a significant number of foreign students (from EC member countries as well as from non-EC countries) enrolled at the *Centre universitaire* and the *IST*.

I.3. Organisation of courses of study

The academic year for university and non-university courses lasts from 1 October to the end of the following June. Application for enrolment must be forwarded to the administration of the institute concerned before 1 September.

The academic year at the *Cunlux*, the *CC* and *IST* is divided into two semesters. Study at the *ISERP* and at the *IEES* takes three years.

The *IUIL* does not offer regular, full-year courses of study, but only seminars, and specialised and general training courses of three to four weeks each. These are offered regularly throughout the year. The *IUIL* organises courses especially during springtime.

At institutions of university and non-university higher education, students do not attend lectures during periods of examination preparation or during summer holidays. The programmes of the *IUIL* do not consist of lectures in the normal way, but essentially of full-time seminars.

Teaching methods at university and non-university institutes are similar: lectures, independent study, seminars, practical courses and exercises.

For the *IUIL*, teaching methods mainly consist of seminars and independent study.

Centre universitaire de Luxembourg (Cunlux)

The *Cunlux* offers only the first year of university studies. The *Cunlux* has the following departments which, in turn, are divided into several subject areas:

1. *département de droit et des sciences économiques* (Law and Economics)
2. *département des lettres et des sciences humaines* (Arts and Humanities)
3. *département des sciences* (Sciences, Medicine, Pharmacy).

The courses of the different departments are compatible with the syllabuses of universities in neighbouring countries.

Even though the first year at the *Cunlux* is a general year, students have already chosen their future specialisation by taking a prescribed number of compulsory and optional subjects in their field of study. There is, however, no preliminary year. The *Cunlux* is considered to be the first year of university study. The first year at the *Cunlux* is concluded with an examination, which the student can retake once in case of failure.

The *département des sciences* also offers a training of two years (*cycle préparatoire polytechnique européen*) preparing for admission without selective examination to one of the 21 French *grandes écoles d'ingénieur* (engineering colleges) of the three *Instituts nationaux polytechniques de Grenoble, de Nancy, and de Toulouse*.

Cycle court (CC)

Studies at the *CC* last two years. The *CC* is part of the Department of Law and Economics of the *Cunlux* and is divided into three departments:

1. *section informatique de gestion* (computer science applied to economics)
2. *section commerce et banque* (commerce and banking) with a subsection *assurance*
3. *section gestion et contrôle*.

The two-year course at the *CC* is intended for students interested in entering their chosen profession as quickly as possible. The *CC* is already highly specialised in banking, finance, commerce, accounting and computer science applied to economics. There is no period of general or preliminary study.

Each academic year at the *CC* is concluded with an examination, which can be retaken twice. Students have to pass the first year's examination before they can be admitted to the second year. Having passed the examination of the second year, students are awarded the final diploma of the *CC*.

Institut supérieur de technologie de Luxembourg (IST)

The studies at the *IST* lead to the *diplôme d'ingénieur technicien*. The duration of the course is three years, or six semesters. The *IST* is divided into four technical subject areas: mechanics, electrical engineering, civil engineering and computer science. The languages of instructions are French and German.

A course of study at the *IST* provides a complete, professionally oriented education. There is no period of preliminary or general study. The courses are specialised from the first year onwards.

Each of the three years at the *IST* is concluded with an examination, which can be retaken twice in case of failure.

Studies leading to the *diplôme d'ingénieur industriel* started in September 1997. They will last four years.

Institut supérieur d'études et de recherches pédagogiques de Luxembourg (ISERP)/Institut d'études éducatives et sociales (IEES)

Courses at the *ISERP* and the *IEES* last three years. The first year at the *ISERP* is a general year for both sections (primary and pre-school teachers). The last two years are specialised for the two sections. There is no preliminary or general year for the *IEES*; studies are specialised from the beginning.

Each year at the *ISERP* and *IEES* is concluded with an examination that can be retaken twice. Students have to pass each year's examination to continue their studies.

Higher technician training courses organised at the *lycées techniques*

The training leading to the *brevet de technicien supérieur (BTS)* is organised at the level of post-secondary education. It lasts two years. The studies are essentially practical.

Institut universitaire international de Luxembourg (IUIL)

Each session at this institute takes three to four weeks. The *IUIL* is divided into three departments:

1. *Centre international d'études juridiques et de droit comparé*
2. *Centre international d'études et de recherches européennes*

3. *Centre international d'économie politique.*

There is no period of preliminary or general study. These courses cannot be compared to postgraduate courses offered abroad. There are only special seminars in various fields. The institute does not conclude with an examination, nor does it award final diplomas. There is therefore no need to repeat the course.

II. Qualifications and diplomas

The following section contains a description of the entrance qualifications, intermediate and final certificates and degrees of the various institutions of higher education, and a summary of their recognised equivalence.

II.1. Qualifications for admission to higher education

The diplomas most commonly held by persons admitted to higher education are secondary school diplomas, which are usually obtained through a final written examination after seven consecutive years of studies at a *lycée classique*, a *lycée technique* or at the European School in Luxembourg.

The different diplomas are:

- the secondary school leaving certificate of the *lycée classique* (*diplôme de fin d'études secondaires*)
- the technical secondary school leaving certificate of the *lycée technique* (*diplôme de fin d'études secondaires techniques*).

The European baccalaureate certificate of the European School in Luxembourg and of all other European Schools abroad is recognised as equivalent to the secondary school leaving certificate of a *lycée classique*.

The final school leaving examination is passed with a grading system from 0 to 60 marks, where 60 is the maximum and 30 the pass mark. The marks for the European baccalaureate, on the other hand, go from 10 (maximum) to 6/10 (pass mark).

The recognition of foreign secondary school leaving certificates is based on the European convention on the equivalence of diplomas leading to admission to universities, signed in Paris, 11 December 1953. Only the countries which have ratified this convention can obtain recognition for their secondary school leaving certificates.

II.1.1. Qualifications for admission to non-university higher education

Holders of the following diplomas are admissible to non-university education:

- a secondary or a technical secondary school leaving certificate
- a foreign secondary school-leaving certificate recognised as equivalent
- a technician diploma (after evaluation by a special board).

A secondary school leaving certificate is obtained after seven years of consecutive and full-time study at a *lycée classique*. A *lycée classique* provides general education and its certificate gives university entrance to all subjects.

A *lycée technique* leads to a technical school leaving certificate or a technician diploma after the same period of study. A *lycée technique* provides general and vocational education.

For the secondary school leaving certificate, pupils take final examinations in seven or eight compulsory subjects. The choice of elective subjects is made earlier. This certificate is awarded in seven specialities:

- A1: main subjects: languages, human sciences;
- A2: main subjects: human and social sciences;
- B: main subjects: mathematics, physics;

- C: main subjects: natural sciences and mathematics;
- D: main subjects: economics and mathematics;
- E: main subjects: fine art and crafts;
- F: main subject: music.

For the technical school leaving certificate, there are 11 or 12 compulsory subjects. This certificate is awarded in three different divisions:

- division administrative et commerciale* (administration, commerce and business management)
- division technique générale* (general technology)
- division des professions de santé* (ancillary medical and social studies).

The technician diploma requires 11 compulsory subjects. This certificate is awarded in different specialities, for example, chemistry, electrical engineering (in all relevant field) and mechanics. This diploma allows students to enter immediately into professional life, but also to attend university or other institutions of higher education in their special subject.

All examinations are State examinations. Even pupils from private schools must sit the State examinations. The examination includes all the compulsory subjects. If a pupils fails in one subject of the written final examination, he/she can sometimes take an oral test in this specific subject.

Diplomas	Institutions of non-university higher education				
	IST	ISERP	IEES (éduc. gradué)	CC	LTECG LTAM (BTS)
secondary school leaving certificate	x ⁽¹⁾	x	x	x	x
technical secondary school leaving certificate	x	x	x	x	x
technician diploma	x ⁽¹⁾			x	x

The *ISERP* and *ISEE* admit students on the basis of their results of the secondary school leaving examination (*numerous clausus*).

Prior to their admission at the *ISERP*, the prospective students have their proficiency in the three official languages (German, French, Luxembourgish) tested. A pass in each of these tests is a necessary condition for their admission to the *ISERP*. Students can pursue a similar course of studies in any of the Member States of the EU.

The system for marks (0 to 60) used for tests throughout the years of study is also used for final examinations.

The diplomas listed previously grant admission to non-university higher education.

II.1.2. Qualifications for admission to university

Holders of the following diplomas are admissible to university higher education:

- a secondary or technical secondary school leaving certificate
- a foreign secondary school leaving certificate recognised as equivalent.

The technician diploma does not give admission to university education, except for engineering studies at the *Centre universitaire*.

Holders of a Luxembourgish or foreign secondary school leaving certificate recognised as equivalent, regardless of the type of school, can register as *élèves réguliers* or as *élèves libres* for the *cours universitaires*.

There is not a set limit to the number of foreign students that can be admitted to the *cours universitaires*. Entrance examinations are not required.

Although the principal language of instruction at the *cours universitaires* is French, for the moment neither a language examination nor a certificate of proficiency is required.

The following diplomas grant admission to university higher education.

Diplomas	Cours universitaires		
	département des sciences	département des lettres	département de droit
secondary school leaving certificate	x	x	x
technical secondary school leaving certificate	x	x	x

No other factors can affect admission to university education. There are no special requirements for particular fields or faculties.

II.2. Intermediate qualifications in higher education

Non-university higher education takes two years at the *cycle court*. It also takes two years for the *BTS* at the *LTECG* and the *LTAM*. It takes three years at the *IST*, the *ISERP* and *IEES*. Each year is concluded with an examination, which has to be passed in order to continue in the following year.

No special diplomas are awarded for these intermediate examinations. A certificate is awarded only at the end of non-university studies. Each intermediate examination can be retaken twice.

The first year of university higher education at the *cours universitaires* is concluded with an examination and a certificate. There are three different certificates, one for each department at the *cours universitaires*.

There are formal academic recognition conventions between the *Centre universitaire* and a number of foreign universities, in order to allow students with certificates from the *cours universitaires* to continue their studies abroad.

II.2.1. Intermediate qualifications in non-university higher education

No intermediate qualifications are awarded by non-university institutions of higher education.

II.2.2. Intermediate university qualifications

The *Centre universitaire* offers only the first year of university studies. Students who have successfully completed this year are given certification of this:

the *certificat d'études juridiques et économiques* from the Department of Law and Economics;
the *certificat d'études littéraires et de sciences humaines* from the Department of Arts and Humanities;
the *certificat d'études scientifiques* from the Department of Sciences.

Students who present one of the three certificates from the *Centre universitaire* can register as regular students for second-year studies at Austrian, Belgian, British, German or French universities (for third-year law studies in Belgium).

The courses of the Department of Law and Economics correspond to those of the first year of law and economics in France (i.e. the *DEUG* in law, economics, economic and social administration) and, one or two courses excepted, to the Belgian syllabus covered in the two years of the *candidature* in law.

The Department of Art and Humanities offers the following subject areas: philosophy and psychology, classical philology, Roman languages, German, English, history and geography. Courses in this department are mostly intended for students wishing to become secondary school teachers.

The Department of Sciences offers the following subject areas: medicine (ME), pharmacy (PH), mathematical and physical sciences (MP), chemistry and biology (CB).

No special diploma is given to the students who have successfully completed their two-year studies at the *cycle préparatoire polytechnique européen*. They are admitted to one of the 21 French engineering colleges (*écoles d'ingénieurs*).

II.2.3. Academic recognition of intermediate qualifications for purposes of further study

As already mentioned, the *cours universitaires* offer only the first year of university studies, and students with a secondary school leaving certificate can register at any of the three departments. If they change their minds during, or at the end of the first year, they can register at one of the two other departments the following year.

Within the non-university sector, a change of field implies a change of institution. The student who abandons his/her studies has to start from the beginning at another institution of non-university higher education. Since the kind of study and the special entrance qualifications differ from one institution to another, previous years cannot be recognised.

Students with a secondary school leaving certificate who are registered at an institution of non-university higher education can afterwards register at the *cours universitaires* if they change their minds.

On the other hand, students who have successfully completed the year at the *cours universitaires* and wish to transfer to an institution of non-university higher education have to register for the first academic year.

II.3. Final qualifications in higher education

II.3.1. Final qualifications in non-university higher education

There are four final qualifications in non-university higher education as there are four institutions. Each of the four diplomas is given only at one specific institution.

Certificats d'études pédagogiques

Each year at the *ISERP* is concluded with an examination. The final diploma, awarded by the Ministry of Education and Vocational Training, is a State diploma. The final examination for this diploma takes into account not only a written test, but also a student's achievements during the whole study programme and training: the theoretical and practical work of three years.

The first year of study is the same for both primary and pre-school teachers. It is composed of a theoretical part and of at least four weeks' of practical work. From the second year on, the study programme is specialised for each of the two types. The educational part is again completed by practical work of at least seven weeks per year of study in classes of primary schools or pre-schools.

There is no final thesis or project required, but the students must have obtained a specific number of study credits during the last two years in order to get the final diploma. The theoretical courses are given partially at the *ISERP* and partially at the *Centre universitaire*.

The study programme for pre-school teachers leads to the *certificat d'études pédagogiques – option enseignement préscolaire*. The study programme for primary school teachers leads to the *certificat d'études pédagogiques – option enseignement primaire*.

All students who have obtained a teacher's training diploma, no matter whether in Luxembourg or in any other Member State take an examination giving access to the profession. This exam is a *concours*, i. e. candidates are employed according to their ranking in the exam.

Diplôme d'ingénieur technicien

Each year at the *IST* is concluded with an examination. The examinations are administered by Luxembourgish regulations and the diploma is awarded by the Ministry of Education and Vocational Training in Luxembourg.

In the course of his/her studies, each student must complete 22 weeks of practical work. Sixteen of these weeks can be taken throughout the three years of studies while the remaining six weeks are more subject orientated and have to be taken right at the end of the studies.

The course of study in each of the four departments of the *IST* consists of theoretical and practical work, including compulsory, elective and non-compulsory subjects chosen by the student. Achievement is measured by written examinations, and practical or laboratory work. Much importance is given to performance in the work-study situation and to the work-study report. Together with a final examination the student has to complete an independent project. A thesis or project report is required.

Students can choose from four different specialisations: mechanics, civil engineering, electrical engineering and computer science. The Department of Electrical Engineering is divided into two smaller branches: *électronique* and *industrielle*.

The study programme of the Department of Mechanics leads to the *diplôme d'ingénieur technicien en mécanique*.

The study programme of the Department of Electrical Engineering leads to the *diplôme d'ingénieur technicien en électrotechnique*.

The study programme of the Department of Civil Engineering leads to the *diplôme d'ingénieur technicien en génie civil*.

The study programme of the Department of Computer Science leads to the *diplôme d'ingénieur technicien en informatique appliquée*.

Diplôme d'éducateur gradué/diplôme d'éducateur

The examination at the *IEES* is administered by the Ministry of Education and Vocational Training. Each year is concluded with an examination. The final examination takes into account the achievement, the written tests and the practical work of the whole study period.

The course of study is structured into a theoretical, technical and practical part. The theoretical part gives the student the essential knowledge for his/her profession; the technical part enables him/her to conduct educational activities; and the practical part ensures that the student has educational know-how.

In principle the theoretical and technical parts take 20 weeks of each year of study. Much importance is given to achievement in practical work, which the student performs under supervision in different special education centres. The final examination includes tests of theoretical knowledge and technical know-how, the completion of practical work and the presentation of a personal thesis.

The choice between *éducateur* and *éducateur gradué* depends on the study level of the students. Whereas admission to the programme for *éducateur gradué* requires a secondary school leaving certificate, admission to the programme for *éducateur* is possible after five years of secondary school.

The study programme for *éducateur* leads to the *diplôme d'éducateur*. The study programme for *éducateur gradué* leads to the *diplôme d'éducateur gradué*.

Diplôme d'études supérieures en gestion

The examination is administered by the Ministry of Education and Vocational Training. The first year is concluded with a written examination which the student has to pass in order to enrol for the second year.

The final examination of the second year can be taken in three different sections:

section informatique de gestion

section commerce et banque

section gestion et contrôle.

In the first year, the students have to choose between two different courses of study: management (*gestion*) and computer science (*informatique*). Whereas the Department of Computer Science is more specialised in the second year, the Department of Management is divided into two smaller branches: *commerce et banque* and *gestion et contrôle des entreprises*.

Each course has its own specific subjects in addition to the subjects common to both courses during the first year. Achievement is measured by examinations throughout the year, which count for 50% of the final examination. Students in the department of computer science have to complete a final project besides the final examination. There is no practical part and no thesis required from students in the department of management.

The courses at the *cycle court* are full time, and designed especially for students interested in entering their chosen profession more quickly.

There are three diplomas corresponding to the three different sections:

diplôme d'études supérieures en gestion: section informatique de gestion;
diplôme d'études supérieures en gestion: section commerce et banque;
diplôme d'études supérieures en gestion: section gestion et contrôle.

II.3.2. Final university qualifications

Since the *Centre universitaire* offers courses only for the first year of university studies, there are no final university qualifications.

II.3.3. Academic recognition of final qualifications in higher education for purposes of further study

Holders of a university diploma

Students who present one of the three certificates from the *Centre universitaire* can register as regular students for second-year studies at Austrian, Belgian, British, German or French universities (and for third-year law studies in Belgium).

They can take a final or even postgraduate degree in any subject which is acknowledged (*homologation*) or registered (*enregistrement*) by the Ministry of Education and Vocational Training in Luxembourg.

Holders of a non-university diploma

In general non-university diplomas are for practising one's specific profession, for which students do not have to take further degrees abroad. They can always specialise, however. If they enrol at a foreign university to get a final degree, the value assigned to their diploma will always depend on the university and the subject.

Holders of the *diplôme d'études supérieures en gestion* can sometimes register in third-year studies abroad, although the diploma cannot be compared to a foreign two-year university standard, because it is actually meant for entering working-life.

With the approval of the rector of the university, students who are in possession of the *diplôme d'ingénieur technicien* can enrol as regular students for the second cycle of studies at certain universities in Belgium, France, Germany and Austria.

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Abbreviations

AIO *Assistent in opleiding*

B *Bachelor*

BBA *Bachelor of business administration*

dr *Doctor*

drs. *Doctorandus*

HAO *Hoger agrarisch onderwijs*

HAVO *Hoger algemeen voortgezet onderwijs*

HBO *Hoger beroepsonderwijs*

HEO *Hoger economisch onderwijs*

HGO *Hoger gezondheidszorgonderwijs*

HPO *Hoger pedagogisch onderwijs*

HSAO *Hoger sociaal agogisch onderwijs*

HTO *Hoger technisch onderwijs*

ing. *Ingenieur (HBO)*

ir. *Ingenieur (WO)*

IO *Internationaal onderwijs*

KNMG *Koninklijke Nederlandse Maatschappij tot bevordering der geneeskunst*

KUO *Hoger kunstonderwijs*

M. *Master*

MBA *Master of Business Administration*

MBO *Middelbaar beroepsonderwijs*

mr. *Meester*

NLO *Nieuwe lerarenopleiding*

Nuffic *Netherlands Organisation for International Cooperation in Higher Education*

OIO *Onderzoeker in opleiding*

OU Open universiteit

PAO Postacademisch onderwijs

PHBO Post hoger beroepsonderwijs

PHO Post hoger onderwijs

VSNU Vereniging van Samenwerkende Nederlandse universiteiten

VWO Voorbereidend wetenschappelijk onderwijs

WEO Wet op de erkende onderwijsinstellingen

WHBO Wet op het hoger beroepsonderwijs

WHW Wet op het hoger onderwijs en wetenschappelijk onderzoek

WO Wetenschappelijk onderwijs

WOU Wet op de open universiteit

WWO Wet op het wetenschappelijk onderwijs

Glossary

Afsluitend examen

With the implementation of the higher education and research act of 1993, the term *afsluitend examen* was introduced and refers to the final examination taken to conclude a study programme comprising 168 credits at either a university or *hogeschool*.

Colloquium doctum

Entrance examination for university and *HBO* education, intended for those who do not have the required diplomas and are older than 21 years.

Co-assistentschap

Clerkships taken in the two years of post-*doctoraal* medical education. Here the student receives practical training in 15 or more medical fields.

Doctoraal examen

Examination that concludes a university course, which may be referred to as *afsluitend examen*. Holders of a degree which states that they have passed the *doctoraal* examination may use the title *doctorandus (drs.)*, *ingenieur (ir.)* (in technical and agricultural subjects) or *meester (mr.)* (law) before their name. They may also use the title master, abbreviated as M. after their name.

Eerstegraadsbevoegdheid

Teaching qualification which allows the holder to teach at all levels of secondary education as well as in *HBO*.

Hogeschool (HBO institutions)

Institutions offering higher professional education, which includes a great variety of disciplines.

Numerus fixus (numerus clausus)

Limitations on the number of students in a particular university or *HBO* programme. These are set each year by the Minister for Education, Culture and Science.

Proefschrift

Doctoral dissertation. If the dissertation is successfully defended in public, the author is promoted to doctor (dr).

First year of study in all disciplines at a university or *hogeschool*. The year concludes with an examination which in most cases must be passed, after which the student is authorised to continue study in the chosen discipline.

Stage

Period of practical training in *HBO* or *MBO* programme.

Staatsexamen

An examination set by a commission which is appointed by the Ministry of Education, Culture and Science for *HAVO* and *VWO*. It is intended for those who do not attend classes during the day, but who prepare for this examination by themselves or through an evening class. The content does not differ from regular *HAVO* and *VWO* programmes.

Tentamen

Sessional examination as part of the curriculum which is either conducted orally or in written form. A *tentamen* has the status of a test. A series of *tentamens* constitutes an examination. The *tentamen* is therefore the standard means of assessing a student's progress and performance.

I. Higher education system

Higher education in the Netherlands includes both university education (*wetenschappelijk onderwijs, WO*) and higher professional education (*hoger beroepsonderwijs, HBO*). The universities prepare students for independent scientific work in an academic or professional setting. The institutions offering *HBO*, known as *hogescholen*, offer higher professional education which concentrates on applied science, providing students with the knowledge and skills they will need for specific professions. The open university offers both types of higher education to people who wish to obtain a degree or diploma but are unable or do not want to attend full-time, regular courses. Most of the courses offered by institutions of higher education come under the legislation of the Ministry of Education, Culture and Science. There are also other higher education courses which are the responsibility of other ministries.

Until the summer of 1993, the various types of higher education were governed by separate laws — the *wet op het wetenschappelijk onderwijs (WWO, 1986)*, the *wet op het hoger beroepsonderwijs (WHBO, 1986)* and the *wet op de open universiteit (WOU, 1985)*. On 1 August 1993, the entirely new *wet op het hoger onderwijs en wetenschappelijk onderzoek (WHW — higher education and research act)* went into effect, combining for the first time all three forms of higher education into one law.

The *WHW* indicates an important change in the government's conception of the role it should play in higher education. Under the *WHW*, institutions have been given more autonomy with regard to spending and curriculum planning. At the same time they are responsible for assuring the quality and relevance of the programmes offered by means of a system of quality control. The task of the government is limited to a subsidising, stimulating and 'retrospective monitoring' role. The government remains responsible for the 'macro-efficiency' of the system, i.e. the efficient distribution of study programmes with regard to societal needs.

I.1. The institutions of higher education

The institutions of higher education which are governed by the *WHW* are, on the one hand, either public (non-denominational) or private (denominational), and, on the other hand, either funded (fully subsidised by the government) or approved (recognised by the Ministry of Education, Culture and Science but not necessarily subsidised by it). Approved institutions are subject to the same quality requirements as government-funded institutions, and students at both funded and approved institutions qualify for government grants and loans.

Besides the open university, there are 13 funded universities in the Netherlands, three of which are private and the remaining 10 of which are public. The approved category of universities includes five theological universities, one University for Humanist Studies, and the Netherlands Business School, Nijenrode. There are currently 73 *hogescholen* which are funded by the government, some of which are public and some private.

The open university offers courses that to a large extent can be completed at home using special course materials. However, attendance at certain classes, such as laboratory or computer-supported activities, may be necessary. The latter are offered at the open university's 18 study centres found throughout the country. The centres also provide advisory and other services.

The Netherlands Business School, Nijenrode

Nijenrode was set up by industry, and receives a subsidy from the government. The university offers only programmes in business and works in close cooperation with industry. Courses have a practical as well as international orientation. Students are housed on the university campus.

The courses offered include:

- the two-year part-time Executive Master of Business Administration (MBA) course;
- the 16-month intensive *doctoraal* programme;
- the 12-month international MBA programme.

Theological universities

The discipline of theology is not only taught by the Faculty of Theology at six of the 13 regular universities, but also at five theological universities. These can be divided according to denomination. They consist of one faculty where *propedeuse* and *doctoraal* programmes (see I.3) in theology are offered, leading to diplomas which are legally recognised as equivalent to those of regular universities.

The admission requirement is the *VWO* diploma (see II.1.2). If this does not include Greek and/or Latin, an admission examination must be passed in these subjects.

The length of the *propedeuse* is one year while that of the *doctoraal* programme is five years. Unlike that at regular universities, the *doctoraal* programme at theological universities includes all the professional and ecclesiastical subjects; this explains the longer course length. Some theological universities also offer ecclesiastical professional courses, for example, in order to become a pastoral assistant.

Other educational institutions

Besides the institutions offering higher education described above, there are many institutions offering different types of higher education which fall under other legislation:

- international education institutes (*internationaal onderwijs, IO*), designed to offer advanced training courses to men and women from developing countries;

- institutions offering courses which do not fall under the Ministry of Education, Culture and Science;

- a great many private education institutions, which are recognised by the recognised educational institutions act of 1986 (*wet op de erkende onderwijsinstellingen*). These institutions may offer programmes that lead to examinations that are supervised by the ministries having jurisdiction over the fields involved. These examinations cover a broad range of professional, vocational and academic competencies, some of which are at the higher education level.

These types of educational institutions will be described in Section III.

Coordinating organisations

The recognised institutions of higher education have set up coordinating organisations which consult with the government on behalf of the institutions. There is an *HBO-Raad* (Association of Dutch Polytechnics and Colleges) and a *Vereniging van samenwerkende Nederlandse universiteiten, VSNU* (Association of Universities in the Netherlands).

The aim of the *HBO-Raad* is to promote the development of higher professional education. It negotiates with the government on behalf of the *hogescholen*. The *VSNU*'s most important aim is to promote consultation and cooperation among the universities in order to form a common vision of the future development of academic education and research. The *VSNU* negotiates with the government on matters which affect all universities.

I.2. Number of students

In 1992 the total number of full-time students registered at universities and *hogescholen* was 422152. Approximately 2% of them were foreign nationals, nearly half of whom came from EC Member States.

Foreign students

Total number of foreign students: 7586

Total number from European States: 3864

Of the students from European States, 2257 studied at universities and 1607 studied at *hogescholen*.

I.3. Organisation of courses of study

The university academic year runs from 1 September to 31 August and the academic year in *HBO* runs from 1 August to 31 July. The open university academic year, like that in universities, runs from 1 September to 31 August. However, due to the unique character of the OU, students can register at any time during the year for the course or courses they wish to take at that particular moment.

Teaching, including periods of practical training and examination periods, takes up 42 weeks per year; there are holidays at Christmas, New Year, Easter and in the summer.

Since the implementation of the new higher education and research act (*WHW*), study programmes which began in the autumn of 1993 at both universities and *hogescholen* have shared a similar structure. The law has provided for a four-year adaptation period (until 1997) to allow institutions and students to complete programmes of study begun before 1993. Under the *WHW*, institutions have been given even more freedom to determine the content and educational objective of each study programme offered. The result is that no two programmes in the same field offered by two different institutions need to be exactly alike.

Hoger beroepsonderwijs, HBO (higher professional education)

The purpose of *HBO* as defined by the *WHW* is to offer theoretical instruction and to develop the skills required for practical application in a particular profession. The focus is on one specific professional field, and practical experience is an important part of the training.

The disciplines within *HBO* are divided into the following seven sectors:

- hoger pedagogisch onderwijs, HPO* (education);
- hoger agrarisch onderwijs, HAO* (agriculture and natural environment);
- hoger technisch en natuurwetenschappelijk onderwijs, HTO* (engineering and technology);
- hoger gezondheidszorgonderwijs, HGO* (health care);
- hoger economisch onderwijs, HEO* (economics);
- hoger sociaal-agogisch onderwijs, HSAO* (social studies);
- hoger kunstonderwijs, KUO* (fine and performing arts).

HBO programmes

HBO studies are four years in length, and the study load is quantified by means of a system of *studiepunten* (credits). One credit represents one week of full-time study, i.e. 40 hours. As the academic year consists of 42 weeks, one year of full-time study is worth 42 credits. An entire *HBO* programme consists of 168 credits and is concluded with a final examination. Upon completion of all requirements, graduates are awarded the *HBO* degree known in Dutch as the *getuigschrift hoger beroepsonderwijs*. Since the implementation of the *WHW*, the diploma is officially referred to as the *getuigschrift van het afsluitend examen*. Both terms, *getuigschrift hoger beroepsonderwijs* and *getuigschrift van het afsluitend examen*, are, however, in use.

The first year of *HBO* study programmes is an orientation year comprising 42 credits, and is referred to as the *propedeuse*. The *propedeuse* is in most cases concluded with an examination (*propedeutisch examen*). There is often a common *propedeuse* year for study programmes in related fields, at the end of which students branch off into individual specialisations.

In the second and third years the student receives a more advanced level of theoretical instruction, and, typically during the third year, completes a period of practical training (*stage*) of up to one year. This period of practical training is usually spent in business, industry or government.

The length of the practical training varies according to study programme, lasting anywhere from 6 to 10 months. In the case of shorter *stages*, the student attends classes during the remaining months of the year. Every student has a supervisor both in the faculty and in the workplace, and an agreement is set up between the two concerning responsibilities, objectives, and other requirements which have to be fulfilled. The student returns to the *hogeschool* periodically to turn in progress reports and participate in discussions, and at the end of the *stage* is required to turn in a detailed report on his or her experience.

After the period of practical training, the course is geared towards independent work, particularly in the last part of the third and/or fourth years. This is concluded with a *scriptie* (thesis) or *werkstuk* (project).

Instruction is given in the form of lectures, seminars and practical work. The student's performance is assessed on the basis of examinations (*tentamens*), papers, the *scriptie/werkstuk* (thesis) and work carried out in practical sessions and laboratories. A great deal of emphasis is also placed on assessment of the practical training periods and the reports drawn up on them.

Students must pass a specified number of oral and written examinations (*tentamens*) for both the *propedeuse* and the final examination. The evaluation of the student's performance is usually expressed in numbers, but there is an alternative pass/fail (*voldoende/onvoldoende*) grading system in use as well (see II.1.2).

In addition to the four-year initial study programmes, about two thirds of all *hogescholen* offer post-*HBO* programmes as well. These programmes are available in almost every sector and vary in length from several weeks to several years. They are geared towards university and *HBO* graduates and enable further specialisation in a number of areas.

Post-*HBO* programmes in the fine and performing arts and in architecture are the only ones regulated by the *WHW*. According to the *WHW*, post-*HBO* programmes in fine and performing arts may contain a maximum of 84 credits (two years); those in architecture must contain a total of 168 credits (four years).

Wetenschappelijk onderwijs, WO (university education)

The purpose of university education as defined by the *WHW* is to prepare for the independent pursuit of scholarships or the professional application of academic knowledge. University programmes therefore offer degree programmes that combine teaching and research and are, as such, the traditional preparation for admission to the doctorate.

Doctoraal programma's

In Dutch university education, there are basically two different levels of advancement: *doctoraal* programmes, most of which take four years of full-time study, and post-*doctoraal* programmes, which may vary in length from some weeks to four years. The *doctoraal* diploma is awarded upon completion of the *doctoraalexamen*, colloquially referred to as the *doctoraal*. Since the implementation of the *WHW*, the *doctoraal* diploma has been officially referred to as the *getuigschrift van het afsluitend examen*. Both terms, *doctoraal* diploma and *getuigschrift van het afsluitend examen* are however in use.

As in *HBO*, the study load of *doctoraal* programmes is quantified by a system of credits. In most disciplines, the *doctoraal* programme requires 168 credits. Study programmes requiring the completion of more than 168 credits are:

- dentistry (*tandheelkunde*): 210 credits;
- philosophy of science (*wijsgeer van een wetenschapsgebied*): 210 credits;
- programmes in engineering and technology offered at technical universities: 210 credits;
- programmes in agriculture offered at the Wageningen Agricultural University: 210 credits (¹);
- medicine (*geneeskunde*): 252 credits;
- pharmacy (*farmacie*): 252 credits;
- veterinary medicine (*diergeneeskunde*): 252 credits.

Doctoraal programmes are demanding. Statistics show that only a small number of students complete the *doctoraal* programme within four years, and that the total length of study is 5.4 years on average. For that reason, registration as a student may be extended by two years. In most disciplines, therefore, students are given six years to complete a programme, and, for the abovementioned exceptions, seven and eight years.

The first year (*propedeuse*) comprises 42 credits and supplies the necessary background in subjects which are relevant to the major area of concentration. The *propedeuse* is concluded by an intermediate examination known as the *propedeutisch examen*.

In each year that follows there is a growing degree of specialisation, but students are allowed considerable freedom in the choice of subjects they want to take. Recurrent components of the programmes are research methodology and training, and a specific number of elective courses outside of but relevant to the major field of concentration. The ratio of required to elective courses varies according to discipline.

Towards the end of the programme, students are required to write a thesis (*scriptie*) of at least 60 pages in length. The main purpose of this thesis is to demonstrate the student's ability to conduct independent research. The evaluation of the student's performance is usually expressed in numbers, but there is an alternative pass/fail (*voldoende/ onvoldoende*) grading system in use as well (see II.1.2).

Instruction is given in the form of lectures, seminars and practical work. Students must pass a specified number of oral and written examinations (*tentamens*) for both the *propedeuse* and *doctoraal*. Since the 1960s, the *doctoraal* examination has become less and less like an examination and more and more like an evaluation. The *doctoraal* examination is therefore in a certain sense a formality, and its main function now is to offer an opportunity for discussion of the *scriptie* or final project.

As well as the normal *doctoraal* programmes, universities also offer a number of post-*doctoraal* programmes.

The open university

The purpose of the open university is to provide higher education to adults, i.e. individuals over 18, who are unable to utilise traditional programmes and institutions. Students' reasons for selecting the open university may range from lack of formal educational qualifications to family and work commitments that preclude full-time study.

The open university offers both university and *HBO* programmes and has the authority to grant the same degrees. A number of programmes are available in each of the following broad areas: business and administrative sciences (*bedrijfs- en bestuurswetenschappen*), cultural sciences (*cultuurwetenschappen*), economic sciences (*economische wetenschappen*), natural sciences (*natuurwetenschappen*), legal sciences (*rechtswetenschappen*), social sciences (*sociale wetenschappen*), and technical and engineering sciences (*technische wetenschappen*).

Courses largely comprise pre-tested written material, and in some cases media material, designed by the open university's professional staff. Most courses are intended for home study, but some require attendance. Each course consists of one or more modules. Each module represents an average of 100 hours of study and has a value of three credits which are awarded upon completion of the course.

Units of credit are earned by passing supervised examinations, which are conducted only at approved sites. In addition to there being three standard annual examination dates, examinations for many courses are offered throughout the year by means of a computerised testing system that generates individual tests for each candidate. Exams of this type are known as *sys-tentamens*. Passing the exam in a course is awarded with a certificate (*certificaat*). Students who have earned two or more certificates may request a transcript (*dossierverklaring*) that summarises their progress. Students who have completed all first-year requirements of a university or *HBO* programme (14 modules, i.e. 42 credits) may get a certificate known as the *propedeuseverklaring* which facilitates transfer to other higher education institutions.

II. Qualifications and diplomas

II.1. Qualifications for admission to higher education

The most common qualifications for admission to the first year of higher education are secondary school diplomas. These diplomas are published by the Ministry of Education, Culture and Science, but issued by the school. The diploma is signed by the director of the school and countersigned by the State inspector present for the written part of the examination. The various types of schools which offer courses leading to these diplomas are laid down by law, as are the guidelines for the school curriculum.

There are no requirements for admission to the open university other than a minimum age of 18.

All qualifications discussed in II.1.1 and II.1.2 give admission to *HBO* and some give admission to university education. General information applicable to both *HBO* and university admission, such as grading, subject requirements, *colloquium doctum*, and limitations, are given at the end of II.1.2.

II.1.1. Qualifications for admission to non-university higher education (*HBO*)

The *WHW* states that the following diplomas may grant admission to *HBO*:

- (a) the *HAVO* diploma (*hoger algemeen voortgezet onderwijs* — senior general secondary education);
- (b) the *MBO* diploma (*middelbaar beroepsonderwijs* — senior secondary vocational education);
- (c) the *VWO* diploma (*voorbereidend wetenschappelijk onderwijs* — university preparatory education).

The *HAVO* diploma

The *HAVO* diploma forms the basis for admission to higher professional education. The diploma is obtained following 12 years of general education: seven years of pre-primary and primary education from the age of five followed by five years of secondary education. Education is compulsory from the age of five, but the majority of children begin pre-primary education (*kleuteronderwijs*) at the age of four.

In secondary education, pupils have approximately 30 hours of lessons per week during the school year of 40 weeks. Up to the fourth year of the course, all subjects in the curriculum are compulsory. After that, six subjects are chosen for the final examinations, of which two (Dutch and a modern language) are compulsory and four others are optional.

When choosing subjects for the final examinations, pupils have to take into account their intended course of study at the tertiary level because certain subject combinations are preferred as preparation for certain *HBO* programmes. The following three combinations of subjects are most common:

- (a) literary/social subjects;
- (b) mathematical/physical science subjects;
- (c) economic/administrative subjects.

The *HAVO* programme may also be taken at schools offering adult education and at schools for secondary vocational education with a separate *HAVO* department.

The final examination

The final examination consists of two parts — a central written examination, conducted nationally, the content of which is laid down by the Ministry of Education, Culture and Science, and an internal school examination, consisting of a series of tests carried out by the school.

If a pupil passes an examination in a seventh subject, a certificate is added to the diploma by the school. The result obtained in this seventh subject has no effect on the overall results of the examination. Candidates who fail some parts of their final examination can receive a certificate for the separate subjects which they have passed.

There is also a possibility of obtaining the *HAVO* diploma by passing a State examination. This examination, the content of which does not differ from the one described above, is set by a commission appointed by the Minister for Education, Culture and Science.

The MBO diploma

MBO is a form of secondary vocational education which includes a large variety of programmes in four sectors: technology, economics, health and human services, and agriculture and the natural environment. Practical experience (*stage*) is a mandatory part of each programme. The course can also be taken at schools offering adult education and at night schools. Some *MBO* schools have a *HAVO* department. This means that the pupils have the opportunity to take a number of subjects at *HAVO* level as well as their vocationally oriented subjects.

MBO has gone through a major reorganisation in the last few years, resulting in four types of programme, ranging in length from two to four years. Only diplomas from the long programmes (*lange opleidingen*, three or four years) qualify for admission to *HBO*. The first of these diplomas was conferred in 1996.

The diploma from a long *MBO* programme represents a total of 11 years of general education and three or four years of vocational education: seven years of pre-primary and primary education from the age of five, four years of secondary education and three or four years of secondary vocational education. The *MBO* curricula include some general education subjects, but subjects are primarily vocationally oriented.

Certificates and diplomas

An important aspect of the reorganisation of *MBO* is that programmes have been structured into 'certificate units'. Completion of a unit involves passing one or more tests, after which a certificate for that particular unit is conferred. For every *MBO* programme, an *MBO* diploma is conferred upon completion of a specified number of certificates. The *MBO* diploma specifies the sector and the programme which the student completed.

II.1.2. Qualifications for admission to university

The *WHW* states that the following diplomas may grant admission to university education:

- (a) the *VWO* diploma (university preparatory education);
- (b) a *propedeutisch* diploma from a *hogeschool*;
- (c) a *doctoraal* degree obtained at a Dutch university or at the open university;
- (d) an *HBO* degree;
- (e) proof that the candidate has passed an entrance test (*colloquium doctum*);
- (f) foreign diplomas equivalent to any of the above.

the VWO diploma

VWO is the university preparatory stream of secondary education. Schools that offer *VWO* are the *gymnasium*, the *atheneum*, and the *lyceum*. The *lyceum* consists of the *gymnasium* and *atheneum*.

These types of school award the following five types of *VWO* diploma:

gymnasium A and *gymnasium B*;
atheneum A and *atheneum B*; and
ongedeeld VWO (unified *VWO*).

The name of the type of *VWO* course followed is stated on the diploma.

A *VWO* diploma is obtained following 13 years of general education: seven years of pre-primary and primary education from the age of five, followed by six years of secondary education. Pupils have approximately 30 hours of lessons per week during the school year of 40 weeks.

Up to the fifth year, the *VWO* curriculum consists mainly of compulsory subjects. Seven subjects are chosen for the final examination, of which five are compulsory and two are optional.

The combination of subjects is furthermore determined by the type of *VWO*: at a *gymnasium*, the emphasis is on the classical languages; in the *atheneum*, classical languages are offered as optional subjects and the emphasis may be on languages and social sciences.

The choice of subjects also depends on the main discipline chosen within the type. Both the *gymnasium* and the *atheneum* have the A group of disciplines where the emphasis is on languages and social sciences, and the B group of disciplines where the emphasis is on mathematics and sciences.

The *ongedeeld VWO* (unified *VWO*) differs in that there is no division into A or B groups of disciplines. This gives the pupils greater freedom when choosing their subjects for the final examination. Furthermore, only two or three subjects are compulsory in the final examination for *ongedeeld VWO*.

The final examination

The final examination consists of two parts — a central written part, held nationally, the content of which is determined by the Ministry of Education, Culture and Science, and a school examination consisting of a series of tests set by the school during the final school year.

Pupils who take an examination in an eighth subject receive a certificate from the school which is added to the diploma. The final results achieved in this subject have no effect on the overall result of the examination. Candidates who fail some subjects receive a certificate for the subjects which were passed.

There is also a possibility of obtaining the *VWO* diploma by passing a State examination. This examination, the content of which does not differ from that described above, is set by a commission appointed by the Minister for Education, Culture and Science.

Grading

The evaluation of the student's performance is expressed in numbers on a scale of 1 (lowest grade) to 10 (highest grade). This scale is used in primary education as well as in secondary and higher education. The grading scale is as follows:

1: very bad	6: sufficient
2: bad	7: amply sufficient
3: low	8: good
4: insufficient	9: very good
5: almost sufficient	10: excellent.

Frequency distributions per year indicate that the grades 9 and 10 are rarely given.

Subject requirements

In principle, everyone who possesses a *HAVO* or *VWO* diploma qualifies for admission to *HBO* or university education respectively. However, for various disciplines in both types of higher education, certain subjects are required in the final secondary examinations. If the required subjects were not included in the *HAVO* or *VWO* final examination, the institution could impose additional requirements before admitting the student.

The *colloquium doctum*

For those who do not possess the necessary diplomas to qualify for admission to universities and *hogescholen*, there is the possibility of passing a *colloquium doctum*. For this, one must be aged 21 years or older.

The *colloquium doctum* consists of a test (oral or written) in a number of subjects, depending on the faculty and discipline. The test must indicate whether the candidate has a sufficient level of general education as well as an adequate command of the Dutch language to follow the programme successfully.

Any candidate who passes the test gains admission to *HBO* or university education in the chosen study programme. It is not possible to en-rol in a study programme other than the one in which the *colloquium doctum* is passed.

Limitations

Restrictions (*numerus fixus*) can be placed on the number of students that can be enrolled in certain study programmes. The *WHW* specifies two reasons why admission restrictions may be applied: the capacity of the institution is insufficient, or the supply of graduates from a particular study programme exceeds the needs of the labour market.

The disciplines to which the *numerus clausus* applies are determined each academic year. Medicine, dentistry and veterinary medicine are always subject to *numerus clausus*.

II.2. Intermediate qualifications in higher education

II.2.1. Intermediate qualifications in university and non-university higher education (*HBO*)

The intermediate qualification in Dutch higher education is known as the *propedeuse*, signifying successful completion of the first year of study. The *WHW* states that every university and *HBO* programme will have a '*propedeutisch* part', and specifies the length and purpose of the *propedeuse*, which is identical for both types of higher education programme. The study load for the *propedeuse* comprises 42 credits, and in most cases is concluded with a *propedeutisch examen*. Students must pass a specified number of oral and written examinations (*tentamens*) for the *propedeuse*, and upon completion of the requirements are given a certificate known as the *propedeutisch diploma* or the *propedeutische verklaring* (statement).

The function of the *propedeuse* is threefold. It is orientational, selective and directional.

Orientalional

Within the chosen field of study, students are given the opportunity to study a large number of subjects covering a broad area in order to orientate themselves towards as many aspects of this subject area as possible.

Selective

On the basis of the student's performance in the *propedeuse*, the institution may recommend that he or she discontinue studies in that particular discipline, or transfer to another institution. Students who fail to complete the *propedeuse* after two years, and in some cases after one, can be dismissed from that particular institution.

Directional

The *propedeuse* offers the student the opportunity to study further in a related discipline, to transfer to another discipline within *HBO* or *WO*, or to transfer from *HBO* to *WO*.

II.2.2. Academic recognition of intermediate qualifications for purposes of further study

In a number of *HBO* disciplines, a student who has passed the *propedeutisch* examination can transfer to the second year of a study programme within the same sector in a discipline other than that begun originally. The possibilities for transfer to the second year of a course in a discipline outside one's own sector are limited. In most cases, one would gain access to the first year. Admission to the first year of a university study programme is also possible for holders of an *HBO propedeuse*.

The *propedeutisch* diploma obtained after completion of the first year at university does not give admission to every *doctoraal* course. A great number of restrictions are placed on transfer. Within a sector, the *propedeutisch* diploma gives access to a great number of *doctoraal* courses, but outside this sector possibilities for transfer are limited.

II.3. Final qualifications in higher education

Strictly speaking, in the Dutch system of higher education, titles, and not degrees, are awarded. Students who pass the final examinations at *hogescholen* and universities obtain a diploma. The holder of such a diploma is granted the right to use a title, the name of which depends on the field of study pursued and the type of education (*WO* or *HBO*). These titles, and the fields of study to which they pertain, are defined in the *WHW* for *hogescholen* and universities.

In practice, the distinction between titles and degrees has become blurred and the two terms are used interchangeably. As *hogescholen* and universities are empowered to award diplomas and, through these, titles, they are also referred to as degree-granting institutions.

II.3.1. Final qualifications in non-university higher education (*HBO*)

The getuigschrift hoger beroepsonderwijs

Upon completion of 168 credits in an *HBO* programme, students are awarded the *getuigschrift hoger beroepsonderwijs*, stating the name of the faculty awarding the diploma and the study programme which the student completed. Since the implementation of the *WHW*, the final exam is officially referred to as the *afsluitend examen* and the diploma as the *getuigschrift van het afsluitend examen*. Both terms, *getuigschrift hoger beroepsonderwijs* and *getuigschrift van het afsluitend examen*, are, however, in use ⁽¹⁾.

All *HBO* graduates are permitted by law to use a particular title. Graduates of programmes in engineering, agriculture and environmental science may use the title *ingenieur*, abbreviated as *ing.* Graduates of all other disciplines may use the title *baccalaureus*, abbreviated as *bacc.* Abbreviated titles are in both cases placed in front of the person's name. Graduates of all programmes, regardless of discipline, may use the title Bachelor. This title is placed after the person's name, and is normally used in abbreviated form (B) followed by an indication of the discipline in which the programme was completed.

In addition to the three academic titles which are regulated and protected by law, graduates of *HBO* programmes can also use a professional title such as *fysiotherapeut* (physical therapist) or *maatschappelijk werker* (social worker), designating the profession which they have been trained to practise. Graduates are considered sufficiently qualified to practise their professions, and may therefore use the professional title as soon as their degree is conferred without further training or licensing examinations.

Graduates of post-*HBO* programmes in fine and performing arts and in architecture also receive a *getuigschrift hoger beroepsonderwijs*, with the additional specification that the study programme in question is a *tweede fase* (i.e. post-*HBO*) programme. Graduates of the post-*HBO* programme in architecture are directly eligible for registration as architects, and may use the legally protected title.

II.3.2. Final university qualifications

The *doctoraal* diploma

Upon completion of 168 credits in a university programme, students are awarded the *doctoraal* diploma, stating the name of the faculty awarding the diploma, the student's major discipline and the minor or subsidiary subjects studied. Since the implementation of the *WHW*, the *doctoraal* examen is officially referred to as the *afsluitend examen* and the diploma as the *getuigschrift van het afsluitend examen*. Both terms, *doctoraal* diploma and *getuigschrift van het afsluitend examen* are, however, still in use ⁽¹⁾.

All university graduates are permitted by law to use a particular title. Graduates of most disciplines may use the title *doctorandus*, which is abbreviated as *drs.* in front of the name. The corresponding titles in engineering and law are *ingenieur* (*ir.*) and *meester* (*mr.*) respectively. Since the introduction of the university education act of 1986 it has been possible for *doctoraal* graduates to use the internationally more familiar title of 'Master', abbreviated as an 'M' after the name. This possibility has also been included in the *WHW*.

In addition to the abovementioned academic titles, the legally protected titles *psycholoog* (psychologist) and architect may be used by graduates of programmes in psychology and architecture, respectively.

The open university

The title *baccalaureus* (*bacc.*) or *ingenieur* (*ing.*) can be earned by completing an *HBO* programme requiring a total of 56 modules, i.e. 168 credits. University programmes also require a total of 56 modules, i.e. 168 credits, and graduates of university programmes can use the titles *doctorandus* (*drs.*), *ingenieur* (*ir.*) and *meester* (*mr.*), depending on the programme. A *doctoraal* diploma awarded by the OU gives admission to post-*doctoraal* courses at regular universities. The same applies to *HBO* diplomas conferred by the OU.

II.3.3. Academic recognition of final qualifications in higher education for purposes of further study

In almost every discipline, after the *doctoraal* and *HBO* examinations, post-degree courses are offered by universities and *hogescholen*. Depending on the discipline, graduates of universities and *hogescholen* are eligible for admission to post-degree courses, which may vary in length from several weeks to several years. The *WHW* brought about important changes in the organisation of post-degree programmes, changes which will primarily affect the post-*HBO* programmes in fine arts and architecture, and the university programmes in medicine, pharmacy, veterinary medicine, and dentistry. These changes will, however, not be noticeable until 1998 and after. The information contained in this chapter describes the current programmes, some of which are being phased out in their current form.

The *getuigschrift hoger beroepsonderwijs* (higher professional education degree)

The *HBO* degree gives admission to post-*HBO* courses and, provided the student's performance and any work or research experience warrants it, to post-*doctoraal* courses at universities as well. Post-*HBO* courses provide advanced professional training, refresher courses, or custom-made courses designed to meet the specific needs of a particular group. A common characteristic of most post-*HBO* programmes is the emphasis on practical application of the material. The majority of these programmes are not funded by the Dutch Government, nor are they regulated by the *WHW*.

Post-*HBO* programmes in the fine and performing arts and in architecture are the only ones regulated by the *WHW*. According to the *WHW*, post-*HBO* programmes in fine and performing arts may contain a maximum of 84 credits (two years); those in architecture must contain a total of 168 credits (four years). It should be mentioned that current post-*HBO* programmes in architecture which are being phased out last six years part-time.

A separate category of post-*HBO* programmes is made up of the growing number of Master's degree programmes offered at *hogescholen*, in most cases in conjunction with a foreign institution. To guarantee a certain standard of quality, a Dutch Validation Council is being founded which is to inspect and approve *HBO* Master's programmes. In addition, the Ministry of Education, Culture and Science stated in its higher education and research policy plan of 1995 that *hogescholen* may obtain State recognition for professional Master's programmes that meet the ministry's criteria.

The *doctoraal* diploma

The following post-*doctoraal* and professional programmes are offered after the *doctoraal* examination:

- one-year university teacher training programmes;
- a wide variety of short-term post-degree courses (recurrent education) for the purpose of upgrading professional expertise;
- longer-term research programmes;
- four-year research programmes leading to the *promotie*;
- advanced professional training in medicine, pharmacy, veterinary medicine, and dentistry. (Under the *WHW* these courses are no longer officially post-*doctoraal* courses, but *doctoraal* courses with a longer duration. New-style diplomas will not be issued until 1998/99.)

Of these courses, only the four-year researcher's course (*AIO*) leads to a title, that of doctor (*dr.*). A diploma is presented at the end of the other courses.

University teacher training courses

Post-*doctoraal* teacher training courses are offered by the universities and are financed by the government. To qualify for admission, students must complete a *doctoraal* programme which includes an orientation course of two months in preparation for the post-*doctoraal* course. The course leads to the so-called *eerstegraadsbevoegdheid*. This means that one is fully qualified to teach in all classes of general and vocational secondary education and in *HBO*. This qualification only applies to the subject which was studied during the *doctoraal* programme.

The course lasts for one year, half of which consists of a period of practical training in a school for *VWO*. Teachers at the *VWO* school as well as faculty members at the university function as the student's supervisors at this stage. The student must spend at least 120 hours in teaching practice.

Promotie

The *promotie* is the procedure by which those who have fulfilled all the requirements of the doctorate are awarded the degree of doctor. Most candidates are appointed as research assistant at a university for a period of four years, and are known as either *assistent in opleiding (AIO)* or *onderzoeker in opleiding (OIO)*. There are a limited number of research assistantships available at each university, and admission is extremely competitive.

Post-doctorale professional programmes

Post-*doctorale* medical courses are compulsory for those who wish to practise as doctors, pharmacists, veterinary surgeons, or dentists. These courses are financed by the government.

The dentistry course lasts one year, and the veterinary and pharmacy courses last two years. For medical doctors, the course is split — first a two-year course for the doctor's examination (after which one is a *basisarts*), and then a specialisation. The specialisation to become a general practitioner takes three years; other specialisations such as anaesthetist, surgeon, lung specialist, ophthalmic surgeon, psychiatrist, rheumatologist, rehabilitation specialist, gynaecologist and others, take four to six years.

All of these courses are taught in university hospitals. The greater part of the course consists of so-called *co-schappen* or *co-assistentschappen*. Here the student receives practical training by functioning as the assistant of a recognised doctor.

After successfully completing the post-*doctoraal* medical courses, students receive one of the following licences, depending on the courses followed:

Arts (general practitioner): this licence is obtained by passing the general practitioner's examination (*artsexamen*);

Tandarts (dentist): after passing the dentistry examination (*tandartsexamen*);

Dierenarts (veterinary surgeon): after passing the veterinary examination (*dierenartsexamen*);

Apotheker (pharmacist): after passing the pharmacy examination (*apothekersexamen*).

At the moment in the Netherlands there are 29 officially recognised medical specialisations. Officially recognised means registered with the *Koninklijke Nederlandse Maatschappij tot bevordering der geneeskunst, KNMG* (Royal Dutch Medical Society).

III. Special types and forms of final qualifications in higher education

Section II gives a description of higher education degrees and diplomas which are regulated by the *WHW*. The Minister for Education, Culture and Science is responsible for these degrees and, to a certain extent, the study programmes they represent.

Besides these, there are a number of higher education diplomas and courses which in many cases do not fall under the legislation of this ministry. This category includes courses which are regulated by other ministries, or, as in the case of *internationaal onderwijs* (international education), are conferred by the independent institutions of higher education which only fall under one or more ministries as regards funding. This category also includes diplomas which are recognised by the *wet op de erkende onderwijsinstellingen (WEO)*, or the recognised educational institutions act of 1986 (see I.1).

The courses discussed in this chapter all require a *HAVO* diploma (see II.1.1) or its equivalent for admission, with the exception of international education programmes, which in most cases require a Bachelor's degree, and the *NIVRA* programme in accountancy, for which a *VWO* diploma is required.

The types of education are:

Het internationaal onderwijs (international education);
Courses regulated by the following ministries:
Ministry of Health, Welfare and Sport;
Ministry of Defence;
Ministry of the Interior;
Ministry of Economic Affairs.

International education

International education in the Netherlands offers courses, at approximately 20 independent institutions, in the fields of science and technology, social sciences and law, business studies (management and administration), agricultural science, media, communication and transport science, medicine and related sciences. These are advanced and supplementary courses in higher education which are mainly geared towards the problems and needs of developing countries. The courses are mainly intended for participants from the developing countries, and instruction is in English.

The various institutions offer courses which lead to a diploma, postgraduate diploma, or the degree Bachelor of Science or Master of Science. Some institutes also award MPhil and PhD degrees.

Education which falls under ministries other than the Ministry of Education, Culture and Science

Some of the diplomas which can be obtained on the basis of courses which fall under the responsibility of various ministries are described in this group. The list is not exhaustive.

1. Ministry of Health, Welfare and Sport:
 - vroedvrouw* (midwife) (length: four years);
 - radiodiagnostisch/radiotherapeutisch laborant* (radiodiagnostical/radiotherapeutical laboratory assistant) (length: three years);
 - podotherapeut* (podotherapist) (length: three years);
 - orthoptist* (orthoptist) (length: three years);
 - oefentherapeut Cesar* (Cesar therapist) (length: three years);
 - mondhygiënist* (oral hygiene specialist) (length: three years).
2. Ministry of Defence:
 - officer's diploma of the *Koninklijke Militaire Academie* (Royal Military Academy) (length: three to six years, depending on programme and entrance level);
 - officer's diploma of the *Koninklijk Instituut van de marine* (Royal Naval Institute) (length: five years).

3. Ministry of the Interior:
 - diploma of the *Nederlandse Politieacademie* (Dutch Police Academy) (length: four years);
 - diploma of the *Nederlands Instituut voor Brandweer en Rampenbestrijding (NIBRA)* (Dutch Fire Service Institute) (length: 1 year (post-higher education)).
4. Ministry of Economic Affairs:
 - Netherlands Institute for Marketing (NIMA), which sets the examinations for three marketing diplomas: NIMA-A, NIMA-B, NIMA-C. Recognised under the *wet op de erkende onderwijs-instellingen (WEO)*, or the recognised educational institutions act of 1986 (see I.1).

Other

A new course for registered accountants was introduced by the Royal Netherlands Institute of Registered Accountants (*Koninklijk Nederlands Instituut voor registeraccountants — NIVRA*) in 1994. The three-phase course is given part-time and requires seven years to complete. Phases two and three are offered by *NIVRA* in cooperation with the Netherlands Business School (Nijenrode). Students who successfully complete phase three obtain a *doctoraal* diploma and are permitted by law to use the title *registeraccountant* (registered accountant) in addition to the *doctorandus* title.

Staatspraktijkdiploma voor bedrijfsadministratie, SPD (State diploma for business administration): 18-hour examination set by the *SPD* commission under supervision of the Ministry of Education, Culture and Science. The diploma is recognised under the *WEO* and holders of an *SPD* diploma have the legal right to use the *baccalaureus* title.

IV EU special directive **Regulated professions** **(first directive)** **under and**

The following is a list of professions in the Netherlands which are regulated by the EC higher education act, grouped according to the competent authority.

Ministry of Justice

- notary (I)
- candidate for notary (I)
- member of the judiciary (I)

Netherlands Order of Lawyers

- lawyer (I)

Ministry of the Interior

- fire officer (I)
- police officer (I)

Ministry of Education, Culture and Science

- interior designer (I)
- archivist (national archives) (I)
- archivist (province) (I)

Information Management Group

- teacher in secondary school (I)
- teacher in primary school (I)
- teacher in special education (primary and secondary) (I)
- teacher in teacher training colleges and other institutions of higher professional education (I)

Ministry of Housing, Spatial Planning and Environment

- architect (special directive)
- town planner (I)
- keeper of records (I)

Ministry of Transport, Public Works and Water Management (RLD)

- captain/master (merchant navy) (I)
- first officer, second officer and third officer on merchant shipping of more than 6 000 grt (I)
- chief, second and third engineer A, B and C (I)
- maritime officer (I)
- registered pilot and certified pilot (shipping) (I)
- engineer (member of aircraft crew) (special directive)
- driver (transport) (special directive)
- air traffic controller (I)
- crewman/engine-driver, transport barge (Rhine and inland waterways) (special directive)
- crewman, transport barge (Rhine and inland waterways) (special directive)
- officer/engine-driver, barge transport (Rhine and inland waterways) (special directive)
- barge captain (Rhine and inland waterways) (special directive)
- crewman, barge transport *volmatroos* (Rhine and inland waterways) (special directive)
- pilot (aircraft) (special directive)

Ministry of Economic Affairs

- accountant/administration consultant (I)
- chartered accountant (I)
- patent agent (I)

National Service for the Inspection of Livestock and Meat, Ministry of Agriculture, Nature Management and Fisheries

animal physiotherapist (I)
veterinarian (special directive)

Ministry of Agriculture, Nature Management and Fisheries

garden designer and landscape architect

Ministry of Health, Welfare and Sport

pharmacist (special directive)
physician (special directive)
dentist (special directive)
midwife (special directive)
nurse (general) (special directive)
physiotherapist (I)
occupational therapist (I)
speech therapist (I)
dietitian (I)
orthoptist (I)
Mensendieck therapist (I)
Cesar therapist (I)
dental hygienist (I)
chiropractist (I)
psychotherapist (I)
X-ray technician (diagnostic) (I)

Ministry of Social Affairs and Employment

safety officer (I)
adviser: labour policy and organisation (I)
adviser: working conditions (I)

NB:

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directive.

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Abbreviations

EC European Community

ECTS European credit transfer system

EFTA European Free Trade Association

NARIC National Academic Recognition Information Centre

NKU *Nasjonalt* *koordinerende* *utvalg*/National Coordinating
Commission

Glossary

Cand.kand.cand.mag./Cand.mag.
Undergraduate degree offered at universities, university colleges and colleges. Normally requires four years of study.

Candidatus/candidata philologiae (Cand.philol)

Graduate degree awarded by the Faculty of Arts, requiring four semesters (two years) of study in addition to a *mellomfag/30 vekttall* in the same field.

Candidatus/candidata politicarum (Cand.polit)

Graduate degree awarded by the Faculty of Social Sciences, requiring four semesters (two years) of study in addition to a *mellomfag/30 vekttall* in the same field.

Candidatus/candidata scientiarum (Cand.scient)

Graduate degree awarded by the Faculty of Mathematics and Natural Sciences and some university colleges, requiring approximately three semesters (one and a half years) of study in addition to a *mellomfag/30 vekttall* in the same field.

Examen philosophicum

A preparatory course in philosophy, logic and the theory of science. The course takes one semester. Not required by the university colleges and college sector.

Grunnskole

Primary and lower secondary school.

Høgskolekandidat

Degree awarded by colleges, course lasts three years.

Grunnfag

Foundation course of 20 *vektall*, comprising two semesters of study.

Hovedfag

Main subject at graduate level; normally a four semester course after completion of *mellomfag/storfag* in the same field.

Mellomfag

Intermediate course of 30 *vektall*, comprising three semesters of study. A *mellomfag* normally builds upon a *grunnfag*.

Storfag

Major subject of 40 *vektall*, comprising four semesters of study. The *storfag* builds upon a *mellomfag*. Available only at the Faculty of Arts.

Vekttall

Credit unit. The normal workload for one semester is 10 *vektall*, or 20 *vektall* for one academic year.

Videregående skole

Upper secondary school.

I. Higher education system

Through legislation and plenary decisions, the *Storting* (National Assembly) defines the overall aims of the schools and the institutions of higher education. It lays down their structure and organisation, the responsibilities for running them, and their sources of funding. The State is directly responsible for the universities and for most of the other institutions of higher education.

The Ministry of Education, Research and Church Affairs is responsible for all public education, including from January 1997 also tertiary level education within the agricultural and the veterinary sector. Military education is under the jurisdiction of the Ministry of Defence.

Questions concerning degrees, examinations, and normal periods of study are decided by the government. Decisions as to which subject areas are to be offered are made by the ministry.

The institutions of higher education enjoy a considerable degree of academic and administrative independence. Appointment of teachers and academic staff, and also of external examiners, is the responsibility of the individual institution.

Tuition is free at public institutions of higher education; however, a small fee must be paid to the student welfare organisations every semester. In 1995, some 40% of the students who completed upper-secondary school embarked on university level education.

The Research Council of Norway (*Norges Forskningsråd*) was formally established after the reorganisation and merging of five research councils. The council serves as a national strategic research agency responsible for promoting and funding basic research in all fields. The universities, university colleges and to some extent State colleges are extensively involved in research. More than 40% of public expenditure is channelled through the Ministry of Education, Research and Church Affairs. Institutions are free to take on externally financed research projects and programmes which go beyond what their ordinary budgets can cover.

I.1 The institutions of higher education

The Norwegian system of higher education consists of:

- (a) four universities:
 - Oslo
 - Bergen
 - the Norwegian University of Science and Technology (previously called the University of Trondheim)
 - Tromsø;
- (b) seven specialised university colleges:
 - the Norwegian College of Agriculture
 - the Norwegian College of Veterinary Medicine
 - the Norwegian School of Economics and Business Administration
 - the Norwegian College of Physical Education and Sport
 - the Oslo School of Architecture
 - the Norwegian State Academy of Music
 - the Free Faculty of Theology;
- (c) the college sector:
 - non-university institutions of higher education.

As of August 1994 the 98 regional colleges were reorganised into 26 State colleges (*statlige høyskoler*) forming larger administrative units of colleges in the same local vicinity/county, and each offering a broader range of subjects but with their own particular specialities. The purpose of the reorganisation was to raise academic standards and to make better use of the available resources.

Courses run for one, two or three years. Longer courses and graduate programmes have also been introduced at some of the institutions. Most courses are oriented towards specific professions, their graduates becoming professional or para-professional personnel (education, nursing, engineering, administration and economics, music, arts, crafts and design, journalism, etc.). In certain arts, social science and natural science subjects the colleges offer courses which correspond to examinations taken within a university degree programme.

Military education is provided at the Military Academy, the Royal Naval Academy and the Royal Air Force Academy. After basic officer training, the military offers specialised training for its personnel.

A major priority during the 1990s has been the development of 'Network Norway', which links public institutions of higher education. The objective is to create a structural framework for increased cooperation and communication between institutions and to facilitate student mobility.

While the universities have traditionally devoted a fairly high percentage of their resources to research, the non-university institutions originally had no such function. Gradually, however, many institutions in the college sector, and especially some of the larger colleges, have developed extensive research activities, often connected to the regions. They may also be part of national programmes, in cooperation with national research institutes. In addition, regional foundations have established links with college research and the college boards.

I.2 Number of students

1994 higher education

Norway	161032
EU Member States	2170
Other countries	6104

Total	169306
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Numbers of students from EU Member States 1994 higher education

Austria	13
Denmark	595
Finland	136
France	77
Germany	280
Greece	18
Ireland	14
Italy	24
Luxembourg	1
The Netherlands	104
Portugal	18
Spain	31
Sweden	446
United Kingdom	398
Total	2170

Figures from the Central Bureau of Statistics show that in 1994 (October), the number of students in higher education amounted to approximately 170000, of which 46% were registered at the universities. About 90% of the student population were enrolled in public institutions of higher education. Approximately 8300 (5%) were citizens of other countries. Of these approximately 2200 (27%) came from EU Member States. The number of students from EU countries increased after 1992 with the entry of EEA countries into the Erasmus programme.

I.3. Organisation of course of study

The academic year at the universities, university colleges and in the college sector is normally divided into two semesters. These are:

- the autumn semester from mid-August to mid-December; and
- the spring semester from mid-January to mid-June.

The months of November-December and May-June are examination periods.

Except for some newly developed programmes in English, all instruction is given in Norwegian.

Non-university higher education

Most courses are geared towards specific professions, their graduates becoming professional or para-professional personnel in areas such as school teaching in pre-schools and at the compulsory school level, engineering, social work, administration, economics, computer science, health professions, library sciences and journalism.

The form of teaching, the structure of the study programme and examinations vary from institution to institution and from course to course.

University higher education

Studies generally begin in August. However, certain programmes allow students to start both in August and January, while some only start in the spring semester. Specific information may be obtained from the individual institutions.

Courses are measured in semester units. The *vektttall* is the Norwegian term for a credit unit. The normal work load for one semester is 10 *vektttall*, or 20 *vektttall* for one academic year. Twenty *vektttall* equals 60 ECTS credits.

At the Faculty of Arts, and the Faculty of Social Sciences, students concentrate their studies in one area at a time, and pass comprehensive departmental examinations. The most common examination levels required for standard degrees at these two faculties are the following:

- *semesteremne* (semester unit) 10 *vektttall*, taken after one semester of study (offered only in some subjects);
- *grunnfag* (foundation course) 20 *vektttall*, taken after two semesters of study;
- *mellomfag* (intermediate course) 30 *vektttall*, taken after three semesters of study. A *mellomfag* normally builds upon a *grunnfag*;
- *storfag* (major subject) 40 *vektttall*, taken after four semesters of study. The *storfag* builds upon and includes a *mellomfag*. It is available only in some subjects at the Faculty of Arts;
- *hovedfag* (at graduate level), normally a four semester course after completion of a cand.mag. degree and *mellomfag/storfag* in the same field.

Embetsstudium is a five or six year professional graduate programme leading to a degree in one specific field, i.e. law, medicine, dentistry, pharmacy, theology, psychology, economics and civil engineering.

At the Faculty of Mathematics and Natural Sciences, individual courses give *vektttall*. Courses normally count for between one and five *vektttall* each.

The university colleges have a different structure.

Instruction at the universities is given in various forms, depending on the subject area. Lectures to larger groups are held in auditoriums, while smaller groups and seminars meet in classrooms. Instruction may also include term papers, field work, excursions and laboratory work.

The Norwegian university system requires students to be independent. There are relatively few hours of lectures per week. Students are expected to structure their time outside lectures to include extensive reading, participation in group work, and individual study. Professors are available for regular academic counselling.

I.4. Transfer of credits

I.4.1. National credit transfer

The universities, the university colleges and the college sector can all confer their own degrees, and programmes taken at one institution must be fully recognised by another institution (i.e. 60 *vektttall* from an engineering college will be given the same number of *vektttall* at a university). However, each of these institutions is free to determine whether additional subjects/examinations must be taken in order to qualify for a particular subject/degree.

Until 1 January 1996, private institutions could apply to have their programmes evaluated by the National Coordinating Commission (*Nasjonalt koordinerende utvalg; NKU*) which was an advisory board under the Norwegian Council of Universities (*Det norske universitetsrad*). With the implementation of the new Act of 12 May 1995 relating to universities and colleges, the *NKU* was discontinued and the Ministry of Education, Research and Church Affairs are presently evaluating an organisational replacement for the functions of the *NKU*.

The last *NKU* list of evaluated programmes and the evaluation results (i.e. how many *vektttall* should be recognised within a university degree) dates from October 1995.

I.4.2. International credit transfer

Students who have completed university studies outside Norway, beyond what is required for matriculation at a Norwegian institution of higher education, may apply to have these studies evaluated for possible credit within the Norwegian degree system. Evaluation normally takes several months. All applications for transfer of foreign credits are evaluated individually, and mainly in relation to the corresponding subjects in a Norwegian degree programme. Where no such correspondence can be found, the student may be given unspecified credits, which may count towards a degree. Students who want to continue their education should apply for credit transfer directly to the institution they wish to attend. Others should apply through the National Academic Information Centre (the Norwegian NARIC)

II. Qualifications and diplomas

II.1. Qualifications for admission to university and non-university higher education

Admission requirements are normally the same for all institutions of higher education and presuppose 12 years of school education. This comprises nine years of compulsory school (*grunnskole*), i.e. six years of primary schooling (*barneskole*) and three years in lower secondary school (*ungdomsskole*). This is followed by three years of upper-secondary education (*videregående skole*). From August 1997, compulsory education has been extended from 9 to 10 years by lowering the school starting age from seven to six.

In the upper-secondary school there are 13 areas of study. General access to higher education is granted to students who have completed general and economic administrative studies (*allmenne og økonomisk-administrative fag*), general subjects with music, dance or drama, general studies with arts, crafts and design or general studies with physical education. Those who have completed vocational upper-secondary education may qualify for admission to higher education by taking additional courses with general subjects of Norwegian, English, social sciences, mathematics and natural sciences.

During the first year of general studies a foundation course is taken; there is no specialisation at this level. Specialisation begins in the second year and continues into the third. In their final examination students sit for a limited number of national examinations, both written and oral, in subjects central to their branch of study.

Admission to higher education may also be given to mature students (above the age of 23) based on an individual evaluation of previous education and work experience.

Grades are awarded on a scale from six to nought, with six being the highest grade. Grades two and above are passing grades. The words *fullført og bestått* (completed and passed) on the certificate (*vitnemål*) indicate that the candidate has passed the whole course of study.

The certificate states the number of hours and year grade for each subject and the national examination grade for a limited number of subjects.

Certain programmes of higher education require specialisation in certain subjects at the upper-secondary school as general admission requirements, i.e. dentistry, medicine, pharmacy, engineering, veterinary medicine, arts and crafts studies.

II.2. Undergraduate programmes in higher education

Degrees offered by the universities and other institutions of higher education may vary from one institution to the next. Questions concerning degrees, exams and normal time of study are decided by the government. Decisions on subject areas which could be included in an examination, are taken by the ministry.

II.2.1. Undergraduate non-university programmes

The majority of the shorter, non-university courses consist of an integral study period. Common to all these training courses is that they qualify students for a particular occupation and last for three years. (Teacher training comprises four years of study.) Students who take an additional year (*grunnfag*) or 20 *vektall* in one subject may obtain the regional *cand.mag.* degree (see below).

Within the college sector, some programmes correspond to university programmes (i.e. arts, social sciences, mathematics and natural sciences), while the majority are not offered at universities. They give the right to the title *Høgskolekandidat* (college graduate). The college courses are fully recognised, i.e. programmes completed at a college will be recognised with the same number of *vektall* within a university degree.

The *candidatus/candidata magisterii* degree (*cand.mag*) (see below) may be conferred on students who, according to certain regulations, have successfully completed four years of study. Within the college system, one can also obtain a higher degree in economics and business administration (*siviløkonom*) and in engineering (*sivilingeniør*).

II.2.2. Undergraduate university degrees

A preparatory course in philosophy, logic and the theory of science, *examen philosophicum*, is normally required of degree candidates at all the universities and is usually taken before or at the beginning of regular faculty studies. Preparation for the examination takes one semester. At the University of Oslo the *examen facultatum* was introduced in 1996. This examination, together with a revised *examen philosophicum*, correspond to 10 *vektall*.

Students who can fully document that they have already passed examinations in these subjects at university level, may apply for exemption. The university colleges do not require *examen philosophicum*.

The universities offer study programmes on two major levels. At the intermediate/undergraduate level, the degree *cand.mag.* is normally obtained after four years of study (three and a half years at the Faculty of Mathematics and Natural Sciences). This includes the *examen philosophicum*. The minimum requirement is that one subject should have a study duration of at least three semesters (*mellomfag/30 vektall*), and one other subject must involve study over at least two semesters (*grunnfag/20 vektall*).

The degree may be obtained at all universities, in fields within the arts, natural sciences or social sciences, or through a combination of these.

Equivalent education from other institutions of higher education in Norway or abroad can also form part of a *cand.mag.* degree.

Grades are awarded according to a numerical system normally ranging from 1.0 (highest) to 6.0 (lowest), with 4.0 as the minimum passing grade. Some programmes/institutions have other numerical grading scales. In addition, there is the pass/fail (*bestått/ikke bestått*) mark. It should be noted that the Faculty of Arts and the Faculty of Social Sciences only give grades better than 2.0 in exceptional cases.

II.3. Graduate degrees in higher education

The *cand.mag.* degree may be expanded towards graduate studies. It normally presupposes a *mellomfag/30 vektall* in the same field at the undergraduate level. In addition to a thesis, based on independent research, graduate studies require specialised courses and seminars. The study period for a graduate degree is normally four semesters (two years) and leads to the title *candidatus/candidata philologiae* (*cand.philol.*) in the arts, *candidatus/candidata politicarum* (*cand.polit.*) in social sciences or *candidatus/candidata scientiarum* (*cand.scient.*) in the field of mathematics and natural sciences.

Within the Faculties of Arts and Social Sciences there is also the degree *magister artium (mag.art.)*. This degree is only offered in a few subjects. It represents a total period of study of seven to eight years, and is normally more research-oriented and specialised than the other graduate degrees.

Professional degrees awarded at the universities normally require six or seven years of consecutive study:

theology (*candidatus/candidata theologiae; cand.theol.*);
law (*candidatus/candidata juris; cand.jur.*);
medicine (*candidatus/candidata medicinae; cand.med.*);
pharmacy (*candidatus/candidata pharmaciae; cand.pharm.*);
dentistry (*candidatus/candidata odontologiae; cand.odont.*);
psychology (*candidatus/candidata psychologiae; cand.psychol.*);
education (*candidatus/candidata paedagogiae; cand.paed.*); and
sociology (*candidatus/candidata sociologiae; cand. sociol.*).

Degrees in economics (*candidatus/candidata oeconomiae; cand.oecon.*) and engineering (*sivilingeniør; siv.ing.*) are usually awarded after approximately five years of study.

The university colleges offer the following professional degrees:

agriculture (*candidatus/candidata agriculturae; cand.agric.*);
veterinary medicine (*candidatus/candidata medicinae veterinariae; cand.med.vet.*);
engineering (*sivilingeniør; siv.ing.*);
architecture (*sivilarkitekt; siv.ark.*);
economics and business administration (*siviløkonom; siv.øk.*).

The Free Faculty of Theology and the Missionary College (both private institutions) also offer the *cand.theol.* degree. These studies usually take six to six and a half years.

Access to certain professions is protected by law. Thus, in addition to educational requirements, an authorisation is necessary to be able to practise the profession. Authorisation is granted by the appropriate ministry, directorate or institution. In order to obtain authorisation in certain professions, further training is required in the form of practical work outside the universities.

Grades are awarded according to a numerical system normally ranging from 1.0 (highest) to 6.0 (lowest), with 4.0 as the minimum pass grade. Some programmes/institutions have other numerical grading scales. In addition, a pass/fail (*bestått/ikke bestått*) mark is given for some examinations. It should be noted that the Faculty of Arts and the Faculty of Social Sciences only give grades better than 2.0 to a very limited number of students.

Some universities and university colleges have recently introduced Masters' programmes, modelled on the British education system, with further internationalisation in mind. The majority of these Masters' programmes last for two years and include a thesis. The language of instruction and examination is English. Foreign students with a minimum of three years of previous education (a Bachelor's degree or equivalent) from a recognised foreign university, or Norwegian students with a *cand.mag.* degree may apply. More programmes in English are being developed.

II.3.1. Postgraduate degrees

Graduate degree studies may be expanded into a doctoral study programme (*dr. scient., dr.art., dr. polit., etc.*) over a three to four-year study period. Admission is very competitive and presupposes the successful submission of an application and a project outline. The doctoral programme is essentially a research training programme. In addition to completing a doctoral thesis under supervision, the candidate has to undergo compulsory training in scientific theory and method. There is also a 'traditional' doctoral degree, *doctor philosophiae (dr.philos.)* with no special study programme, but with very high requirements for the doctoral thesis. The two doctoral degrees have the same academic level.

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**Diagram
education**

of

the

**Norwegian
system**

Appendix I

Final qualifications

The university sector

	Degree	Duration (years)
University of Bergen		
Faculty of Arts		
Degrees awarded:	<i>candidatus/candidata magisterii</i>	4
	<i>candidatus/candidata philosophiae</i>	6
	<i>doctor artium</i>	+ 3-4
	Master of Philosophy in History	2
Faculty of Law		
Degrees awarded:	<i>candidatus/candidata juris</i>	5 ¹ •2-6
	<i>doctor juris</i>	+ 3-4
Faculty of Mathematics-Natural Sciences		
Degrees awarded:	<i>candidatus/candidata magisterii</i>	3 ¹ •2
	<i>candidatus/candidata scientarium</i>	5
	<i>sivilingeniør</i> (civil engineer)	5
	<i>doctor scientarium</i>	+ 3-4
Faculty of Medicine		
Degrees awarded:	<i>candidatus/candidata</i>	
	<i>medicinae</i>	6-6 ¹ •2
	<i>doctor medicinae</i>	+ 3-4
	Master of Philosophy in Histopathology	+ 2
	Master of Philosophy in Health Promotion	2
Master of Philosophy in Health Science		2

Faculty of Dentistry

Degrees awarded:	<i>tannpleiereksamen</i> (dental hygienist examination)	2	
	<i>candidatus/candidata odontologiae</i>	5	
	<i>licenciante odontologiae</i> (last awarded in 1992)	+ 2	
	<i>doctor odontologiae</i>	+ 3	Master of Science in Dentistry
	+ 2		

Faculty of Social Sciences

Degrees awarded:	<i>candidatus/candidata magisterii</i>	4	
	<i>candidatus/candidata rerum politicarum (cand.polit.)</i>	6	
	<i>doctor politicarum</i>	+ 3-4	

Faculty of Psychology

Degrees awarded:	<i>candidatus/candidata psychologiae</i>	6 ^{1•2}	
	<i>doctor psychologiae</i>	+ 3-4	
	Master of Science in Health Promotion	+ 2	

University of Oslo

Faculty of Arts

Degrees awarded:	<i>candidatus/candidata magisterii</i>	4	
	<i>candidatus/candidata philologiae</i>	6	
	<i>magister artium</i>	7-8	
	Master of Arts in Society, Science and Technology	1	
	<i>doctor artium</i>	+ 3-4	

Faculty of Law

Degrees awarded:	<i>candidatus/candidata juris</i>	5 ^{1•2} -6	
	<i>doctor juris</i>	+ 3-4	

Faculty of Mathematics-Natural Sciences

Degrees awarded:	<i>candidatus/candidata magisterii</i>	3 ^{1•2}
	<i>candidatus/candidata pharmaciae</i>	5
	<i>candidatus/candidata scientarium</i>	5
	<i>sivilingeniør</i> (civil engineer)	5
	<i>doctor scientarium</i>	+ 3-4

Faculty of Medicine

Degrees awarded:	<i>candidatus/candidata medicinae</i>	6-6 ^{1•2}
	<i>doctor medicinae</i>	+ 3-4

Faculty of Dentistry

Degrees awarded:	<i>candidatus/candidata odontologiae</i>	5
	Master of Science in Dentistry	+ 2

Faculty of Social Sciences

Degrees awarded:	<i>candidatus/candidata magisterii</i>	4
	<i>examen oeconomicae</i>	3 ^{1•2}
	<i>candidatus/candidata</i> <i>oeconomicae</i>	5 ^{1•2}
	<i>candidatus/candidata</i> <i>paedagogiae</i>	6 ^{1•2-7}
	<i>candidatus/candidata</i> <i>psychologiae</i>	6 ^{1•2-7}
	<i>candidatus/candidata sociologiae</i>	6
	<i>candidatus/candidata rerum</i> <i>politicarum</i>	6
	<i>magister artium</i>	7-8
	<i>doctor rerum politicarum</i>	+ 3-4
	<i>doctor psychologiae</i>	+ 3-4

Faculty of Theology

Degrees awarded:	<i>candidatus/candidata theologiae</i>	6
	<i>doctor theologiae</i>	+ 3-4

University of Tromsø

This university does not use the term faculty for its academic units. Departments (institutes), schools and faculties are equal units.

Faculty of Medicine

Degrees awarded:	<i>candidatus/candidata magisterii</i>	4
	<i>candidatus/candidata scientarium</i>	5
	<i>sivilingeniør</i> (civil engineer)	4 ¹ •2-5
	<i>candidatus/candidata medicinae</i>	6-6 ¹ •2
	Master of Public Health	+ 2
	Diploma in Nursing Science	+ 2 ¹ •2
	<i>doctor medicinae</i>	+ 3-4
	<i>doctor scientarium</i>	+ 3-4

Department of Biology and Geology

Degrees awarded:	<i>candidatus/candidata magisterii</i>	4
	<i>candidatus/candidata scientarium</i>	5
	<i>sivilingeniør</i> (civil engineer)	5
	<i>doctor scientarium</i>	+ 3-4

Department of Mathematical Sciences

Degrees awarded:	<i>candidatus/candidata magisterii</i>	3 ¹ •2
	<i>candidatus/candidata scientarium</i>	5
	<i>sivilingeniør</i> (civil engineer)	5
	<i>doctor scientarium</i>	+ 3-4

School of Law

Degrees awarded:	<i>candidatus/candidata juris</i>	5 ¹ •2-6
	<i>doctor juris</i> (<i>doctor legis</i> discontinued in 1993)	+ 3-4

Department of Social Sciences

Degrees awarded:	<i>candidatus/candidata magisterii</i>	4
	<i>candidatus/candidata philologiae</i>	6
	<i>candidatus/candidata rerum politicarum</i>	6
	<i>candidatus/candidata psychologiae</i>	6 ¹ •2-7
	<i>doctor artium</i>	+ 3-4
	<i>doctor psychologiae</i>	+ 3-4
	<i>doctor rerum politicarum</i>	+ 3-4

School of Languages and Literature

Degrees awarded:	<i>candidatus/candidata magisterii</i>	4
	<i>candidatus/candidata philologiae</i>	6
	<i>doctor artium</i>	+ 3-4

Norges Fiskerihøgskole (Norwegian College of Fishery Science)

(Integrated into the University of Tromsø in 1988)

Degrees awarded:	<i>candidatus/candidata magisterii</i>	4
	<i>candidatus/candidata rerum politicarum</i>	6
	<i>candidatus/candidata scientarium</i>	5
	<i>fiskerikandidat</i> (fishery science diploma)	5
	<i>doctor rerum politicarum</i>	+ 3-4
	<i>doctor scientarium</i>	+ 3-4

University Of Trondheim/Den Allmennvitenskapelige Høgskolen (Avh)
 (College of Arts and Sciences) (now known as the **Norwegian Institute of Science and Technology**)

Faculty of Arts

Degrees awarded:	<i>candidatus/candidata magisterii</i>	4
	<i>candidatus/candidata philologiae</i>	6
	<i>magister artium</i> (discontinued from 1992)	7-8
	<i>doctor artium</i>	+ 3-4

Faculty of Mathematics and Natural Sciences

Degrees awarded:	<i>candidatus/candidata magisterii</i>	3 ^{1•2}
	<i>candidatus/candidata scientarium</i>	5
	<i>doctor scientarium</i>	+ 3-4

Faculty of Social Sciences

Degrees awarded:	<i>candidatus/candidata magisterii</i>	4
	<i>candidatus/candidata socionomiae</i> (discontinued 1993)	5 ^{1•2}
	<i>candidatus/candidata rerum politicarum</i>	6
	<i>doctor rerum politicarum</i>	+ 3-4

Faculty of Psychology

Degrees awarded:	<i>candidatus/candidata psychologiae</i>	6 ¹ •2-7
	<i>doctor psychologiae</i>	+ 3-4
	Master of Science in Health Promotion	+ 2

Norges Tekniske Høgskole (Nth) (Norwegian Institute of Technology) (incorporated into the University of Trondheim in 1968)

Degrees awarded:	<i>sivilarkitekt</i> (architect)	5
	<i>sivilingeniør</i> (civil engineer)	4 ¹ •2-5
	Master of Science	+ 2
	<i>doctor technicae</i>	+ 3-4
	<i>doktor ingeniør</i>	+ 3
	Master of Science in Technology	
	Management	+ 2

Faculty of Medicine

Degrees awarded:	<i>candidatus/candidata medicinae</i>	6-6 ¹ •2
	<i>doctor medicinae</i>	+ 3-4

NB: The degree *doctor philosophiae* is offered in all subjects in all Norwegian universities.

University college sector

Norges Landbrukshøgskole (Norwegian College of Agriculture)

Degrees awarded:	<i>candidatus/candidata agriculturae</i>	5
	<i>sivilingeniør</i> (civil engineer)	5
	<i>candidatus/candidata magisterii</i>	4
	Master of Science in Management and Natural Resources and Sustainable Agriculture	+ 2
	<i>doctor scientarium</i>	+ 3-4
	<i>doctor agricolae</i> (<i>dr.agric.</i>)	+ 3-4

Norges Idrettshøgskole (Norwegian College of Sports and Physical Education)

Degrees awarded:	<i>idrettskandidat</i> (sports diploma)	5
	<i>doctor scientarium</i>	+ 3-4

Arkitektøgskolen i Oslo (The Oslo School of Architecture)

Degrees awarded:	<i>sivilarkitekt (siv.ark)</i>	5
	<i>doktor ingeniør</i>	+ 3

Norges Veterinærhøgskole (Norwegian College of Veterinary Medicine)

Degrees awarded:	<i>candidatus/candidata medicinae veterinariae</i>	5 ¹ •2-6
	<i>doctor scientarium</i>	+ 3-4
	<i>doctor medicinae veterinariae</i>	+ 3-4

Norges Musikkhøgskole (Norwegian State Academy of Music)

Degrees awarded:	<i>kandidatseksamen</i>	4
	<i>candidatus/candidata magisterii</i>	4
	Master in Music	+ 2
	<i>candidatus/candidata musicae</i>	+ 2

Norges Handelshøgskole (Norwegian School of Economics and Business Administration)

Degrees awarded:	<i>candidatus/candidata magisterii</i>	4
	Master of International Business	+ 2
	Business economics	1
	<i>foretaksøkonom</i> (enterprise economics)	2
	<i>markedskandidat</i> (marketing diploma)	2
	<i>diplomøkonom</i> (diploma in economics)	3
	<i>siviløkonom</i> (business economics)	4
	<i>doctor oeconomicae</i>	+ 3-4

Det teologiske menighetsfakultet (Free Faculty of Theology)

Degrees awarded:	<i>candidatus/candidata theologiae</i>	6
	<i>candidatus/candidata philosophiae</i>	6

The college sector

Degrees awarded:	<i>høgskolekandidat</i> (college diploma)	2-3
	<i>candidatus/candidata magisterii</i> (regional)	4

Diplomas (with length of study indicated):

<i>allmennlærer</i> (general subjects teacher)	4
<i>barnevernspedagog</i> (child welfare worker)	3
<i>bibliotekar</i> (librarian)	3
<i>bioingeniør</i> (bioengineering)	3
<i>datahøgskolekandidat</i> (data college diploma)	2
<i>designkandidat</i> (design diploma) (after <i>høgskolekandidat</i>)	+ 1 ^{1•2}
<i>eldreomsorg</i> (geriatric nurse) (after nursing)	+ 1
<i>ergoterapeut</i> (occupational therapy)	3
<i>faglærer</i> (specialised subject teacher)	varies
<i>fysioterapeut</i> (physiotherapy) (three years' theory plus one year's practical work)	3 + 1
<i>førskolelærer</i> (pre-school teacher)	3
<i>ingeniør</i> (engineer)	3
<i>kommunalkandidat</i> (public administration diploma)	3
<i>kunstfagkandidat</i> (art diploma) (after <i>høgskolekandidat</i>)	+ 1 ^{1•2}
<i>næringsmiddelteknolog</i> (food technologist)	3
<i>ortopediingeniør</i> (prosthetics and orthotics)	3
<i>psykiatrisk sykepleier</i> (psychiatric nurse) (after nursing)	+ 1
<i>radiograf</i> (radiography)	3
<i>reseptar</i> (prescriptionist)	2 ^{1•2}
<i>sosionom</i> (social worker)	3
<i>spesiallærer</i> (special education teacher) (qualified teacher plus 1 year)	+ 1
<i>sykepleier</i> (nurse/advanced nurse)	3-4
<i>tolk</i> (interpreter for the impaired of hearing)	1
<i>vernepleier</i> (social educator)	3
<i>yrkeslærer</i> (vocational subject teacher)	+ 1

Appendix II

Regulated professions (the list is not exhaustive)

Doctor/physician

Dentist

Psychologist

Physical therapist

Occupational therapist

Bio-engineer

Nurse

Midwife

Assistant nurse

Competent body:

County Health Officer – Oslo

Postboks 8041 Dep

N-0031 Oslo

Teacher for pre-school/nursery

Teacher for primary and secondary education

Competent body:

Ministry of Education, Research and Church Affairs

Postboks 8119 Dep

N-0032 Oslo

Lawyers

Competent body:

Ministry of Justice

Postboks 8005 Dep

N-0030 Oslo

Veterinarian

Competent body:

Ministry of Agriculture

Postboks 8007 Dep

N-0030 Oslo

Auditor

Real estate agent

Competent body:

The Banking, Insurance and Securities Commission of Norway

Postboks 100 – Bryn

N-0611 Oslo

Sea captain

Deck officer

Maritime engineer

Competent body:

Norwegian Maritime Directorate

Boks 8123 Dep

N-0032 Oslo

Portugal

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Glossary

Bacharel

A degree awarded by polytechnic institutions (*ensino superior politécnico*) at the successful completion of courses lasting three years.

Carta de curso

Certificate issued to holders of a *bacharel*, *licenciado* or *mestre* degree.

Carta doutoral

Certificate issued to holders of a *doutor* degree.

Diploma de estudos superiores especializados

A diploma awarded by polytechnic institutions for courses lasting two years after the successful completion of a *bacharel* degree. It is equivalent to the degree of *licenciado* for professional and academic purposes.

Disciplinas específicas

These examinations aim at assessing the candidate's capacity to attend a specific higher education course. They are compulsory for all public and private higher education institutions.

Doutor

A degree conferred only by universities to those who have passed the doctorate examinations and have defended a thesis.

Doutoramento

All the preparatory work and examinations leading to the award of the degree of *doutor*.

Ensino superior politécnico

A type of higher education essentially practical in nature with a view to its use in professional activities. It is offered at *escolas* (schools) and *institutos* (institutes).

Instituto Politécnico

An organic unit of higher education incorporating schools of this type of higher education.

Licenciado

Academic degree awarded upon completion of a *licenciatura* course.

Licenciatura

Course leading to the award of the degree of *licenciado*.

Mestrado

Course leading to the award of the degree of *mestre*.

Mestre

A degree awarded in university education to holders of a *licenciado* degree who have successfully completed a course lasting two years and have presented an original dissertation (minor thesis). It is a postgraduate degree below the level of *doutor*.

Pré-requisitos

These are preliminary conditions, physical, functional or vocational, particularly relevant to some higher education courses. It is up to the higher education institution to decide whether applicants to some of its courses must be subjected to these prerequisites and to decide upon their content.

I. Higher education system

The general law, approved in 1986 and known as the *Lei de Bases do Sistema Educativo* — *LBSE* (law on the bases of the education system), aimed at reforming the whole education system in Portugal, is in force throughout the whole of the national territory.

The principle of self-government by the public universities embodied in this law was subsequently set down in the autonomy law, Law No 108/88, dated 24 September 1988.

In accordance with this law, Portuguese public higher education institutions are autonomous institutions and are free to manage their academic, administrative and financial affairs. This implies the right to grant their own degrees and diplomas, to create new courses and to establish teaching methods.

In 1990, Law No 54/90, dated 5 September, established the statute and autonomy of the polytechnic institutes.

I.1. The institutions of higher education

Under the terms of the law on the bases of the education system, higher education in Portugal is divided into two systems:

university education;

polytechnic education (non-university higher education).

University education

University education is essentially theoretical in nature. It is designed to inculcate innovation and critical analysis and to provide scientific and technical training, equipping graduates to work as professionals. It undertakes fundamental and applied research in different subject areas.

University education is provided by universities, which are organised into *escolas* (schools), *institutos* (institutes), *faculdades* (faculties) or other units — for example, *departamentos* (departments), *cursos* (courses) or *projectos* (projects).

Universities offer courses in areas such as arts and humanities (including theology), social sciences (including economics, anthropology, psychology, sociology, European studies), business management (including public administration), medicine (including dentistry and pharmacy), architecture, engineering and technology, exact and natural sciences, informatics, law, fine arts and design, agriculture and silviculture (including veterinary medicine and food sciences), physical education and sports, communication sciences (including journalism) and other areas such as music, social work, military sciences, etc.

Polytechnic education

The purpose of education at polytechnic higher education institutions, essentially practical in nature, is to provide a thorough cultural and technical higher education, to develop the capacity for innovation and critical analysis and to disseminate theoretical and practical scientific knowledge and its applications with a view to its use in professional activities. This type of education is offered at *escolas* and *institutos superiores*. The polytechnic institutes offer courses in the following areas: accountancy, business and management (including marketing, publicity, secretarial studies, auditing, administration), engineering and technology, agriculture and silviculture, tourism, nursing, paramedical activities, informatics, teacher training courses for educators and for basic education (first and second cycle), music, drama, theatre, cinema, arts, etc.

There are also a number of higher education institutions which are under the joint responsibility of the Ministry of Education and other ministries such as the *Academia Militar* (Army Academy), *Escola Náutica* (Navy School), *Academia da Força Aérea* (Airforce Academy), *Escola Superior de Polícia* (Higher School for Police Officers) (see further, under Section III).

I.2. Number of students

The number of students enrolled in initial courses for the 1995/96 academic year was as follows:

Public higher education organised by the Ministry of Education	
University education	131585
Polytechnic education	47158
Public higher education organised by the Ministry of Education and other ministries	
University and polytechnic education	6927
Private higher education	
University education	43102
Other higher education institutions	54598
Portuguese Catholic university	9040
Total	292410

I.3. Organisation of course of study

Teaching terms

In general, the academic year begins on 1 October and ends on 31 July. In courses organised into semesters there is a one month interval between the end of the first semester and the beginning of the second semester. This interval, which occurs generally in January or February, is used for the examinations concerning the subjects of the first semester. However, no general rule exists because each institution establishes its own calendar, which specifies lecture periods, dates of examinations and holidays. At both Christmas and Easter, there is normally a two-week vacation.

According to the characteristics of the course, the following types of learning activity may be combined: lectures, seminars, conferences, practical training and study visits. Lectures may be theoretical, practical or a combination of both. Practical lectures may or may not be laboratory based. Theoretical lectures aim at the comprehensive learning of facts, concepts and principles.

The practical and theoretical lectures aim at the learning of methods and the practical application of concepts and principles. Seminars aim at organising the student's work concerning a theme or themes in order to achieve a sound knowledge through documented research, observation and experiment. Conferences consist of the analysis and discussion of one or several themes. Study visits aim at the direct observation of one or several cases, which always involve the previous definition of the objects of study and respective working methods.

Structure of study programmes

Courses may run for a year, for semesters (two per academic year) or both. The institution itself decides which type is more convenient for its courses of study. Examinations take place at the end of the semester (for semestral subjects) or at the end of the year (for annual subjects).

The structure of the curriculum is the responsibility of the institution. Courses may be structured on a traditional basis (academic years or semesters) or on credit units. A course organised in credit units may be easily updated because institutions are allowed to modify the curricula every year.

The main components of a curriculum in credit units are: (i) the definition of the main subject; (ii) the listing of the compulsory scientific subjects and their corresponding credit units; (iii) the listing of the optional subjects and their corresponding credit units; (iv) the length of the course, in academic years; (v) the total number of credit units required for the completion of the course. Each credit unit corresponds to 15 hours of theoretical lectures or to 40 hours of practical lectures or to 22 hours of theoretical-practical lectures or to 30 hours of practical training or seminars.

Assessment of knowledge

Every higher education institution has the authority to lay down the general rules governing the assessment of knowledge within the overall parameters legally established at national level. They may opt for either continuous assessment or a final examination, or a mixture of both. Assessment takes place throughout the course of study in each subject of the syllabus. For instance, a student who is enrolled for five subjects during the first year of a course will have to undergo at the end of that year five examinations/continuous assessments (one for each separate subject). In each academic year, students can take examinations at two different periods. A first period (normal) and a second period (resit). In the latter period (September/October), the student may only take two examinations. Under certain conditions, any higher education institution may grant a student total or partial exemption from the final examination. This applies to both public and private institutions.

Results/final grading

The result achieved in a subject, whether through continuous assessment or in an examination, is expressed along a scale from 0 to 20 marks. A pass requires at least 10 marks.

The final grading of a course is shown on the relevant diploma or degree certificate (except on the certificate for a degree of *mestre* or *doutor*) along a scale of 0 to 20 marks (at least 10 marks are required for a pass).

A result, instead of a number, may be entered on diplomas or degree certificates, with the following equivalences:

10 to 13 marks:	Adequate		
14 to 15 marks:	Good		
16 to 17 marks:	Good with distinction		
18 to 19 marks:	Very good with distinction		
20 marks:	Magna	cum	laude

II. Qualifications and diplomas

Both higher education systems (university and polytechnic) cover the theoretical features of the respective courses. However, university education is more theoretical and scientific than polytechnic education, in which the practical and professional aspects are more prominent. In general, diplomas conferring academic degrees are valued according to the number of years which constitute the corresponding courses.

No distinction is made as to the secondary school qualifications required for admission either to university education or to polytechnics. In either case, the 12th-year school certificate is always required.

II.I. Qualifications for admission to higher education

The system of access to higher education, which was in force for 1993-95, underwent some changes in 1996. According to the new regulations for the academic year 1996/97, admission to higher education was granted on the basis of the following conditions:

- having successfully completed the 12th year of schooling or equivalent;
- having sat for the relevant examination corresponding to the student's secondary course;
- having sat for the *disciplinas específicas* (specific examinations) in the 12th year required by the higher education institution for the course the student wishes to attend and, if required, having achieved a minimum mark previously established by the institution;
- having fulfilled the prerequisites — if set by the institution — for the course the student wishes to attend.

The number of vacancies available on each course in each establishment is set annually and is known to the applicants beforehand.

For public universities and polytechnic institutions, the number of vacancies is set by the respective administrative bodies. For private higher education institutions, the number of vacancies is set by the Minister for Education, in the light of proposals by the respective administrative bodies.

The places in public higher education institutions are filled by means of a national competition (*concurso nacional*) organised by the *Núcleo de Acesso ao Ensino Superior* (Unit of Access to Higher Education).

The places in private higher education institutions are filled by means of a local competition (*concurso local*) organised by each private higher education institution.

The ranking of candidates for each course in each higher education institution is done in decreasing order based on an 'application mark' (*nota de candidatura*) established by specific regulations.

In the national competition the placement of candidates combines:

- the order of preference in which the candidate has placed each course/establishment combination;
- the placement of the candidate on the list — in rank order — concerning the course and establishment which the candidate has applied for.

Preferential access to polytechnic education

Candidates with qualifications from vocational schools, from the vocational stream of the 12th year of schooling, from apprenticeship courses and from professional schools equivalent to the 12th year of schooling may be allocated up to 30% of the places in each polytechnic institution. This quota is defined annually by each polytechnic institution.

The *Núcleo de Acesso ao Ensino Superior* (Unit of Access to Higher Education) is responsible for placing applicants on courses in decreasing order of their preference. Placement of applicants is an interactive process carried out by computer.

At the end of this process, the abovementioned body publishes the lists of applicants, indicating in each case whether the applicant was 'placed' or 'not placed' in a certain course and institution or excluded on the ground of legal procedures.

Application to enter the general competition is made to the local branch of the Unit of Access to Higher Education of the district in which the candidate lives.

Application takes place in July, in accordance with a previously announced schedule.

Higher education institutions will inform the Ministry of Education about the courses for which prerequisites are required.

The Department of Higher Education will publish this information by means of a publication distributed to its information centres and to all the secondary education establishments.

Special competitions for entry to higher education (*concursos especiais*)

Special competitions are organised for:

- applicants over 25 years old who do not hold the 12th-year school certificate but who have passed a special examination assessing their capacity to enter into higher education (ad hoc examination);
- candidates who already hold a specific qualification from a medium- or higher-level course;
- students who have already been enrolled in a foreign higher education course.

The places not filled in this special competition will revert to the ones established for the general competition.

Special conditions for entry to higher education (*regimes especiais*)

Besides the general competition, there are also special competitions for applicants in the following situation:

- Portuguese civil servants working in Portuguese diplomatic missions and their relatives (living with them);
- Portuguese scholarship holders or Portuguese civil servants on official missions abroad and their relatives (living with them);
- permanent staff of the Portuguese armed forces who are required to undergo specific training abroad;
- scholarship holders from Portuguese-speaking African countries, as part of the cooperation agreements signed by Portugal;
- foreign officers working in accredited diplomatic missions in Portugal and their relatives living in Portugal, on a reciprocity basis;
- native and displaced children from territories under Portuguese administration occupied by foreign armed forces;
- top-level athletes.

II.2. Intermediate qualifications in higher education

If 'intermediate qualification' is taken to mean a qualification obtained by passing the first part of a higher education course organised in stages, it can be said that there are no intermediate diplomas in higher education.

However, there is one special case which refers to higher schools of fine arts.

The courses taught in these institutions are organised in two stages: basic cycle (*ciclo básico*) and special cycle (*ciclo especial*). The successful completion of the first three years leads to the award of the *diploma de ciclo básico*.

Students holding this diploma may pursue their studies in order to obtain the *diploma de ciclo especial* which is equivalent to the *licenciado* degree with the right to enter a profession. The *diploma de ciclo básico* is equivalent to the *bacharel* degree.

II.3. Final qualifications in higher education

In Portugal, all degrees and diplomas are awarded by the higher education institutions themselves. State diplomas do not exist. The formats of diplomas and certificates are drawn up in accordance with certain general rules by the higher education institutions, which submit them to the Ministry of Education for approval. Afterwards the Ministry has them published in the *Diário da República* (Official Gazette).

Certificates for the *carta de curso* (degree) and *carta doutoral* (doctorate degree) are issued by the institutions themselves and bear the signatures of the academic bodies authenticated by the embossed seal of the relevant institution.

II.3.1. Final qualifications in polytechnic education

Polytechnic education (*ensino superior politécnico*) refers to higher education whose main purpose is to provide the country with skilled technicians in various fields of studies.

The courses taught in this type of institution are directly related to the economic and social needs and potential of the regions in which they are located.

The following degrees/diplomas are awarded:

- the degree of *bacharel*;
- the *diploma de estudos superiores especializados* (diploma in specialised higher studies);
- the degree of *licenciado*.

The degree of *bacharel* is a final qualification showing evidence of a scientific, technical and cultural education. The courses leading to the award of this degree have an average length of three years. It qualifies its holder to proceed to study for *licenciatura* courses and for courses leading to the *diploma de estudos superiores especializados* (*DESE*).

The *diploma de estudos superiores especializados* is evidence of scientific, technical and cultural education in specialised fields of a professional activity. Entry to courses leading to the *DESE*, which last from 18 months to two years, is open to those who hold the *bacharel* or *licenciado* degree.

The *diploma de estudos superiores especializados* constitutes a qualification equivalent to a *licenciado* degree for all academic and professional purposes, in particular entitling its holder to attend *mestrado* courses and be admitted to *provas de doutoramento* (doctoral degree).

(A list of subjects in which the degrees of *bacharel* and *DESE* are issued by polytechnic institutions is given in Appendices I and II.)

II.3.2. Degrees and diplomas awarded in fine arts

Courses in fine arts are organised into two cycles: the basic cycle lasting for three years and leading to the *diploma do ciclo básico* and the specialised cycle, lasting for two years (after completion of the first cycle) and leading to the issue of the *diploma de ciclo especial*.

Students holding the *diploma do ciclo básico* can pursue studies in courses for which possession of a higher course diploma is required. With regard to entry to a profession, this diploma is equivalent to the degree of *bacharel*. Those qualified in the basic cycle or legal equivalent can proceed to the specialised cycle.

Holders of the *diploma de ciclo especial* may take courses which holders of higher studies diplomas are entitled to attend. With regard to entry to a profession, this diploma is equivalent to a *licenciado* degree.

II.3.3. Final qualifications in university education

The following degrees are awarded in university higher education:

- the degree of *licenciado*;
- the degree of *mestre*;
- the degree of *doutor*.

The degree of *licenciado*

The degree of *licenciado* indicates a sound scientific, technical and cultural education which forms a basis for study in greater depth in a specialised field of knowledge and an adequate degree of professional competence. This final degree is conferred after the completion of courses whose length varies from four to six years. Holders of a *licenciatura* can apply for admission to courses for the *mestrado* and may also be allowed to sit doctoral examinations (*provas de doutoramento*).

(A list of subjects for the degree of *licenciado* issued by university institutions is given in Appendix III.)

The degree of *mestre*

The degree of *mestre* indicates an advanced level in a specific scientific field and the capacity for conducting practical research. The postgraduate courses leading to the award of this degree usually last two years. A dissertation written especially for the purpose must be submitted and defended within two years of completion of the academic part.

A pass in the postgraduate course leading to the degree of *mestre* gives an exemption from all examinations except that of the presentation and defence of the *tese de doutoramento* (doctoral thesis) for the degree of *doutor* in the same specialisation.

(A list of subjects for the degree of *mestre* issued by university institutions is given in Appendix IV.)

The degree of *doutor*

The degree of *doutor* indicates a high cultural level and the capacity to undertake scientific research in a given branch of knowledge. It is conferred after the preparation and defence of a thesis constituting an original contribution to research in a given field of knowledge and after having passed additional examinations. These additional examinations consist of a discussion of two subjects or a study or research project in fields other than those of the thesis.

There are no specialised courses leading to the award of the degree of *doutor*. Studies for a doctorate consist essentially of a programme of individual research on subjects chosen beforehand by the candidates themselves, with the agreement and guidance of the professor in charge of the doctorate concerned. This degree is conferred only by the universities.

No period is laid down by law during which the candidate must prepare for his/her doctorate examinations. The preparatory work usually takes between three and six years in the humanities and from three to four years for subjects in technology and the exact sciences.

Examinations for this degree are assessed by a panel appointed by the Minister for Education on the recommendation of the university.

The final result of the examinations is expressed as:

- *recusado* (failed);
- *aprovado com distinção* (passed with distinction);
- *aprovado com distinção e louvor* (passed magna cum laude).

Holders of a *licenciado* degree or a legally equivalent qualification with a final mark of at least 16 along a scale of 0 to 20 are entitled to take examinations for a doctorate.

(For a list of the degrees of *doutor* so far issued by classification of branches of knowledge, see Appendix V).

II.3.4. Final qualifications in private higher education

Universidade Católica Portuguesa (UCP)

The *Universidade Católica Portuguesa* (Portuguese Catholic University) occupies a special place within the system of higher education in Portugal, since it is a legal and economic entity established by decree of the Holy See and recognised by the State of Portugal for the purposes of internal law under the aegis of Article XX of the Concordat between the two States.

Within this legal and institutional framework, the *UCP* does not need permission from the government to set up or recognise schools, courses or other units. The *UCP*'s representative simply informs government departments about the schools and courses in operation.

The *UCP* awards the same academic degrees as those awarded by the public universities. Degree courses have the same duration and are organised in the same way as those offered in the public education system.

Private higher education institutions

Private higher education institutions are supervised and partially supported by the Ministry of Education. Thus, it falls to the State to grant authorisation for the creation and operation of institutions and courses and to decide upon their official recognition.

Private higher education courses are organised on the same lines as the public higher education courses awarding the corresponding degrees. They are of the same duration and use the same assessment system.

Degrees and diplomas awarded by these institutions have the same value and force as concerns academic or professional effects as those issued by public higher education institutions.

Types of private higher education institutions

In private higher education we may distinguish two types of institution:

- university institutions;
- other higher education institutions.

Degrees and diplomas issued by private higher education institutions are recognised as equal to those awarded by public higher education institutions.

II.3.5. Academic recognition of final qualifications in higher education

A first degree does not automatically entitle the holder to enter a postgraduate course. For instance, holders of a *bacharel* degree are not entitled to attend a *mestrado* course. Only holders of a *licenciado* degree or a legally equivalent qualification with a final mark of 14 along a scale of 0 to 20 are entitled to attend a *mestrado* course.

Examinations for a doctorate are only possible for holders of a *licenciado* degree or a legally equivalent qualification with a final mark of at least 16 along a scale of 0 to 20, or holders of a *mestre* degree.

II.3.6. Intercommunicability between the systems of higher education

The two systems of higher education — university and polytechnic — are interlinked and it is always possible to transfer from one to the other.

In fact, a student attending a course in a polytechnic institution may apply for a transfer to a university course and vice versa. The relevant bodies of the higher education institution to which the student wishes to move have the power to decide whether to accept him or her and to define the curriculum which the student will have to complete in order to finish the new study programme.

II.3.7. Intercommunicability between public and private higher education

It is possible to transfer from a public higher education institution to a private one and vice versa, according to the rules set up by the institution itself. The equivalence of disciplines is assessed on an individual basis, after the analysis of the candidate's curriculum, by the validating academic body of the higher education institution concerned. Accordingly, a new study programme may be set up, if it seems necessary.

III. Special types and forms of final qualifications in higher education

Section II gives a description of degrees and diplomas awarded by higher education institutions depending exclusively on the Ministry of Education. However, there are also a number of higher education institutions which are under the joint responsibility of the Ministry of Education and other ministries. These institutions, offering either polytechnic or university education, are normally administered by another ministry according to their nature, but their teaching and scientific activities are controlled by the Ministry of Education.

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**Diagram
education**

of

the

**Portuguese
system**

Appendix I

Cartas de curso do grau de bacharel

Acção Social Escolar
Administração Autárquica
Administração Pública, Regional e Local
Agricultura
Análise de Marketing
Análises Clínicas e Saúde Pública
Anatomia Patológica, Citológica e Tanatológica
Animação Cultural
Animação Cultural e Educação Comunitária
Animação Socioeducativa
Animadores Socioculturais
Artes
Artes Decorativas
Artes Plásticas
Assistente de Administração
Assistentes de Administração
Assistentes de Direcção
Biotecnologia
Canto
Cardiopneumologia
Ciências Administrativas
Ciências da Computação
Ciências da Comunicação
Ciências da Informação
Cine-Vídeo
Cinema
Clarinete (Instrumento, área de)
Comércio
Composição
Comunicação
Comunicação e Jornalismo
Comunicação e Relações Económicas
Comunicação e Relações Públicas
Comunicação Empresarial: Relações Públicas
Comunicação Social
Conservação e Restauro
Contabilidade
Contabilidade e Administração
Contabilidade e Auditoria
Contabilidade e Finanças
Contabilidade e Finanças Públicas
Contabilidade e Gestão
Contabilidade e Gestão Financeira
Contabilidade Empresarial
Contrabaixo (Instrumento, área de)
Cozinha e Produção Alimentar
Cravo (Instrumento, área de)
Dança
Desenho

Design
Design e Gestão da Produção de Material Pedagógico
Design e Produção Gráfica
Design e Tecnologia para a Cerâmica
Design e Tecnologias Gráficas
Design Industrial
Dietética
Direcção de Orquestra
Direcção e Gestão de Operadores Turísticos
Direcção e Gestão Hoteleira
Educação de Infância
Educação e Intervenção Comunitária
Educação Social
Educadores de Infância
Educadores Socioprofissionais
Electrónica e Computadores
Electrónica e Telecomunicações
Enfermagem
Engenharia Agrária
Engenharia Agroalimentar
Engenharia Agropecuária
Engenharia Alimentar
Engenharia Biotecnológica
Engenharia Cerâmica
Engenharia Civil
Engenharia Civil e do Ambiente
Engenharia Civil: ramo de Topografia
Engenharia da Comunicação e Técnicas Gráficas
Engenharia da Gestão e do Ordenamento
Engenharia da Produção
Engenharia da Produção e Manutenção Industrial
Engenharia da Produção Industrial
Engenharia das Comunicações
Engenharia das Construções Cívicas
Engenharia das Indústrias Agroalimentares
Engenharia das Madeiras
Engenharia das Operações Florestais
Engenharia de Construção Civil
Engenharia de Electrónica e Computadores
Engenharia de Energia e Ambiente
Engenharia de Energia e Sistemas de Potência
Engenharia de Energias Renováveis
Engenharia de Instrumentação e Controlo
Engenharia de Instrumentação e Qualidade Industrial
Engenharia de Manutenção de Equipamentos Eléctricos
Engenharia de Manutenção de Equipamentos Informáticos
Engenharia de Manutenção de Equipamentos Médico-Hospitalares
Engenharia de Manutenção de Equipamentos Têxteis
Engenharia de Manutenção Industrial
Engenharia de Manutenção Marítima de Electricidade e Telecomunicações
Engenharia de Máquinas
Engenharia de Máquinas Marítimas
Engenharia de Ordenamento dos Recursos Naturais

Engenharia de Produção Agrícola
Engenharia de Produção Animal
Engenharia de Produção Florestal
Engenharia de Produção Gráfica
Engenharia de Produção Industrial
Engenharia de Produção Mecânica
Engenharia de Recursos Informáticos
Engenharia de Sistemas e Informática
Engenharia do Ambiente
Engenharia do Ambiente e do Território
Engenharia e Design do Produto
Engenharia e Gestão de Projectos e Obras
Engenharia Eléctrica e Electrónica
Engenharia Eléctrica Industrial
Engenharia Electromecânica
Engenharia Electrónica
Engenharia Electrónica e de Automação
Engenharia Electrónica e de Telecomunicações
Engenharia Electrónica: Frio e Climatização
Engenharia Electrónica: Electrónica Industrial
Engenharia Electrónica: Manutenção Industrial
Engenharia Electrónica: Sistemas de Energia
Engenharia Electrotécnica
Engenharia Electrotécnica: Electrónica Industrial
Engenharia Electrotécnica: Manutenção Industrial
Engenharia Geotécnica
Engenharia Hortofrutícola
Engenharia Industrial da Qualidade
Engenharia Informática
Engenharia Informática de Gestão
Engenharia Informática e de Sistemas
Engenharia Informática: Informática Industrial
Engenharia Informática: Tecnologias da Informação
Engenharia Mecânica
Engenharia Mecânica de Transportes
Engenharia Mecânica e Gestão Industrial
Engenharia Mecânica, ramo Térmica
Engenharia Mecânica, ramo de Gestão e Manutenção Industrial
Engenharia Mecânica-Térmica
Engenharia Publicitária
Engenharia Mecânica de Transportes
Engenharia Química
Engenharia Química Industrial
Engenharia Rural
Engenharia Técnica Agro-industrial
Engenharia Técnica da Produção
Engenharia Técnico-Comercial
Engenharia Topográfica
Engenharia Zootécnica
Ensino Básico do 1.º ciclo
Estudos Comunitários
Estudos Superiores de Comércio
Estudos Superiores Gregorianos, área de Canto Gregoriano
Estudos Superiores Gregorianos, área de Direcção Coral

Estudos Superiores Gregorianos, área de Órgão
Fagote (Instrumento, área de)
Farmácia
Fisioterapia
Flauta (Instrumento, área de)
Flauta de Bisel (Instrumento, área de)
Formação Musical
Fotografia
Gestão
Gestão Aduaneira e de Transportes
Gestão Autárquica
Gestão Bancária
Gestão Comercial
Gestão Comercial e Contabilidade
Gestão Comercial e de Produção
Gestão Comercial e Marketing
Gestão Cultural
Gestão da Empresa Agrícola
Gestão da Produção
Gestão das PME
Gestão de Banca e Seguros
Gestão de Comércio Internacional
Gestão de Empresas
Gestão de Empresas Turísticas
Gestão de Empresas Turísticas e Hoteleiras
Gestão de Marketing
Gestão de Marketing e Publicidade
Gestão de Pequenas e Médias Empresas
Gestão de Pessoal e Relações Públicas
Gestão de Recursos Florestais
Gestão de Recursos Humanos
Gestão de Recursos Humanos e Psicologia do Trabalho
Gestão de Transportes
Gestão do Património
Gestão e Ciência Fiscal
Gestão e Contabilidade
Gestão e Criação de Empresas
Gestão e Finanças de Empresas
Gestão Hoteleira
Gestão Industrial
Gestão Industrial e da Produção
Gestão Informática
Gestão Internacional e Exportação
Gestão Seguradora
Guia Intérprete
Guias Intérpretes Nacionais
Guitarra (Instrumento, área de)
Guitarra Clássica (Instrumento, área de)
Higiene e Saúde Ambiental
Horticultura
Informática
Informática de Gestão
Informática e Gestão
Informática Industrial

Instrumentistas de Orquestra
Internacional de Secretariado de Direcção
Jornalismo
Jornalismo e Comunicação
Línguas e Secretariado
Línguas e Secretariado de Administração
Manualidade Artística
Maquinaria Agrícola
Marketing
Marketing e Publicidade
Nutrição Humana Social e Escolar
Oboé (Instrumento, área de)
Organização e Gestão do Turismo
Organização e Sistemas
Ortóptica
Património e Actividades
Percussão (Instrumento, área de)
Piano (Instrumento, área de)
Piano de Acompanhamento (Instrumento, área de)
Pilotagem
Pintura
Produção Agrícola
Produção Animal
Produção e Tecnologias da Música
Produção Industrial
Professores do Ensino Básico (1.º ciclo)
Professores do 1.º ciclo do Ensino Básico
Professores do Ensino Primário
Psicologia e Intervenção nas Organizações
Publicidade
Publicidade e Marketing
Radiologia
Radioterapia
Realização Plástica do Espectáculo
Recursos Humanos
Relações e Cooperação Internacionais
Relações Humanas e Comunicação no Trabalho
Relações Internacionais
Relações Públicas
Relações Públicas e Publicidade
Salvaguarda e Protecção do Património
Secretariado
Secretariado de Administração
Secretariado Internacional
Segurança Social
Sociologia Aplicada
Solicitadoria e Assessoria Jurídica
Teatro
Técnicas de Turismo
Técnico de Turismo
Técnicos de Higiene e Saúde Ambiental
Tecnologia da Comunicação Audiovisual
Tecnologia das Indústrias Agroalimentares
Tecnologia e Artes Gráficas

Tecnologia em Conservação e Restauro
Tecnologias Artísticas
Tecnologias da Informação Empresarial
Terapeuta Ocupacional
Terapêutica da Fala
Terapêutica Ocupacional
Terapia da Fala
Topografia
Tradução
Tradução e Interpretação
Tradução e Relações Internacionais
Tradutores
Tradutores e Gestão Aduaneira
Tradutores-Intérpretes
Trombone (Instrumento, área de)
Trompa (Instrumento, área de)
Trompete (Instrumento, área de)
Turismo
Turismo e Termalismo
Turismo, Hotelaria e Termalismo
Violeta (Instrumento, área de)
Violino (Instrumento, área de)
Violoncelo

(Instrumento,

área

de)

Appendix II

Diplomas de estudos superiores especializados

Administração de Serviços de Enfermagem
Administração e Gestão Escolar
Administração e Gestão Marítima
Administração Empresarial
Administração Escolar
Análise e Organização do Ensino
Animação Comunitária e Educação de Adultos
Animação Cultural da Escola
Apoio Educacional a Populações Especiais
Apoio Educativo
Área de Percussão
Arte e Tecnologia
Arte, Arqueologia e Restauro
Artes Decorativas Portuguesas
Assessoria de Administração
Assessoria de Direcção e Administração
Assessoria de Gestão
Auditoria
Auditoria Contabilística
Auditoria e Controlo de Gestão
Auditoria e Revisão de Contas
Automação e Robótica
Canto
Ciências da Informação
Ciências do Desporto
Clarinete (áreas de sopro)
Composição
Composição
Computadores no Ensino
Comunicação Educacional Multimédia
Comunicação Interna
Contabilidade e Administração Bancária
Contabilidade e Administração de Empresas
Contabilidade e Administração Financeira
Contabilidade e Administração Fiscal
Contabilidade e Ciências da Administração
Contabilidade e Gestão de Empresas
Contrabaixo (área de Cordas)
Controlo de Gestão
Cravo (área de Música Antiga)
Curriculum e Supervisão
Desenvolvimento Ético e Estético
Desenvolvimento Pessoal e Social
Desenvolvimento Pessoal/Social/Educação Cívica
Design
Design de Interiores
Design de Mobiliário Urbano
Design Industrial
Direcção de Instituições de Acção Social
Direcção Pedagógica e Administração Escolar
Educação Comunitária e Perspectiva do Património Ambiental

Educação Ambiental
Educação e Grupos de Risco
Educação em Ciências da Natureza
Educação Especial
Educação Especial: Educação Pré-Escolar e Ensino Básico (1.º ciclo)
Educação Especial: Ensino Básico (2.º e 3.º ciclos) e Ensino Secundário
Educação Especial: Dificuldade de Aprendizagem. Motricidade e Cognição
Educação Física
Educação Física e Desporto
Educação Infantil e Básica Inicial
Educação Musical
Educação Visual e Tecnológica
Enfermagem a Pessoa Adulta Idosa em Situação de Doença Crónica
Enfermagem de Reabilitação
Enfermagem de Saúde do Idoso e Geriátrica
Enfermagem de Saúde Infantil e Pediátrica
Enfermagem de Saúde Materna e Obstétrica
Enfermagem de Saúde Mental e Psiquiátrica
Enfermagem de Saúde na Comunidade
Enfermagem Médico-Cirúrgica
Enfermagem na Comunidade
Engenharia Alimentar
Engenharia Civil
Engenharia Civil: Construção
Engenharia Civil: Direcção, Gestão e Execução de Obras
Engenharia Civil Municipal
Engenharia Civil: Transportes e Vias de Comunicação
Engenharia Civil: Direcção, Gestão e Execução de Obras
Engenharia da Qualidade
Engenharia das Construções Cívicas
Engenharia das Madeiras
Engenharia de Manutenção e Controlo de Sistemas
Engenharia de Máquinas
Engenharia de Máquinas Marítimas
Engenharia de Sistemas de Electrónica e Telecomunicações
Engenharia de Sistemas de Informação
Engenharia e Gestão de Projectos e Obras
Engenharia e Gestão Industrial
Engenharia Electromecânica
Engenharia Electrónica
Engenharia Electrotécnica
Engenharia Geotécnica: Escavações e Fundações
Engenharia Industrial
Engenharia Informática
Engenharia Informática Industrial
Engenharia Mecânica
Engenharia Mecânica: Frio e Climatização e Ventilação Industrial
Engenharia Mecânica: Manutenção
Engenharia Mecânica e Gestão Industrial
Engenharia Mecânica: Gestão da Produção
Engenharia Municipal
Engenharia Publicitária
Engenharia Química Industrial
Engenharia Química: Engenharia do Ambiente e Qualidade

Engenharia Química: Gestão da Energia na Indústria Química
Engenharia Térmica: Industrial
Engenharia de Produção de Óleos Alimentares
Ensino de Língua Estrangeira no 1.º ciclo
Ensino do Português como 2.º Língua
Ensino e Administração
Ensino Precoce das Línguas Estrangeiras
Ensino Tecnológico, Profissional e Artístico
Ensino
Estudos Africanos e Ensino da Língua Portuguesa em África
Expressão Dramática e Criação Teatral na Educação
Expressões Artísticas Integradas na Educação
Fagote (área de Sopros)
Finanças Empresariais
Flauta (área de Sopros)
Flauta de Bisel (área de Música Antiga)
Formação Pessoal e Social
Gestão Bancária
Gestão Bancária e Gestão Seguradora
Gestão Comercial
Gestão das Artes na Cultura e Educação
Gestão de Cooperativas Agrícolas
Gestão de Empresas de Turismo
Gestão de Empresas Turísticas
Gestão de Marketing
Gestão de Pequenas e Médias Empresas
Gestão de Recursos Humanos
Gestão Transportes
Gestão e Administração Escolar
Gestão e Contabilidade
Gestão e Extensão Agrárias
Gestão e Tecnologias Marítimas
Gestão Escolar
Gestão Financeira
Gestão Industrial
Gestão Informática
Gestão Pedagógica Educacional
Gestão Turística e Hoteleira
Guitarra
Informática Aplicada à Educação
Informática Aplicada à Gestão
Informática de Gestão
Informática de Gestão e Informática
Informática e Gestão
Informação Turística
Inspecção Escolar
Instrumento: Área do Piano
Integração Escolar
Interculturalismo
Interpretação e Tradução Simultânea
Investigação Educacional
Investigação em Educação
Jornalismo Internacional
Marketing

Marketing e Consumo
Marketing e Relações Públicas Internacionais
Marketing Internacional
Marketing Internacional e Promoção Turística
Metodologia do Ensino da Matemática
Metodologia do Ensino das Ciências
Metodologia e Supervisão de Form. de Prof. do 1.º e 2.º ciclos
Museologia em Gestão
Novas tecnologias na Educação
Oboé (área de Sopros)
Organização e Administração Escolares
Organização e Gestão dos Recursos Rurais
Organização e Gestão Turísticas
Organização e Intervenção Socioeducativa
Orientação e Gestão Educacional
Orientação Educativa
Orientação Pedagógica
Pedagogia Social
Peritos em Arte/Mobiliário
Piano
Planeamento e Controlo de Gestão
Reabilitação
Relações e Cooperação Internacional
Relações Públicas
Relações Públicas Internacionais
Relações Públicas Empresariais
Saúde Mental comunitária
Segurança Social
Sistemas e Tecnologias da Informação
Sistemas Eléctricos de Energia
Sistemas Europeus de Educação de Infância
Supervisão
Supervisão Educativa
Supervisão Pedagógica
Supervisão Pedagógica e Gestão da Formação
Teatro e Educação
Técnicas de Regadio e Gestão da Água da Rega
Tecnologia de Produtos Agropecuários
Tradução Especializada
Trompa (área de Cordas)
Trompete (área de Cordas)
Turismo
Viola (área de Cordas)
Violino (área de Cordas)
Violoncelo (área de Cordas)

de *Cordas)*

Appendix III

Cartas de curso do grau de licenciado ⁽¹⁾

Administração Autárquica
Administração e Gestão de Empresas
Administração Pública
Administração Regional e Autárquica
Antropologia
Arquitectura
Arquitectura de Design
Arquitectura de Design de Moda
Arquitectura de Gestão Urbanística
Arquitectura de Interiores
Arquitectura do Planeamento Urbano e Territorial
Arquitectura Paisagista
Arte e Design
Artes Plásticas: Escultura
Artes Plásticas: Pintura
Assessoria de Administração
Assessoria de Direcção
Assessoria de Direcção e Administração
Biologia
Biologia (ensino de)
Biologia Aplicada
Biologia Aplicada aos Recursos Animais
Biologia e Geologia (ensino de)
Biologia Marinha e Pescas
Biologia Microbiana e Genética
Biologia Vegetal Aplicada
Bioquímica
Cerâmica
Ciência Política
Ciência Política e Relações Internacionais
Ciências Administrativas
Ciências da Comunicação
Ciências da Comunicação e da Cultura
Ciências da Educação
Ciências da Educação Física e do Desporto
Ciências da Nutrição
Ciências da Tradução e Cultura Comparada
Ciências de Computadores
Ciências do Ambiente
Ciências do Desenvolvimento e Cooperação
Ciências do Desporto
Ciências do Desporto e Educação Física
Ciências do Meio Aquático
Ciências Económicas Empresariais
Ciências Empresariais
Ciências Farmacêuticas
Ciências Geofísicas
Ciências Históricas
Ciências Matemáticas
Ciências Militares

Ciências Militares Aeronáuticas
Ciências Militares Navais
Ciências Musicais
Ciências Policiais
Ciências Religiosas
Ciências Sociais
Comunicação
Comunicação Empresarial
Comunicação Social
Comunicação Social e Cultura
Contabilidade
Dança
Design
Design de Comunicação
Design de Equipamento
Design Gráfico e Ilustração
Design Industrial
Design/Projectação Gráfica
Desporto e Educação Física
Direito
Economia
Economia e Finanças
Educação
Educação Especial e Reabilitação
Educação Física e Desporto
Educação Social
Electrónica (ensino de)
Enfermagem
Engenharia Aeroespacial
Engenharia Aeronáutica
Engenharia Agrícola
Engenharia Agro-industrial
Engenharia Agronómica
Engenharia Alimentar
Engenharia Ambiental e dos Recursos Naturais
Engenharia Biofísica
Engenharia Biológica
Engenharia Biotecnológica
Engenharia Cerâmica e do Vidro
Engenharia Civil
Engenharia da Comunicação e do Design
Engenharia da Energia e do Ambiente
Engenharia da Linguagem e do Conhecimento
Engenharia da Produção
Engenharia da Qualidade
Engenharia das Ciências Agrárias
Engenharia de Automação e Controlo
Engenharia de Electrónica e Informática
Engenharia de Electrónica Industrial
Engenharia de Electrónica
Engenharia de Informática
Engenharia de Materiais
Engenharia de Minas
Engenharia de Minas e Geo-Recursos

Engenharia de Polímeros
Engenharia de Processos e Energia
Engenharia de Produção
Engenharia de Produção Industrial
Engenharia de Projectos e Gestão de Obras
Engenharia de Recursos Geológicos
Engenharia de Recursos Naturais
Engenharia de Sistemas Decisionais
Engenharia de Sistemas e Computação
Engenharia de Sistemas e Computadores
Engenharia de Sistemas e Informática
Engenharia de Transportes
Engenharia do Ambiente
Engenharia do Papel
Engenharia do Território
Engenharia do Vestuário
Engenharia dos Materiais
Engenharia dos Recursos Hídricos
Engenharia e Gestão da Produção
Engenharia e Gestão Industrial
Engenharia Electromecânica
Engenharia Electrónica
Engenharia Electrónica e de Telecomunicações
Engenharia Electrónica Industrial
Engenharia Electrotécnica
Engenharia Electrotécnica e de Computadores
Engenharia Electrotécnica Militar
Engenharia Empresarial
Engenharia Energética
Engenharia Física
Engenharia Física e Tecnológica
Engenharia Física Tecnológica
Engenharia Florestal
Engenharia Geográfica
Engenharia Geológica
Engenharia Geotécnica
Engenharia Hortofrutícola
Engenharia Industrial
Engenharia Informática
Engenharia Informática e Computação
Engenharia Informática e de Computadores
Engenharia Mecânica
Engenharia Mecânica Militar
Engenharia Mecatrónica
Engenharia Metalúrgica e de Materiais
Engenharia Militar
Engenharia Naval
Engenharia Química
Engenharia Têxtil
Engenharia Têxtil e do Vestuário
Engenharia Zootécnica
Enologia
Ergonomia
Escultura

Estatística
Estatística e Investigação Operacional
Estudos Europeus
Estudos Portugueses
Estudos Teatrais
Filosofia
Filosofia e Desenvolvimento da Empresa
Filosofia e Humanidades
Física
Física (ensino de)
Física Aplicada
Física e Tecnologia dos Materiais
Física e Química
Física e Química (ensino de)
Física Tecnológica
Física/Matemática Aplicada (Astronomia)
Formação Complementar
Francês-Inglês
Geografia
Geografia (ensino de)
Geografia e Planeamento
Geografia e Planeamento Regional
Geologia
Geologia Aplicada e do Ambiente
Gestão
Gestão Agrária
Gestão Comercial e Contabilidade
Gestão das PME
Gestão de Empresas
Gestão de Marketing
Gestão de Recursos Humanos
Gestão de Recursos Humanos e Psicologia do Trabalho
Gestão e Administração
Gestão e Administração Pública
Gestão e Desenvolvimento Social
Gestão e Engenharia Industrial
Curso Planificado em Turismo
Gestão Imobiliária
História
História (ensino de)
História da Arte
Humanidades
Informática
Informática (ensino de)
Informática: Gestão
Informática de Gestão
Informática e Gestão de Empresas
Informática Empresarial
Informática: Matemáticas Aplicadas
Inglês e Alemão (ensino de)
Inglês-Alemão
Investigação Social Aplicada
Jornalismo
Língua e Cultura Portuguesa (Língua Estrangeira)

Língua Portuguesa e Línguas Estrangeiras Aplicadas

Línguas e Literaturas Clássicas

Línguas e Literaturas Clássicas e Portuguesa

Línguas e Literaturas Modernas

• *Estudos Portugueses e Franceses (ensino de)*

• *Estudos Portugueses e Ingleses (ensino de)*

• *Estudos Franceses e Alemães*

• *Estudos Franceses e Espanhóis*

• *Estudos Franceses e Ingleses*

• *Estudos Franceses e Italianos*

• *Estudos Ingleses e Alemães*

• *Estudos Portugueses e Alemães*

• *Estudos Portugueses e Espanhóis*

• *Estudos Portugueses e Franceses*

• *Estudos Portugueses e Ingleses*

• *Estudos Portugueses e Italianos*

• *Estudos Portugueses*

Línguas e Literaturas Românicas

Linguística

Literatura Comparada

Marketing

Marketing e Comércio Internacional

Marketing e Publicidade

Matemática

Matemática (ensino de)

Matemática Aplicada

Matemática Aplicada à Economia e à Gestão

Matemática Aplicada à Tecnologia

Matemática Aplicada e Computação

Matemática e Ciências da Computação

Matemática: Informática

Matemáticas Aplicadas

Medicina

Medicina Dentária

Medicina Veterinária

Microbiologia

Música

Música (ensino de)

Novas Tecnologias da Comunicação

Nutrição e Engenharia Alimentar

Optoelectónica e Laser

Organização e Gestão de Empresas

Pintura

Planeamento Regional e Urbano

Política Social

Português (ensino de)

Português e Alemão (ensino de)

Português e Francês (ensino de)

Português e Inglês (ensino de)

Português, Latim e Grego (ensino de)

Português-Francês

Português-História

Probabilidades e Estatística

Professores de Educação Musical do Ensino Básico

Professores do 1.º ciclo do Ensino Básico
Professores do 2.º ciclo do Ensino Básico: variante Educação Física
Professores do 2.º ciclo do Ensino Básico: variante Educação Musical
Professores do 2.º ciclo do Ensino Básico: variante Educação Visual e Tecnológica
Professores do 2.º ciclo do Ensino Básico: variante Mat. e C. Natureza
Professores do 2.º ciclo do Ensino Básico: variante Por. Hist. C. Sociais
Professores do 2.º ciclo do Ensino Básico: variante Port. e Francês
Professores do 2.º ciclo do Ensino Básico: variante Port. e Inglês
Professores do Ensino Básico: variante Educ. Física
Professores do Ensino Básico: variante Educ. Musical
Professores do Ensino Básico: variante Mat. e C. Natureza
Professores do Ensino Básico: variante Port. e Francês
Professores do Ensino Básico: variante Port. e Inglês
Psicologia
Psicologia Aplicada
Psicologia Clínica
Psicologia e Intervenção nas Organizações
Psicologia Social e do Trabalho
Psicopedagogia Curativa
Química
Química (ensino de)
Química Aplicada
Química Industrial
Relações Internacionais
Relações Públicas e Publicidade
Segurança no Trabalho
Serviço Social
Sociologia
Sociologia das Organizações
Sociologia do Trabalho
Sociologia e Planeamento
Teologia
Tradução
Tradução e Interpretação em Línguas Modernas
Tradutores e Intérpretes
Transportes
Urbanismo

Appendix IV

Cartas de curso do grau de mestre ⁽¹⁾

Activação do Desenvolvimento Psicológico
Actividade Motora Adaptada
Actuariado e Gestão de Riscos Financeiros
Administração e Gestão de Empresas
Administração e Planeamento da Educação
Administração Pública
Agricultura e Horticultura Sustentáveis
Análise e Política Social
Análise Social e Administração da Educação
Antropologia
Antropologia: Património de Identidade
Aquicultura
Arqueologia
Arquitectura
Arquitectura da Habitação
Arquitectura de Cena
Astronomia
Biofísica
Biologia Celular
Biologia Humana
Bioquímica
Biotecnologia (Engenharia Bioquímica)
Biotecnologia Vegetal
Ciência e Engenharia Alimentar
Ciência e Engenharia de Superfícies
Ciência e Tecnologia de Alimentos
Ciência Política
Ciências Agrárias: Agricultura, Ambiente e Mercados
Ciências Agrárias: Horticultura, Fruticultura e Viticultura
Ciências Agrárias: Produção Animal
Ciências Antropológicas
Ciências da Comunicação
Ciências da Educação
Ciências da Engenharia
Ciências da Visão
Ciências das Zonas Costeiras
Ciências de Enfermagem
Ciências de Enfermagem: Pediatria
Ciências de Engenharia Mecânica
Ciências do Ambiente
Ciências do Desporto
Ciências do Mar e Recursos Marinhos
Ciências do Papel e dos Produtos Florestais
Ciências e Tecnologia de Alimentos
Ciências Económicas e Empresariais
Ciências Empresariais
Ciências Exactas, Naturais e Tecnológicas
Ciências Geofísicas
Ciências Jurídicas «Direito em Acção»
Ciências Musicais
Ciências Neurológicas

Ciências Sociais
Clínica das Doenças Tropicais
Comércio Internacional
Comportamento Organizacional
Comunicação Educacional Multimedia
Comunicação, Cultura e Tecnologias de Informação
Conservação da Diversidade Animal
Construção
Construção de Edifícios
Contabilidade e Auditoria
Contabilidade e Finanças Empresariais
Controlo da Qualidade e Toxicologia dos Alimentos
Controlo de Qualidade
Controlo Químico da Qualidade
Criminologia
Cultura Arquitectónica Contemporânea e Construção da Sociedade Moderna
Cultura e Literatura Portuguesa
Cultura Grega
Desenho Industrial de Equipamento e Produtos
Desenho Urbano
Desenvolvimento da Criança
Desenvolvimento e Cooperação Internacional
Desenvolvimento Regional Transfronteiriço
Design e Marketing
Direito
Ecologia
Ecologia Aplicada
Ecologia Humana
Ecologia, Gestão e Modelação dos Recursos Marinhos
Economia
Economia Agrária e Sociologia Rural
Economia Agrícola
Economia Aplicada
Economia e Gestão da Ciência e Tecnológica
Economia e Política da Energia e do Ambiente
Economia e Política Social
Economia e Sociologia Históricas (séculos XV-XX)
Economia Europeia
Economia Financeira
Economia Industrial e da Empresa
Economia Internacional
Economia Monetária e Financeira
Economia Rural dos Recursos Naturais
Educação
Educação Especial
Educação Médica
Electrónica Industrial
Engenharia Biológica
Engenharia Biomédica
Engenharia Civil
Engenharia da Rega e dos Recursos Agrícolas
Engenharia de Estruturas
Engenharia de Fabricação Têxtil e Vestuário

Engenharia de Materiais
Engenharia de Polímeros
Engenharia de Processos Químicos
Engenharia de Projecto
Engenharia de Sistemas e Computação
Engenharia de Tecnologia Automóvel
Engenharia do Ambiente
Engenharia do Solo e da Água
Engenharia dos Equipamentos Médicos
Engenharia dos Materiais Lenhocelulósicos
Engenharia Electónica e Telecomunicações
Engenharia Electrotécnica e de Computadores
Engenharia Estrutural
Engenharia Humana
Engenharia Informática
Engenharia Mecânica
Engenharia Metalúrgica
Engenharia Municipal
Engenharia Química
Engenharia Química: Química Aplicada
Engenharia Sanitária
Engenharia Térmica
Engenharia Têxtil
Engenharia-Química: Processos e Indústria
Ensino da Física
Ensino da Física e da Química
Ensino da Matemática
Ensino de Economia
Ensino de Física e Química
Estatística e Gestão da Informação
Estatística e Investigação Operacional
Estatística e Optimização
Estética e Filosofia da Arte
Estratégia
Estruturas de Engenharia Civil
Estudos Africanos
Estudos Alemães
Estudos Americanos
Estudos Anglóxicos
Estudos Anglo-Americanos
Estudos de População e Ecologia Humana
Estudos+ de Tradução
Estudos Económicos e Sociais
Estudos Europeus
Estudos Filosóficos e Alemães
Estudos Literários Comparados
Estudos Marinhos e Costeiros
Estudos Portugueses
Estudos Portugueses e Brasileiros
Estudos sobre Mulheres
Etologia
Exercício e Saúde
Experimentação Animal
Farmacotecnia Avançada

Fenomenologia e Hermenêutica
Filosofia
Filosofia Contemporânea
Filosofia da Comunicação
Filosofia da Educação
Filosofia da Linguagem e da Consciência
Filosofia da Natureza e do Ambiente
Filosofia de Expressão Portuguesa
Filosofia do Conhecimento
Filosofia em Portugal e Cultura Portuguesa
Filosofia Moderna
Filosofia Moderna e Contemporânea
Finanças
Física
Física Aplicada
Física do Estado Sólido e Ciência dos Materiais
Fisiologia e Bioquímica de Plantas
Genética Humana
Genética Humana Aplicada
Genética Médica
Genética Molecular Microbiana
Geociências
Geografia
Geografia de Engenharia
Geografia e Planeamento Regional: Gestão do Território
Geografia Física e Ambiente
Geografia Humana
Geografia Humana e Planeamento Regional e Local
Geografia: Dinâmicas Espaciais e Ordenamento do Território
Geologia Dinâmica
Geologia Económica e Aplicada
Geoquímica
Geo-Recursos
Gestão
Gestão Cultural
Gestão da Formação Desportiva
Gestão da Qualidade
Gestão de Empresas
Gestão de Informação nas Organizações
Gestão de Projectos
Gestão de Recursos Biológicos
Gestão de Recursos Naturais
Gestão de Sistemas de Informação
Gestão do Desenvolvimento e Cooperação Internacional
Gestão do Desporto
Gestão dos Recursos Humanos
Gestão e Administração Pública
Gestão e Economia da Saúde
Gestão e Estratégia Industrial
Gestão e Qualidade de Materiais
Gestão Global
Gestão Internacional
Gestão Têxtil e Vestuário
Gestão-MBA

Ginecologia-Oncologia
Hidráulica
Hidráulica e Recursos Hídricos
Higiene Ocupacional
História
História Contemporânea
História Cultural e Política
História da Arte
História da Arte em Portugal
História da Colonização e das Migrações: Portugal-Brasil
História da Cultura Portuguesa
História da Expansão Portuguesa
História da Idade Média
História das Instituições e Cultura Moderna e Contemporânea
História das Populações
História dos Descobrimientos e da Expansão Portuguesa
História dos Séculos XIX-XX
História e Cultura do Brasil
História e Cultura Medievais
História e Cultura Pré-Clássica
História e Filosofia da Ciência
História Económica e Social
História Económica e Social Contemporânea
História Ibero-Americana
História Insular e Atlântica
História Medieval
História Moderna
História Regional e Local
História Social Contemporânea
Humanidades
Imunologia
Informática
Informática de Gestão
Informática e Educação
Instrumentos e Técnicas de Apoio ao Desenvolvimento Rural
Instrumentação, Manutenção Industrial e Qualidade
Investigação Operacional
Investigação Operacional e Engenharia de Sistemas
Língua e Literatura Francesas
Língua, Literatura e Cultura Inglesas
Linguística
Linguística Geral
Linguística Portuguesa
Linguística Portuguesa Descritiva
Literatura Alemã e Comparada
Literatura Comparada
Literatura Francesa
Literatura Portuguesa
Literaturas Clássicas
Literaturas Comparadas Portuguesa e Francesa
Literaturas Românicas
Literatura Brasileira, Moderna e Contemporânea
Marketing
Master Europeu: Management de la Filière Fruit et Légumes

Matemática
Matemática Aplicada
Matemática Aplicada à Economia e à Gestão
Matemática Aplicada às Ciências Biológicas
Matemática Computacional
Matemática Pura
Matemática-Educação
Materiais e Processos Fabrico
Mecânica dos Solos
Medicina Desportiva
Medicina do Desporto
Medicina do Trabalho
Medicina Escolar
Medicina Legal
Medicina Veterinária e Zootecnia Tropicais
Melhoramentos de Plantas
Métodos Quantitativos em Gestão
Minerais e Rochas Industriais
Mineralogia e Planeamento Mineiro
Museologia e Património
Nutrição Clínica
Nutrição e Alimentação
Nutrição Vegetal, Fertilidade dos Solos e Fertilização
Observação e Análise da Relação Educativa
Oncobiologia
Oncologia
Optimização e Teoria do Controlo
Optoelectrónica e Lasers
Ordenamento do Território e Planeamento Ambiental
Organização e Sistemas de Informação
Parasitologia Médica
Patologia do Aparelho Respiratório
Performance Artística-Dança
Planeamento e Projecto do Ambiente Urbano
Planeamento Regional e Urbano
Política Económica
Políticas e Gestão de Recursos Humanos
Poluição Atmosférica
Pré-História
Probabilidades e Estatística
Produção Agrícola Tropical
Produção Integrada por Computador
Produção Vegetal
Propedêutica Oftalmológica
Protecção Integrada
Psicologia
Psicologia da Educação
Psicologia do Desporto
Psicologia e Educação Ambientais
Psicologia Educacional
Psicologia Legal
Psicologia Social e Organizacional
Psicopatologia e Psicologia Clínica
Psiquiatria

Química
Química Analítica
Química Celular
Química de Materiais
Química dos Produtos Naturais e Alimentos
Química Farmacêutica
Química Orgânica Tecnológica
Química Teórica
Química Têxtil
Química-Física
Reabilitação da Arquitectura e Núcleos Urbanos
Recuperação do Património Arquitectónico e Paisagístico
Relações Económicas, Sociais e Internacionais
Relações Interculturais
Relações Internacionais
Saúde Mental
Saúde Ocupacional
Saúde Pública
Serviço Social
Serviço Social e Política Social
Sistemas de Automação
Sistemas de Informação Geográfica
Sistemas e Automação
Sistemas e Computadores Digitais
Sistemas e Tecnologia da Informação
Sistemas Sócio-Organizacionais da Actividade Económica
Sociedades e Políticas Europeias
Sociologia
Sociologia do Território
Sociologia do Trabalho
Sociologia: Poder Local, Desenvolvimento e Mudança Social
Supervisão
Tecnologia Alimentar e Qualidade
Tecnologia da Arquitectura e Qualidade Ambiental
Tecnologia do Medicamento
Tecnologia e Gestão de Recursos Minerais
Teologia
Teologia e Ética da Saúde
Terra de Livros
Teoria e Ciência Política
Transportes
Treino de Alto Rendimento
Treino do Jovem Atleta
Viticultura

e

Enologia

Appendix V

Cartas doutorais por ramos de conhecimento

Administração e Gestão de Empresas

Anestesiologia

Antropologia

Arquitectura

Arquitectura Paisagística

Artes e Técnicas da Paisagem

Astronomia

Biologia

Biologia Humana

Biologia Marinha

Bioquímica

Biotecnologia

Ciência do Desporto

Ciência e Engenharia de Polímeros

Ciência e Engenharia dos Materiais

Ciências

Ciências Agrárias

Ciências Aplicadas ao Ambiente

Ciências Biológicas

Ciências Biomédicas

Ciências Biomédicas Tropicais

Ciências da Comunicação

Ciências da Cultura

Ciências da Educação

Ciências da Engenharia

Ciências da Engenharia: Engenharia Química

Ciências da Linguagem

Ciências da Literatura

Ciências da Matemática

Ciências da Terra

Ciências de Computadores

Ciências do Ambiente

Ciências do Mar

Ciências Económicas

Ciências Económicas e Empresariais

Ciências Exactas

Ciências Fisiológicas e Farmacológicas

Ciências Médicas

Ciências Musicais

Ciências Sociais

Ciências Veterinárias

Cirurgia

Cultura

Dermatologia e Venerologia

Dermofarmácia e Cosmética

Didáctica

Direito

Ecofisiologia Vegetal

Economia

Economia Agrária

Educação

Eletrónica Industrial
Engenharia Aeroespacial
Engenharia Aeronáutica
Engenharia Agrícola
Engenharia Agro-industrial
Engenharia Agronómica
Engenharia Biofísica
Engenharia Civil
Engenharia da Produção
Engenharia de Materiais
Engenharia de Minas
Engenharia de Produção e Sistemas
Engenharia de Sistemas
Engenharia do Ambiente
Engenharia do Papel
Engenharia do Território
Engenharia e Gestão Industrial
Engenharia e Tecnologia
Engenharia Electrónica
Engenharia Electrotécnica
Engenharia Electrotécnica e Computadores
Engenharia Física
Engenharia Física e Tecnológica
Engenharia Florestal
Engenharia Geográfica
Engenharia Informática
Engenharia Informática e de Computadores
Engenharia Mecânica
Engenharia Metalúrgica e de Materiais
Engenharia Naval
Engenharia Química
Engenharia Química e Biológica
Engenharia Rural
Engenharia Têxtil
Estudos Alemães
Estudos Anglo-Americanos e Portugueses
Estudos Anglo-Portugueses
Estudos Ingleses e Americanos
Estudos Portugueses
Estudos Portugueses e Franceses
Farmácia
Farmacognosia
Farmacologia
Filosofia
Finanças Públicas Locais
Física
Geociências
Geografia
Geografia e Planeamento Regional
Geologia
Geologia Estrutural
Gestão
Gestão de Empresas
Gestão Industrial

Ginecologia e Obstetrícia
Hidrologia
Higiene e Sanidade Animal
História
História da Língua Portuguesa
História e Teoria das Ideias
Humanidades
Informática
Interdisciplinar de Ciências
Letras
Línguas e Literaturas Românicas
Linguística
Linguística Portuguesa
Literatura
Literatura Comparada
Literatura Inglesa
Literatura Moderna
Literatura Portuguesa
Matemática
Matemática Aplicada
Medicina
Medicina Dentária
Medicina Interna
Medicina Tropical
Microbiologia
Motricidade Humana
Música e Artes do Espectáculo
Neuropsiquiatria
Nutrição e Química dos Alimentos
Oftalmologia
Ortopedia
Ortopedia e Traumatologia
Otorrinolaringologia
Património Arquitectónico
Pediatria
Planeamento Urbanístico
Psicologia
Química
Química Analítica
Química Farmaceutica
Química Orgânica
Radiologia e Imagem Médica
Sistematização e Conservação do Solo
Sociologia
Sociologia Médica
Tecnologia Orgânica
Teologia
Toxicologia
Turismo
Urologia

Appendix VI

List of regulated professions and competent authorities

Regulated professions ⁽¹⁾
under Directive 89/48/EEC

Competent authorities

1. Law, accounting and financial sector

Lawyer **Ordem dos Advogados**

Largo de S. Domingos, 14-2.º
P-1100 Lisbon
Tel. (351-1) 886 18 82
Fax (351-1) 886 24 03

Chartered accountant

Câmara dos Revisores
Oficiais de Contas
R. do Salitre, 51-53
P-1200 Lisbon
Tel. (351-1) 353 61 58
Fax (351-1) 353 61 49

Patent agent

Instituto Nacional da Propriedade
Industrial
Campo das Cebolas
P-1100 Lisbon
Tel. (351-1) 888 11 01/888 51 51/3

2. Medical and paramedical sector

Laboratory analyst

Departamento de Recursos Humanos do Ministério da Saúde
Av. Miguel Bombarda, 6-6.º
P-1050 Lisbon
Tel. (351-1) 793 54 27

Psychologist

Inst. de Desenv. e Inspecção
das Condições de Trabalho
Praça de Alvalade, 1
P-1700 Lisbon
Tel. (351-1) 797 23 97
Fax (351-1) 793 40 47

3. Technical and scientific sector

(a) Civil engineer

Mechanical engineer

Electrical engineer

Mining engineer

Chemical engineer

Naval engineer

Geographical engineer

Agronomica engineer

Ordem dos Engenheiros

Av. António A. Aguiar, 3-D

P-1000 Lisbon

Tel. (351-1) 356 24 38

Fax (351-1) 352 46 32

Forestry engineer

Metallurgical engineer

(b) Civil technician	Conselho Coordenador dos Institutos Superiores Politécnicos Av. 5 de Outubro, 89-3. ^o P-1050 Lisbon Tel. (351-1) 797 41 72/3 Fax (351-1) 797 41 72
Electronics and tele- communications technician	
Mechanical technician	
Computer science technician	
Energy power systems technician	
Geotechnics technician	
Agricultural technician	

4. Educational sector

Educator	Ministério da Educação Departamento de Gestão de Recursos Educativos Av. 24 de Julho, 142 P-1360 Lisbon Tel. (351-1) 397 71 81
Teacher of basic education (first, second and third cycles) Secondary school teachers	
Teacher in higher education (polytechnic education)	Conselho Coordenador dos Institutos Superiores Politécnicos Av. 5 de Outubro, 89-3. ^o P-1050 Lisbon Tel. (351-1) 797 41 72/3 Fax (351-1) 797 41 72
Teacher in higher education (university education)	Conselho de Reitores das Universidades Portuguesas R. Florbela Espanca, 1 P-1700 Lisbon Tel. (351-1) 797 30 93 Fax (351-1) 797 73 94

5. Cultural sector

National guide/interpreter Tourist courier	Instituto Nacional de Formação Turística Av. Eng. ^o Arantes e Oliveira, 7 P-1900 Lisbon
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Tel. (351-1) 847 30 71/5

6. Transport sector

Marine engineer Deck officer	Direcção-Geral de Portos, Navegação e Transportes Marítimos Edifício Vasco da Gama Doca de Alcântara P-1300 Lisbon Tel. (351-1) 352 38 05/7
Radio communications officer	

7. Public service administration sector

Officer (general/specialist)	Ministério das Finanças Direcção-Geral da Administração <i>Pública</i> Av. 24 de Julho, 80
Senior officer (general/specialist)	

P-1300 Lisbon
Tel. (351-1) 397 21 61/69
Fax: 60 01 48

Spain

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Abbreviations

BUP *Bachillerato Unificado y Polivalente*

COU *Curso de Orientación Universitaria*

EGB *Educación General Básica*

FP *Formación Profesional*

LRU *Ley Orgánica de Reforma Universitaria de agosto de 1983*

UNED *Universidad Nacional de Educación a Distancia*

Glossary

Arquitecto

A degree awarded upon completion of all first and second cycle studies undertaken in the *Escuelas Técnicas Superiores de Arquitectura*.

Arquitecto técnico

A degree awarded upon completion of the first cycle of university studies in the *Escuelas Universitarias de Arquitectura Técnica*.

Bachillerato unificado y polivalente (BUP)

Secondary education, lasting for three years. Successful pupils are known as *Bachiller*.

Colegio universitario

A university unit responsible for organising the first cycle or the first three years of studies leading to the qualification of *Licenciado*, organised by *Facultades and Escuelas Técnicas Superiores*.

Consejo de universidades

University Council consisting of the rectors of the State universities, the members of the boards of education of the autonomous communities and 15 members appointed by parliament, the senate and the government. The Minister for Education acts as president.

Curso de orientación universitaria (COU)

A preparatory course for university studies; it has to be successfully completed before entry to university and higher education in general.

Departamento

A unit responsible for teaching and research in the university, within a field of knowledge. It contains all the professors of the said field.

Diplomado

A degree awarded upon completion of the first cycle of university studies (nearly always pursued in the *Escuela Universitaria*).

Directrices generales

A general framework to which university studies leading to official qualifications must conform in order to be recognised by the University Council.

Doctor

A degree awarded upon completion of third cycle studies and successful defence of an individual academic thesis.

Escuela Técnica Superior

A university unit responsible for organising first and second cycle studies leading principally to the title of *Ingeniero* or *Arquitecto*.

Escuela Universitaria

A university unit responsible for organising the first cycle studies leading to the qualification of *Diplomado*, *Ingeniero Técnico* or *Arquitecto Técnico*.

Facultad

A type of institute of higher education where long-term courses are offered in almost all academic disciplines (except technical courses), leading to the degree of *Licenciado*.

Formacion Profesional (FP)

Modality of secondary education more oriented towards working life and preparation for employment. It is structured at two levels called first and second grade and the appropriate qualification is obtained at the end of each one.

Ingeniero

A degree awarded upon completion of all first and second cycle studies basically in an *Escuela Técnica Superior*.

Ingeniero técnico

A degree awarded upon completion of the first cycle of university studies in an *Escuela Técnica Universitaria*.

Instituto universitario

A university unit responsible for teaching in specialised university studies and third cycle studies.

Licenciado

A degree awarded upon completion of the first and second cycle studies, basically within *Facultades*.

Plan de estudios

An ordered group of subjects and disciplines drawn up and approved by the universities, on completion of which students obtain a qualification. This has to be recognised by the University Council.

Pruebas de acceso

A special examination required for entry to faculties and technical colleges. Held in June and September.

Títulos oficiales

Official qualifications valid throughout Spain.

I. Higher education system

Higher education in Spain is conducted almost entirely under the auspices of the universities. Only a few courses in higher education are studied in institutions not affiliated to universities. Such institutions are the responsibility of specific central government ministries or of the autonomous communities (¹).

The *Ley Orgánica de Reforma Universitaria* — *LRU* (law for the reform of higher education) of August 1983 is the legal foundation for the Spanish higher education system. It defines the areas of responsibility with regard to higher education policy of the State, the autonomous communities and the higher education institutions.

The 1983 law acknowledges the academic freedom of the universities. This is reflected in their capacity to devise and approve study and research plans and to issue their degrees and diplomas.

But in order for their studies and the corresponding degrees to be recognised officially and be valid throughout Spain, the higher education institutions, as the authorities responsible for the study plans, must abide by a number of basic unified rules for the organisation of studies which are issued by the government but drawn up by the University Council.

In other cases, the universities are free to organise courses without being subjected to pre-established rules, although in these cases the degrees and corresponding diplomas do not have official status.

I.1. The institutions of higher education

Spanish higher education is provided almost entirely within the framework of the universities. There are only a few non-university institutions of higher education.

Non-university higher education

Non-university higher education now includes only a few specialised institutes, which organise advanced studies in areas such as:

courses leading to the qualification of *Técnico en Empresas y Actividades Turísticas* (tourism and related activities) which are taught in *Escuelas* under the responsibility of the Ministry of Transport and Communications;
advanced art studies, for which the Ministry of Education and Science is responsible (dramatic art and dance (¹), singing, and conservatories of music).

University higher education

In accordance with the law for the reform of higher education, the functions of universities are as follows: the creation, development, teaching and exercise of criticism of culture, the qualifications of students for the exercise of professional activities and the support of the cultural, social and economic development of Spain and the self-governing regions.

The university system in Spain consists of 43 State universities, three private universities and four universities belonging to the Catholic Church. In principle, these are full curriculum universities which provide, according to their circumstances, courses in the various fields of knowledge (experimental science, social science and law, the humanities, medicine, engineering and technology, etc.) and at all levels (first, second and third cycles or *Doctorado*).

However, three of them, known as *Universidades Politécnicas*, specialise in technical areas such as engineering and technology. These subjects are also studied alongside other branches of science and the humanities in the other universities. Moreover, it should be pointed out that the *Universidad Nacional de Educación a Distancia* — *UNED* (National Open University) operates throughout the whole of Spain.

The Spanish university system is predominantly a State system with the Catholic Church universities and, more recently, the private universities having only a minor influence.

All State universities in Spain organise their teaching in accordance with a common basic structure consisting of *Facultades*, *Escuelas Técnicas Superiores*, *Escuelas Universitarias*, and university *Departamentos and Institutos*.

Universities belonging to the Catholic Church are governed by their own operating standards.

The *Facultades*, *Escuelas Técnicas Superiores* and *Escuelas Universitarias* are the institutions responsible for organising and administering the courses leading to the various academic degrees. The courses vary in length and can be long or short.

Facultades and *Escuelas Técnicas Superiores* organise long-term courses lasting five or six years. The former deal with science and the humanities while the latter teach only technology, engineering and architecture. As a result of the European Community directives, medical studies last six years and odontology, pharmacy and veterinary studies last five years.

The *Escuelas Universitarias* are institutions responsible for short-term courses lasting three years. These are of an applied or vocational nature, and structured as a first cycle of university studies.

The *Departamentos* are teaching and research units in each university representing the different fields of knowledge. They contain all the professors, each of whom is a specialist in a particular field. From the teaching point of view, the *Departamentos*, within their own fields of specialisation, are responsible for the teaching activity and the subjects included in the study plans of each *Facultad*, *Escuela Técnica Superior* or *Escuela Universitaria*.

The *Institutos Universitarios*, which are institutions devoted basically to technical scientific research or artistic creation, can also perform teaching activities connected with specialised disciplines and doctoral studies.

In order to decentralise university teaching, *Colegios Universitarios* were set up to teach only for the first cycle (three years) which leads to long-term courses.

Similarly, there are *Escuelas Universitarias* (and, in a few cases, *Facultades* as well) which, although not legally a part of the university institution concerned ('not integrated' into the university) because they are privately owned, nevertheless are academically incorporated in the universities ('assigned' to them). Such *Escuelas* or *Facultades* differ in having their own administrative rules, entrance fees and so on, but not in regard to their educational administration, which is the same as that of their sponsoring university.

I.2. Number of students

Spanish higher education has witnessed a massive increase in enrolment in the last 30 years, probably the largest in the developed world.

At the same time, certain studies are in the process of being incorporated into the university system and this has accentuated the growth in student numbers. As a consequence, there is a large reduction in the number of students in non-university higher education institutions.

The data given below refer only to university education.

Academic year	Number of university students
1960/61	166 797
1970/71	329 149
1980/81	649 098
1986/87	903 166
1991/92	1 194 189

Another feature of the university sector is the small part played by non-State institutions. This is the student distribution for the 1991/92 academic year:

State universities	1 154 233
Non-State universities	39 956.

The distribution of students between the various types of studies for the 1991/92 academic year was as follows:

<i>Facultades</i> (including university colleges)	726 885
<i>Escuelas Técnicas Superiores</i>	100 955
<i>Escuelas Universitarias</i>	366 349.

There are not many foreign students at Spanish universities. For the 1991/92 academic year only 24 883 students out of a total of 1 194 189 were not of Spanish nationality. Of these, 4 435 came from other European Community countries. Due to the progressive incorporation of the non-university higher education studies in the university system, the number of non-university higher education students is very small.

The distribution by country was as follows (1991/92):

Belgium	182
Denmark	28
Germany	1 347
Greece	29
France	1 508
Ireland	42
Italy	365
Luxembourg	7
Netherlands	183
Portugal	170
United Kingdom	547
Total	4 408

Note: This figure (i.e. 4 408) does not include students from the European Community countries taking part in Erasmus programmes in Spanish universities. The number of Erasmus students was 3 500 for the 1991/92 academic year.

I.3. Organisation of courses of study

General organisation

University studies are organised in cycles according to the following pattern. The first cycle, lasting for three years, is taken in the *Facultades*, *Escuelas Técnicas Superiores* and *Escuelas Universitarias*. The first cycle attended in *Facultades* and *Escuelas Técnicas Superiores* is not a final one; it forms a basic, generalised curricular module in which the basic subjects are taught. Students do not receive a degree or diploma on graduation but move straight on to the second cycle of studies, which is more specialised.

The first cycle taken in *Escuelas Universitarias* is a complete course. It lasts for three years in an applied or 'vocational' area. After graduation, students are awarded the degree of *Diplomado*, *Ingeniero Técnico* or *Arquitecto Técnico*, as appropriate. In many cases through the 'pasarela' system it is possible to pass from a first cycle qualification to a second cycle of different studies ⁽¹⁾.

The second cycle, also taken in *Facultades* and *Escuelas Técnicas Superiores*, lasts for two years (except in medical studies and exceptionally in other cases, where it lasts for three years). On the successful completion of the second cycle, students are awarded the degree of *Licenciado*, *Ingeniero* or *Arquitecto*, as appropriate.

The third cycle of university studies in Spain is devoted to scientific specialisation and training in the techniques of research. The course lasts at least four years and includes *Doctorado* teaching courses and the completion of a doctoral thesis. Only *Licenciados*, *Ingenieros* or *Arquitectos* may apply to enrol for these studies, with the permission of the university *Departamento* responsible for the *Doctorado* course in question. After the successful completion of this third cycle, which is taught in university *Departamentos* and *Institutos*, candidates obtain the title of Doctor.

Besides the *Doctorado* degree, the universities also organise non-doctoral postgraduate studies, which are interdisciplinary or of a specialist nature, for which they award their own degrees and diplomas not covered by the official regulations. There is one case in which such postgraduate non-doctoral studies are officially recognised; this is the case of 'Master's'. In addition to this kind of studies (academic specialisation), there are also vocational specialised studies. This second type of studies comes under the education and health department's competence (for example medicine, pharmacy and nursing).

Pursuant to the LRU, Royal Decree 1497/1987 of 27 November (*Official Gazette* for 14 December) was issued. This decree established new bases for the future organisation of university studies leading to official qualifications. The most important innovations in these provisions, which will be implemented in respect of all university education in the course of the next few years, include the reorganisation of studies, some shortening of their total duration and the rationalisation of the volume of teaching. Specifically, the first cycle lasting for two or three years will be organised by the *Facultades*, *Escuelas Técnicas Superiores* and *Escuelas Universitarias*; the second cycle, which will be organised only by *Facultades* and *Escuelas Técnicas Superiores*, will last for two years (except in medicine, which will be three, and other courses in which the first stage lasts for only two years).

Finally, transfer from the first cycle to certain second cycle studies may be permitted with or without supplementary training courses. The teaching load of the curricula, to be approved by the universities, must be set at between 60 and 90 credits for each academic year (one credit = 10 hours' teaching).

Teaching organisation

Generally speaking, apart from postgraduate and doctorate studies, university teaching is divided into academic years (between the months of October and June). Studies are undertaken both in the form of lectures and as practical classes or specialised seminars, depending on the nature of the academic disciplines concerned.

Students must pass the yearly examinations in each subject (examinations are held in June, with subsidiary ones in September, though some are held every four months). The qualifications may be negative (fail), which means that the subject in question must be repeated, or positive (pass, good, excellent and excellent with honours).

Although the curricula are structured so as to align course subjects into modules of one academic year, there is, in general, no limit to the number of subjects which may be taken by a student. Nevertheless, it is usual for the curricula to establish the requisite sequence of studies, and a pass has to be obtained in some subjects before other scientifically more advanced subjects may be studied.

II. Qualifications and diplomas

II.1. Qualifications for admission to higher education

Pupils who have completed eight years of compulsory primary education (known as *Educación General Básica — EGB*) begin their secondary schooling at the age of 14.

They have two options:

- the *Bachillerato Unificado y Polivalente — BUP* (general secondary school); it consists of three years of study leading to the qualification of título de Bachiller;
- the *Formación Profesional* (vocational education) structured in two stages, known as *Primero* and *Segundo Grado* (first and second grades): this second stream is more practically oriented and is aimed at preparing pupils for employment in a specialist trade.

The *Primero Grado* consists of two years of studies and leads to the qualification of *Técnico Auxiliar* in the trade selected.

The *Segundo Grado* consists of either two or three years of study at the end of which the student can obtain the qualification of *Técnico Especialista* in his or her chosen branch.

In most cases, students have to study for a further year after completing their *Formación Profesional de Primer Grado* before beginning the *Segundo Grado*.

It should be mentioned that the regulations provide for a number of bridges between the academic and vocational streams which enable a student to change from one to the other.

The *Curso de Orientación Universitaria (COU)*

Before beginning higher education, students have to take what is called the *Curso de Orientación Universitaria — COU* (orientation course for institutions of higher education) which is a *sine qua non* for entering higher education.

The *COU* is a one-year academic course taught in public secondary schools (*Institutos de Bachillerato*) and in recognised private schools.

When this course was first organised it was placed under university supervision; experts are of the opinion that it has, in effect, become a fourth year of *Bachillerato* for those who wish to enter university. Moreover, the vast majority of university students have completed this type of education; very few come from the *Formación Profesional*.

There are four options in the *COU*, namely:

- (i) Science and technology;
- (ii) Biology and medicine;
- (iii) Social sciences;
- (iv) Arts and languages.

The selection of the desired option implies a preference for subsequent university entry. In this way, the student will study a core curriculum of three subjects (Spanish language, a foreign language and the history of philosophy) and an optional group of subjects consisting of two compulsory ones and another two chosen from a list of four. Students may also take a second foreign language as an option.

On completion of the *COU*, students who have passed in all subjects taken receive the overall pass certificate, giving them, in principle, access to university studies.

The *pruebas de acceso a la universidad*

Students wishing to study at *Facultades*, *Colegios Universitarios* and *Escuelas Superiores Técnicas* (see I.1) also have to pass a general entrance examination, the so-called *pruebas de acceso*.

University entrance examinations are held twice a year, in June and September, and are organised by the university concerned, with the participation of the teachers conducting the *COU*.

Students have to sit these examinations at the university with which their secondary school (*Bachillerato*) is registered; this is usually the one nearest to the school. In Madrid and Barcelona, where there are several universities, a number of schools are allocated to each university. Sitting the examination at a particular university does not give the right to subsequent entry to that university; this is governed by the arrangements for allocating vacant places at the various institutions as provided by existing legislation.

The format of the entrance examinations is established by ministerial order and consists of two papers:

first paper: this relates to the *COU* core subjects and is divided into three parts:

1. textual analysis and Spanish language and, if appropriate, the official language of the autonomous community concerned (Euskera, Catalan, Galician and the language of Valencia);
2. foreign language;
3. philosophy;

second paper: this relates to the subjects of the option selected in the *COU*. It is divided into two parts:

1. compulsory subjects;

2. optional subjects.

The final pass marks awarded in the examination are determined on a scale of 0 to 10 by the arithmetical mean between:

- the total marks awarded for the papers;
- the average of the grades for the upper secondary and *COU* courses.

For a pass in the entrance examinations the final mark must be 5 or above, and the overall grade for the papers must be at least 4. Students may not present themselves for the entrance examinations more than four times.

There is a special version of the entrance examination for foreign or Spanish students who have had part or all of their secondary education abroad. This procedure is governed by a recent ministerial order and the *Universidad Nacional de Educación a Distancia* has been given the task of organising it. Examinations may be taken at Spanish embassies or consulates abroad if the number of students registered in the country or city in question justifies it.

II.1.1. Qualifications for admission to non-university higher education

Entry to non-university higher education institutions is, with the exception of advanced art studies (*Enseñanzas Superiores Artísticas*) which have a structure and format of their own, dependent upon the successful completion of secondary education (*Bachillerato*) and the orientation course for institutions of higher education (*Curso de Orientación Universitaria*).

In general, within the non-university higher education sector, two types of studies may be distinguished: education which leads to qualifications that have been formally stated to be equivalent to similar qualifications gained from various university courses, and specific educational courses which are not equivalent.

With regard to the first group of studies (tourism), the academic requirements are the same as those for university entrance (see II.1.2), in addition to which there are some specific entrance examinations geared to the particular features of such studies.

The second group contains special studies with exceptional features (dramatic art, singing and conservatories of music). The usual requirement is a pass in an entrance examination or test and an academic level equivalent to *Graduado Escolar* (completion of primary education) or *Bachillerato* (secondary school).

II.1.2. Qualifications for admission to university

Although there are several different ways of entering a university, it has to be said that the majority of students take the *COU* and the *pruebas de acceso* (see II.1).

Entry to *Facultades*, *Colegios Universitarios* and *Escuelas Superiores Técnicas*

Students who wish to be admitted to one of these institutions must have successfully completed secondary education (*BUP*), the one-year orientation course (*COU*), and also must have passed university entrance examinations (*pruebas de acceso*).

Entry to *Escuelas Universitarias*

Students who wish to study at *Escuelas Universitarias* are not required to pass the entrance examinations. Although it is not an express requirement, in practice, students who have passed this examination have a better chance of being admitted to their first choice of study area.

Students holding the qualification of *Técnico Especialista* can gain direct access to *Escuelas Universitarias* which maintain connections with the branch of knowledge and speciality studied in the *Formación Profesional de Segundo Grado*.

Under the regulations governing university entry, universities have to reserve at least 30% of their places in short-term studies at such institutions for this type of student. In fact, this percentage may be increased by any university whose Board of Governors so decides.

Examinations for students over 25

Universities may organise special examinations for the admission of persons over 25 years of age, without preconditions as to previous studies or qualifications.

This route is exceptional and numerically insignificant. It is valid only for one particular establishment and university, so that success in the examination gives entry to only the university and the establishment which set it.

Some universities organise preparatory courses for this examination. The National Open University (*UNED*) deserves special mention because of its activities in this area.

II.2. Intermediate qualifications in higher education

At the present time, there are no official qualifications attesting the completion of intermediate studies in the various university curricula in Spain. Although, as noted earlier, long-term studies are structured as a first cycle and second cycle, they are almost invariably organised as units; the first cycle includes a basic education which has to be continued in the second cycle, at the end of which a degree can be obtained.

When the first cycle has its own distinctive character it is regarded as final. This is the case with the subjects taught in the *Escuelas Universitarias* (see II.3.2).

II.3. Final qualifications in higher education

II.3.1. Final qualifications in non-university higher education

As was stated earlier, the qualifications which ratify the various non-university higher education studies — with the exception of art — are generally regarded to be equivalent to the university degrees of *Diplomado* or *Licenciado*; they are issued by the ministry sponsoring the institutions concerned.

II.3.2. Final university qualifications

The government has to prescribe the official designation for each of the official qualifications, each designation being reserved specifically for the qualification concerned. The designation must include the following specifications: official qualification valid throughout the country, followed by the relevant qualification (*Diplomado, Ingeniero Técnico, Arquitecto Técnico, Licenciado, Ingeniero, Arquitecto*) and the identification of the studies concerned (stating the scientific, technical or artistic field).

These qualifications are only awarded once a pass has been achieved in the subjects included in the relevant curriculum, which has been approved by the university in question and recognised by the University Council.

There are no final general examinations for obtaining the qualification in question. Nevertheless, the curricula of the *Escuelas Técnicas Superiores*, the *Escuelas Universitarias* and the *Arquitectura e Ingeniería Técnica* require students to complete a project at the end of the course to obtain either the degree of *Arquitecto Ingeniero*, *Arquitecto Técnico* or *Ingeniero Técnico*.

The qualifications are issued in the name of the king by the rector of the university concerned. They have a standardised format, which may mean that they are written in two languages (Spanish and the other official language of the autonomous community in which the university concerned is situated).

State universities may provide education outside the normal framework (students cannot enter for this unless they have the general academic qualifications for university entrance). Such studies will be accredited with unofficial qualifications or diplomas, 'individual' to each university issuing them. In any event, the names and formats of such certificates must neither be the same as those of the official qualifications referred to above nor incorporate the identifying wording mentioned. Their unofficial character must be plainly indicated.

II.3.3. Academic and professional value of university qualifications

University official diplomas (that is diplomas awarded after completing a degree approved by the University Council) take full academic effects, and entitle their holders to the exercise of the profession and to all the rights attendant thereto. Universities also have their own diplomas, awarded after completing degrees not approved by the University Council, which in turn neither take full academic effects nor entitle the holder to the exercise of the profession. From an academic point of view, this means that these diplomas do not qualify the holder for the pursuance of officially regulated university studies, after which an official diploma is awarded. From a professional point of view, they do not lead to an officially regulated profession.

III. Types and special sorts of final diplomas in higher education

Official diplomas are awarded upon the completion of degrees pursued at the universities dependent on the Catholic Church in Spain. In accordance with the legal provisions prescribed by the appropriate agreement between Spain and the Holy See, these diplomas take the same effects as those awarded by public universities, given that they have been granted civil effects by means of a Royal State Decree. In this case, the diplomas bear the same denominations as those awarded by public universities, and are issued on behalf of the king by the chancellor of the university at issue (until now, by the Ministry of Education and Science). With regard to diplomas issued by universities dependent on the Catholic Church and which have not been granted civil effects, they do not have official status.

The *Ley Orgánica de Reforma Universitaria* (law for the reform of higher education) of 1983 regulates the possibility of creating private universities (under a regulation other than that of the universities depending on the Catholic Church). Three universities of this kind have already been created. Their diplomas will be issued by the chancellor or another person with a similarly preeminent post, and will need to be approved by the government before they can have official status. The same regulations apply to private schools of higher education that do not depend on any university. In this case, however, the school will need to integrate into a private university or be assigned to a public one.

**Diagram
the**

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education

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system**

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Appendix I

Alphabetical index of the 125 official university degrees divided into areas

Humanities

<i>Licenciados en:</i>	<i>Bellas Artes</i>
	<i>Filología Alemana</i>
	<i>Filología Catalana</i>
	<i>Filología Árabe</i>
	<i>Filología Clásica</i>
	<i>Filología Eslava</i>
	<i>Filología Francesa</i>
	<i>Filología Gallega</i>
	<i>Filología Hebrea</i>
	<i>Filología Hispánica</i>
	<i>Filología Inglesa</i>
	<i>Filología Italiana</i>
	<i>Filología Portuguesa</i>
	<i>Filología Románica</i>
	<i>Filología Vasca</i>
	<i>Filosofía</i>
	<i>Geografía</i>
	<i>Historia</i>
	<i>Historia del Arte</i>
	<i>Humanidades</i>
	<i>Traducción e Interpretación</i>
	<i>Documentación</i>
	<i>Lingüística</i>
	<i>Teoría de la Literatura y Literatura Comparada.</i>
<i>Diplomado en:</i>	<i>Biblioteconomía y Documentación.</i>

Health and experimental sciences

<i>Licenciados en:</i>	<i>Biología</i>
	<i>Ciencias del Mar</i>
	<i>Farmacia</i>
	<i>Física</i>
	<i>Geología</i>
	<i>Matemáticas</i>
	<i>Medicina</i>
	<i>Odontología</i>
	<i>Química</i>
	<i>Veterinaria</i>
	<i>Ciencias de la Actividad Física y del Deporte</i>
	<i>Bioquímica</i>
	<i>Ciencia y Tecnología de los Alimentos.</i>
<i>Diplomados en:</i>	<i>Enfermería</i>
	<i>Estadística</i>
	<i>Fisioterapia</i>
	<i>Óptica y Optometría</i>
	<i>Podología</i>

Terapia Ocupacional.

Legal and social sciences

Licenciados en: *Administración y Dirección de Empresas*
Ciencias Políticas y de la Administración
Comunicación Audiovisual
Derecho
Economía
Pedagogía
Periodismo
Psicología
Publicidad y Relaciones Públicas
Sociología
Antropología Social y Cultural
Ciencias Actuariales y Financieras
Investigación y Técnicas de Mercado
Psicopedagogía.

Diplomados en: *Ciencias Empresariales*
Educación Social
Gestión y Administración Pública
Logopedia
Relaciones Laborales
Trabajo Social.

Maestro: *Especialidad de Audición y Lenguaje*
Especialidad de Educación Especial
Especialidad de Educación Física
Especialidad de Educación Infantil
Especialidad de Educación Musical
Especialidad de Educación Primaria
Especialidad de Lengua Extranjera.

Technical studies

Arquitectura
Ingenieros: *Aeronáutico*
Agrónomo
de Caminos, Canales y Puertos
de Minas
de Montes
de Telecomunicación
en Informática
Industrial
Naval y Oceánico
Químico
en Organización Industrial
en Automática y Electrónica Industrial
en Electrónica
en Geodesia y Cartografía.

Licenciados en: *Máquinas Navales*
Náutica y Transporte Marítimo
Radioelectrónica Naval.

Arquitectura Técnica
Diplomados en: *Máquinas Navales*
Navegación Marítima

Ingenieros Técnicos en: *Radioelectrónica Naval.*
Aeromotores
Aeronavegación
Aeronaves
Aeropuertos
Construcciones Civiles
Diseño Industrial
Electricidad
Electrónica Industrial
Equipos y Materiales Aeroespaciales
Estructuras Marinas
Explotación de Minas
Explotaciones Agropecuarias
Explotaciones Forestales
Hidrología
Hortofruticultura y Jardinería
Industrias Agrarias y Alimentarias
Industrias Forestales
Informática de Gestión
Informática de Sistemas
Instalaciones Electromecánicas y Mineras
Mecánica
Mecanización y Construcciones Rurales
Mineralurgia y Metalurgia
Propulsión y Servicios del Buque
Química Industrial
Recursos Energéticos, Combustibles y Explosivos
Sistemas de Telecomunicación
Sistemas Electrónicos
Sondeos y Prospecciones Mineras
Sonido e Imagen
Telemática
Textil
Topografía
Transportes y *Servicios* *Urbanos.*

Appendix II

List of regulated professions in Spain (Directive 89/48/EEC)

Legal and economic professions

Abogado
Procurador
Graduado Social
Economista
Actuario de Seguros
Diplomado en Ciencias Empresariales y Profesor Mercantil
Agente de la Propiedad Inmobiliaria
Auditor de Cuentas
Habilitado de Clases Pasivas
Gestor Administrativo
Técnico de Empresas y Actividades Turísticas

Health professions

Enfermero generalista con especialidad, excepto en la especialidad obstétrico-ginecológica
Fisioterapeuta
Óptico
Podólogo
Psicólogo

Technical and experimental sciences professions

Biólogo
Físico
Geólogo
Químico
Ingeniero Aeronáutico
Ingeniero Agrónomo
Ingeniero de Caminos, Canales y Puertos
Ingeniero Industrial
Ingeniero de Minas
Ingeniero de Montes
Ingeniero Naval
Ingeniero de Telecomunicaciones
Ingeniero Técnico Aeronáutico
Ingeniero Técnico Agrícola
Ingeniero Técnico de Obras Públicas
Ingeniero Técnico Industrial
Ingeniero Técnico de Minas
Ingeniero Técnico Forestal
Ingeniero Técnico Naval
Ingeniero Técnico de Telecomunicación
Ingeniero Técnico en Topografía
Arquitecto Técnico

Cultural professions

Maestro

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Diplomado en Trabajo Social

Sweden

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Glossary

Allmän behörighet

General eligibility for admission to higher education.

Anmälan

Application to higher education to the central or local admissions office.

Anmälningssblankett

Application form.

Anmälningdatum

Closing day for applications.

Antagningsbesked

Admission notification.

Antagningsbyrå/-enhet

Admissions office.

Behörig

Eligible.

Behörighetskrav

Admission requirement.

Betyg

Grade; certificate.

Betygsskala

Grading scale.

Studentregister

Certificate from the computerised student register.

Decentraliserad universitetsutbildning

External university studies.

Deltidsstudier

Part-time studies.

Disputation

Public defence (of doctoral thesis).

Distansstudent

External student.

Distansutbildning

Off-campus study.

Docent

Lecturer, reader, associate professor.

Docentkompetent

Qualified as associate professor.

Doktorand

Doctoral student.

Doktorandkurs

Postgraduate course.

Doktorandtjänst

Postgraduate studentship.

Doktorsavhandling

Doctoral thesis, dissertation.

Doktorsexamen

Doctorate, Ph.D.

Separat kurs
Separate course, single-subject course.

Etappavgång

Intermediate degree.

Ettbetygskurs

Twenty-credit-point course (one term) (before 1969).

Examen

Degree.

Examensarbete

Degree project, thesis.

Examensbenämning

Official title of degree (up to 1993).

Examensbevis

Degree certificate, diploma.

Examensfordringar

Degree requirements.

Examensförordningen

Degree ordinance.

Examinator

Examiner, the university lecturer or professor responsible for the course examinations of a certain course.

Examinatorier

Continuous assessment seminars.

Examinatorium

Course with compulsory classwork.

Examinerad

Graduate.

Fakultet

Faculty, school.

Fakultetsnämnd

Faculty board.

Fakultetsopponent

University-appointed examiner at public defence of doctoral thesis.

Filosofie doktor

Doctor of Philosophy (Ph.D.).

Filosofisk fakultet

Faculty of Humanities, Social Sciences and Natural Sciences.

Forskarassistent

Research associate, assistant professor (postdoctoral position).

Forskare

Researcher, scientist, scholar.

Forskargrupp

Research team.

Forskarhandledare

Research supervisor.

Forskarstipendium

Research grant.

Forskarstudent

Postgraduate student.

Forskarutbildning

Doctoral studies, postgraduate studies.

Forskning

Research.

Forskningsanknytning

Research connection, link to research (for university colleges and colleges of health sciences).

Fortsättningskurs

Intermediate course (40-point-level course).

Fristående kurs

Single-subject course.

Fritt tillträde

Unrestricted admissions.

Fördjupningskurs

In-depth course (80-point-level course) (may be a postgraduate-level course).

Föreläsare

Lecturer.

Föreläsning
Lecture.

Föreläsningssal
Lecture hall.

Godkänd
Pass.

Grundexamen
Undergraduate degree.

Grundkurs
Foundation course (20-point-level course).

Grundläggande högskoleutbildning
Undergraduate education.

Gästforskare
Visiting research fellow or professor.

Gästföreläsning
Guest lecture.

Halvfartsstudier
Part-time studies.

Handelshögskola
School of Economics.

Handledare
Tutor, supervisor.

Hedersdoktor
Honorary doctor.

Heltids- (helfarts-) studier
Full-time studies.

Högskola
Institution of higher education, university college.

Högskolan
Swedish higher education.

Högskoleadjunkt
Lecturer.

Högskoledirektör
Registrar, vice-president for administrative affairs.

Högskoleförordningen
The higher education ordinance.

The higher education act.

Högskolelektor
Senior lecturer, associate professor.

Högskoleprovet
Higher education aptitude test.

Högskolerektor
Rector, vice-chancellor.

Högskoleverket
National Agency for Higher Education (from 1 July 1995).

Kårhus
Student union building.

Kårobligatorium
Compulsory student union membership (the only compulsory student fee).

Kårval
Student union election.

Landstingskommunal högskoleutbildning
County administered higher education.

Lantbruksuniversitetet
University of agricultural science.

Licentiat
Diploma holder, licentiate.

Lärare
Lecturer, senior lecturer.

Obligatorisk kurs
Compulsory course.

Opponent, external examiner.

Poäng
(Credit) points.

Prefekt
Head of department.

Preparandkurs
Preparatory Swedish language course for visiting students.

Professur
Professorship, chair.

Promotion
Conferral of doctorates.

Prorektor

Vice-rector, pro-vice-chancellor, vice-president for academic affairs.

Påbyggnadskurs

Advanced course (60-point-level course).

Påbyggnadslinje

Advanced study programme.

Rest

Conditional pass.

Resttentamen

Re-examination.

Sektion

Sub-faculty.

Sektor

(Vocational) sector.

Sektorforsknings

Sectoral research.

Skriftlig tentamen

Written examination.

Studentbostad/-hem

Student residence, hostel, student flat.

Studentexpedition

Student Affairs Office.

Studentförsäkring

Student insurance.

Studentkår

Student union.

Studentlegitimation

Student ID card.

Studentläkarmottagning

Student health service office.

Studentpräst

University chaplain.

Studentregister (STUDOK, LADOK)

National student records database.

Studenttandläkarmottagning

Student dental service office.

Temaforskning

Thematic research (research based on an interdisciplinary theme).

Tentamen

Examination.

Tentamenperiod

Examination period.

Tentamensskrivning

Examination paper.

Tentator

Examiner.

Tentera

Take an examination.

Termin

Term, semester.

Uderkänd

Fail.

Universitetsförvaltning

University administration.

Universitets- och högskoleämbetet

National Board of Universities and Colleges (until 1992).

Utbildningsbevis

University certificate.

Utbildningslinje/-program

Study.

Utländsk lektor

Foreign lecturer.

Valfri kurs

Optional elective course.

Verket för högskoleservice (VHS)

National Agency for Higher Education (until 30 June 1995).

Verket för högskoleansökningar (VHS)

National Admissions Office to Higher Education (from 1 July 1995).

Väl godkänd

Pass with distinction.

Ämnesfördjupning

In-depth studies in a subject.

Ämnesföreläsare

Holder of a chair.

Ämnesråd
Departmental

student

committee.

I. Higher education system

The education system in Sweden was previously strongly centralised with national education policy determined by Parliament and implemented by the Ministry of Education and Science, with the assistance, until fairly recently, of the National Board of Education for schools and the National Board of Universities and Colleges for higher education (which were abolished in 1990 and 1992 respectively). These authorities had the responsibility for national planning of education in cooperation with representatives of the respective systems of education, which meant that education was the same all over the country. There were few private institutions. Education was open to all categories of people, free of charge and with favourable State study assistance. In 1977, a far-reaching reform of the higher education system took place with the creation of an integrated and uniform system for all types of tertiary education, broadened admission policies for higher education, widened geographic distribution of higher education and the creation of recurrent educational opportunities. New measures to strengthen links between higher education and research and to create closer ties between education and other areas of society were taken. In 1979, Sweden introduced a *numerus clausus* for higher education, which has made admission to most study programmes highly selective. In the 1990s education at all levels became more decentralised. A new reform of both upper-secondary school and higher education was launched in 1993, with for example, prolongation of vocational upper-secondary school to three years instead of two, fewer prescribed programmes in both secondary school and higher education, a new degree system in higher education, etc.

The 1977 reform introduced the *högskola*, the Swedish collective name for higher education, encompassing not only traditional university studies but also those at the various professional institutes and university colleges and a number of programmes previously taught in other parts of the higher education system. Most of the programmes included in the broadened definition of higher education are under the jurisdiction of the Ministry of Education and Science, others are under the Ministry of Agriculture and paramedical programmes are under the county councils. Research is integrated with and founded on close local cooperation with the undergraduate and postgraduate programmes of the university or institute concerned. This applies both to basic research at higher education institutions and to what is known as sectoral (i.e. externally funded) research.

In the 1993 reform of higher education, higher education institutions were given increased autonomy in the organisation of studies, admissions, use of resources and general organisation. The new degree system provides greater freedom for the students to plan their own studies. Diversity and competition between higher education institutions were introduced together with incentives for improved quality. First the Chancellor's office, later the Department of Evaluation and Quality Audit within the National Agency for Higher Education, obtained national responsibility for quality development and assessment. The National Agency for Higher Education also has the task of deciding about accreditation of academic degrees and the right of certain university colleges to establish professorships. Independent universities and university colleges are recognised by the government and may obtain the right to award degrees and/or receive State subsidies and for their students to receive study assistance. Diplomas from all kinds of higher education institutions recognised by the government have equal official value.

I.1. The institutions of higher education

There are at present six multi-faculty universities and one agricultural university in Sweden. These universities, together with the universities/institutes of technology and medicine, have a permanent allocation for research and postgraduate education. The more than 30 university colleges have research links with the universities through special government grants. In addition to the State-run institutions of higher education, there are the semi-private Stockholm School of Economics, Chalmers University of Technology and the University College of Jönköping. There are also local government-run colleges of health sciences for paramedical professions in all the six university regions (Stockholm, Uppsala, Linköping, Lund, Göteborg, Umeå), some of which, however, are merging with State-run institutions.

Thus, there is no distinction between university and non-university higher education in Sweden. This means that all higher education is conducted within the universities, institutes and university colleges mentioned above. However, there are long-term programmes designed to train scientifically oriented professionals and prepare for research in the field and short-term programmes designed to train professionals capable of performing or supervising tasks with a high scientific content. Also, there are single-subject courses enabling the students to design their own studies, mostly theoretically oriented and preparing for research in the major subject.

For example, engineering and technology programmes are offered at the universities/institutes of technology and at the technical faculties of some of the universities. The long-term programmes leading to *civilingenjörsexamen* are designed to train top-level independent professionals who are responsible for fundamental and applied research and the design and application of scientific research for the development of new technologies. The emphasis is on theoretical education and specialised training. The short-term programmes leading to *ingenjörsexamen/högskoleingenjörsexamen* are designed to train middle-level professionals to apply and further develop existing knowledge and technologies. The difference between these programmes lies in their structure and length. Even if they are organised by the same institute/university and have the same admission requirements, transfer of studies from the short-term to the long-term programme may be difficult and only limited recognition of credits will be given.

In the 1977 reform, study programmes were organised in five sectors: (i) technical; (ii) administrative, economic and social work; (iii) health; (iv) teacher training and (v) information, communication and arts. At the same time, postgraduate education was organised in scientific disciplines in accordance with the traditional faculties, which were also the basis for the 1993 organisational structure: pharmacy, philosophy, humanities, law, mathematics-natural sciences, medicine, dentistry, social sciences, engineering, technical-natural sciences, theology, agriculture, forestry and veterinary medicine. From 1993 onwards, undergraduate education has been organised partly in the same areas as the faculties mentioned, and partly in education areas like health sciences, education, design, fine arts, music, opera, theatre, media, dance and sports.

Most higher education takes place in the universities, institutes, university colleges or colleges of health sciences as has been mentioned above. Other State-run institutions of higher education are the military and police training colleges.

I.2. Number of students

The total number of undergraduate students in 1994/95 was 270000. There was a 17 % increase in the number of applicants to higher education in the autumn of 1994; around 210000 individuals applied for places in study programmes or single-subject courses. The number of applicants who have not previously studied at university, approximately 100000, has been constant over the past three years.

During 1994/95, the total number of students in foundation studies increased by 5.2 %, but the number of students enrolled in study programmes decreased from 44 to 41% of the total student body. The decline in the number of students choosing a study programme has been matched by an increase in the number of students taking advantage of the improved possibilities to choose a set of courses individually within an agreed framework, as intended by the 1993 reform.

Sweden has a large number of students studying abroad as 'free-movers' due to a liberal study assistance policy. In 1994/95, around 18000 studied abroad with study assistance, 14800 of whom did not take part in exchange programmes. Most of the students studied in Europe; next was North America, with the United States as the single most popular country (4694 students). Nearly two thirds of all students going abroad were women. The countries in Europe receiving most Swedish free-movers were France (2147 students), the UK, Spain, Germany, Switzerland and Italy. The most popular subjects studied abroad were humanities (4500 students), arts (more than 2000 students), economics and business administration (around 2000 students) and social sciences (1200 students). During 1994/95, 2302 Swedish students participated in the Erasmus programme. They spent an average of six months in another European country, primarily the UK, Germany, France, the Netherlands and Spain.

The most recent survey of foreign students studying in Sweden was made in 1993 and showed that about 5% of the student body, 11100 students, were foreign. This figure included immigrants and refugees, as well as visiting students. The number of visiting students was approximately 3900, but only 1500 visiting students spent a full year in Sweden. Most visiting students in Sweden studied social sciences, engineering, and humanities.

Higher education in Sweden is free of charge for all students, except for a small fee paid to the student union for social services etc. Swedish students and immigrants holding a permanent residence permit have the right to financial State support through loans and grants.

I.3. Organisation of studies

The academic year runs from the end of August to the beginning of June, a period of 40 weeks, with an average of 40 study hours per week for full-time studies, including lectures, etc., and independent studies. The 40 weeks include periods for preparing for examinations and for writing a thesis.

The language of instruction is usually Swedish, but there is an increasing number of courses in English, and sometimes also in other languages. However, much of the literature studied is in English. Very often, postgraduate education is conducted in English. There are also Master's degree programmes in English for foreign students.

Grades are generally given on a three-level scale: pass with distinction, pass and fail (*väl godkänd, godkänd, underkänd*). A number of programmes, however, use only a two-level scale: pass and fail. Others, such as law and engineering, use scales with several levels which are expressed as letters or numbers.

Studies are organised either in the form of *utbildningslinjer/-program* (study programmes) or *fristående kurser* (single-subject courses), both leading to a degree. Sweden has a system of credit points (*poäng*), where one semester of successful full-time studies with a workload of 40 hours per week is equivalent to 20 points, and one year to 40 points. A 'major' is normally 60 points and includes a thesis.

The forms of teaching used in Swedish higher education are lectures, seminars and laboratory and project work. The number of lessons per week varies between different kinds of education. Continuous assessment occurs throughout the course, normally through written examinations or seminars with papers. Students who fail their examinations may repeat them. Normally, students are required to obtain 20 credit points in a course before they can go on to the next level of 20 points in the same subject if they take single-subject courses. Such courses are studied one at a time and students choose courses each semester. Students are required to do an independent project or thesis of an analytical and problem-solving character at the end of their studies, as a final control of knowledge and ability achieved in the programme or subject. In general, there is no longer a final oral examination.

Before 1993, there were about 100 general study programmes (*allmänna utbildningslinjer*), established by Parliament and varying in length from 40 to 220 points. Until 1989, the curriculum for the general programmes was planned by the National Board of Universities and Colleges, with more detailed planning decided by local programme committees. In 1989, the whole responsibility for curriculum planning was decentralised to the higher education institutions. After 1993, it has also been these institutions which have decided which programmes and courses to offer and how they should be organised, as long as the degree requirements have been met.

In some fields there are programmes of varying length called *påbyggnadslinjer* which require a degree from previous studies.

For students who have regular jobs, single-subject courses are often offered in the evenings and on a part-time basis, or as distance education courses. Part-time studies usually take twice as long to complete as full-time studies. The single-subject courses have served one of the objectives of the 1977 reform: to make higher education a forum for recurrent education. They also offer a possibility for an individually chosen combination of studies as an alternative to the set study programmes. The students can decide whether they want to study for a full degree (e.g. *filosofie kandidatexamen*) or only take courses giving a certificate (*utbildningsbevis*).

After completion of a full programme, the student obtains a degree (*examen* — the English word ‘examination’ translates as *tentamen* in Swedish). The *examen* is named after the field of studies or the occupation involved, with an official translation into English. The principle for this translation has been, except for a period after 1993, that degrees based on 120 to 140 points are translated as Bachelor’s degrees and degrees based on 160 points or more as Master’s degrees. Degrees from shorter programmes than i.e. less than 120 points, were originally translated as ‘University Certificate’, and later as ‘University Diploma’ (see Section II.3 for the new translations). Students may obtain degree certificates in English on request. The degree certificates contain detailed information as to the contents of the degree. Certificates and degrees are issued/awarded by the university/institute/university college/college of health sciences and they need no other authorisation.

Teacher training

Swedish teacher training has changed in the last few years. Students used to be trained to teach all subjects in primary school, junior or intermediate level, or to teach a certain set combination of subjects in secondary school, lower or upper level. In 1988, a new teacher training programme was introduced, the *grundskollärarytbildning*, parts of which are common to all teachers in primary and lower secondary school. Teachers are trained for work in grades 1 to 7 (either Swedish and social sciences or mathematics and natural sciences) or grades 4 to 9 with specialisation in one of five different tracks:

1. Swedish and foreign languages,
2. social sciences,
3. natural sciences,
4. mathematics and natural sciences,
5. practical/artistic subject plus another subject.

The length of the education is 140 to 180 points. Teacher training for upper-secondary school (*gymnasielärarytbildning*, formerly *ämneslärarytlinjen*) is most often based on a certain combination of subjects within one and the same field, like mathematics/natural sciences, languages, humanities, etc., a total of 180 to 200/220 points. As from 1992, it has been possible, in principle, to combine any two subjects within a teacher training programme. These subjects are studied at the university up to a level giving eligibility for doctoral studies, 60 or 80 points. It is also possible to study the subjects at the university first and then to study a 40-point education course (*praktisk-pedagogisk utbildning*, including educational theory, teaching methods and teaching practice) at the teacher training institute/faculty. This is also possible for teachers in lower-secondary school, as an alternative to the *grundskollärarytbildning*.

Postgraduate education is at present offered at the universities of Stockholm, Uppsala, Linköping, Lund, Göteborg, Umeå, the University of Agricultural Sciences in Uppsala, the Royal Institute of Technology and the Karolinska Institute in Stockholm, the Stockholm School of Economics, Chalmers University of Technology, Luleå University of Technology and the University College of Jönköping. The principle in the Swedish system of doctoral studies is that the studies are systematically planned with courses and a doctoral dissertation (*doktorsavhandling*). It should be possible to complete the doctoral degree (*doktorsexamen*) after four years of full-time study, but the average time is around six years. Each student is entitled to individual supervision and the dissertation is defended in public with an opponent (external examiner), often from abroad. The dissertation may be written either as a monograph or as a so-called composite dissertation, consisting of a number of published research papers and a summary. It is published and distributed to all universities.

Apart from *doktorsexamen* (doctoral degree), there is a *licentiatexamen* (licentiate degree), which is a research degree with a shorter qualifying period: a minimum of two years consisting of courses and a shorter dissertation than the doctoral dissertation. The *licentiate* dissertation is defended in a seminar with an opponent. This degree was reintroduced in the 1980s starting with the technical faculty, which is the faculty having the most licentiates because of the demand from industry. There was an older kind of *licentiate* degree before 1972 with different criteria from the ones mentioned above.

Scientific research after the doctoral degree may lead to the title *docent*, but there are no longer special positions for *docent* holders in the higher education system.

II. Qualifications and diplomas

II.1. Qualifications for admission to higher education

Admission to undergraduate education

Higher education in Sweden has two kinds of eligibility requirements: general and specific requirements. The general requirements are common to all higher education and are as follows:

Completed secondary school (*fullständigt avgångsbetyg från gymnasieskola*) or adult secondary school (*komvux*) or community high school (*folkhögskola*) or 25 years of age plus four years of working experience or a minimum of 12 years at a foreign school.

knowledge of Swedish and English from the last year of upper-secondary school. Although teaching is in the Swedish language, a great deal of the literature is in English which is the reason why English is required. For visiting students, a one-year intensive course in Swedish is offered at most of the universities.

The specific requirements vary according to the field of higher education. The requirements for the study programmes of agriculture, engineering and architecture, natural sciences and the corresponding single-subject courses are mathematics, physics and chemistry; for medicine and dentistry biology is also required; for business administration and economics and other programmes in social sciences, including psychology, and the corresponding courses, the specific requirements are mathematics and civics. Some faculties demand a higher level of Swedish and English as well as additional subjects or experience. More detailed information on the admission requirements can be obtained from the National Agency for Higher Education (*Högskoleverket*) in Stockholm or from the higher education institutions.

The specific requirements are, in principle, the same even when the programmes differ in character, for example long-term and short-term engineering programmes have the same requirements.

Competition is usually keen due to the fact that there is a *numerus clausus* for all higher education. The selection of students is based on secondary school results and/or a special higher education aptitude test (*högskoleprovet*). Some faculties are also introducing other tests. The *högskoleprovet* (the higher education aptitude test) is a tool for selection as an alternative to school results. It is not compulsory and not an entrance test. The test checks the aptitude for university studies. Before 1991, this test was used only in the selection of those who did not have a secondary school background but had working life experience; now it can be taken by all students who apply to university. The test is given in Swedish and requires a thorough knowledge of the Swedish language and other abilities (including comprehension of written English). There is no pass level. The scale is from maximum 2.0 to 0.1, with 1.0 being the average result.

Admission to most study programmes is centralised via the National Admissions Office to Higher Education. This makes it possible to obtain information on admission requirements for all higher education in Sweden and to apply to several higher education institutions and to various programmes at the same time, with up to 12 alternatives on the application form. From 1995 onwards, however, admission to study programmes may have been to a certain extent decentralised and handled by the local admissions offices in the same way as admission to single-subject courses.

Admissions are done in several steps. The main application period for the autumn term ends in mid-April. Notifications of admission are sent out after mid-July. The admission of reserves takes place in August and is administered directly by the higher education departments in August-September. The application period for the spring term (starting in January) ends in mid-October.

The admission of visiting students follows another procedure with different deadlines.

II.2. Intermediate qualifications in higher education

In the Swedish higher education system there are generally no intermediate qualifications. However, it is possible to obtain a degree from *grundläggande* (basic) studies in certain study programmes within social sciences and law, i.e. the first stage of these programmes, corresponding to 80 points. This degree is called a *högskoleexamen*, translated as 'University Certificate in...' (business administration, law, public administration, etc.).

Other degrees awarded on completion of study programmes of this length are not to be regarded as intermediate qualifications but as final qualifications, even if there is a possibility to continue studying. This is also true for the new *högskoleexamen*, translated as ‘Diploma of Higher Education’ or ‘University Diploma in...’.

II.2.1. Academic recognition of intermediate qualifications for purposes of further study

The intermediate degrees mentioned above are given on completion of the first stage of the study programme concerned and therefore cause no problem for recognition for further studies. The degrees described as final degrees, however, may be partially or fully recognised for further studies, depending on their aim and character. For example, from the *högskoleingenjörsexamen* of 80 points (University Diploma in Engineering/lower level), around 40 points are recognised for further studies in the long-term engineering programme. On the other hand, studies for the *högskoleexamen* (80 points) in the new system may be fully recognised for a *kandidatexamen* (120 points) if one of the subjects is studied up to the 60 point level and includes a thesis of 10 points.

II.3. Final qualifications in higher education

II.3.1. Non-university qualifications

Sweden has no non-university sector, i.e. the education system is not a binary system.

II.3.2. Final university qualifications

In the system up to 1993, there were around 100 study programmes leading to degrees either of the kind *högskoleexamen på ...-linjen*, *fil. kand.-examen på ...-linjen* (= *filosofie kandidat*), *juris kandidatexamen*, *teologie kandidatexamen*, or they were named after the profession they led to, for example *arkitektexamen*, *bergsingenjörsexamen*, *civilingenjörsexamen på ...-linjen*, *brandingenjörsexamen*, *ingenjörsexamen på ...-linjen*, *sjökaptensexamen*, *agronomexamen*, *ekonomexamen*, *internationell ekonomexamen*, *psykologexamen*, *socionomexamen*, *apotekarexamen*, *sjuksköterskeexamen*, *laboratorieassistentexamen*, *läkarexamen*, *fritidspedagogexamen*, *ämneslärarexamen*, *idrottslärarexamen*, *lågstadie lärarexamen*, *mellanstadie lärarexamen*, *musiklärarexamen*, etc. The length of these degree programmes varied from 40 to 220 points.

The minimum requirements for, for example, a *filosofie kandidatexamen* (*fil. kand.*) or *högskoleexamen på xx-linjen* were 120 points with a major in one subject giving eligibility for doctoral studies in the same field. The length of study programmes leading to such a *högskoleexamen* or a *fil. kand.-examen* varied between 120 and 160 points or more. Programmes leading to *ekonomexamen* (business administration and economics) and *socionomexamen* (social work) were 140 points. Other degrees in engineering, agriculture, law, psychology, medicine, dentistry, etc., required 180 to 220 points.

The system of points (*poäng*) is based on one academic year being 40 weeks. Successful studies with a workload of 40 hours per week should yield 40 points per year. However, normally the students need more than four years to reach 160 points since studies at a higher level, including the thesis, tend to demand more time.

In the 1993 Swedish higher education reform, a new degree system was introduced where only the goals, the length and the right to award degrees are decided by the government. In this system there are two kinds of degrees: general and professional degrees.

General degrees

A new kind of *högskoleexamen* requiring 80 points (translated as ‘Diploma of Higher Education in...’ or ‘University Diploma in...’).

Kandidatexamen requiring 120 points and a thesis of 10 points in the major subject of 60 points (translated as ‘Bachelor’s degree’).

Magisterexamen requiring 160 points, one thesis of 20 points or two theses of 10 points and 80 points in the major subject (translated as ‘Master’s degree’).

The *kandidat-* and *magisterexamen* may also indicate the major subject or faculty, for example *ekonomie magisterexamen*.

All universities have the right to award the *magisterexamen*. The university colleges have to apply for this right, for each subject, and be determined as qualified to award this degree.

Professional degrees

These are awarded in the fields of engineering, medicine and dentistry, agriculture, teacher training, fine arts, etc., with mostly the same degrees as before (but during a period translated as ‘University diploma in...’. After 1994, there have been variations in the translation into English of the professional degrees; from 1996 onwards there has again been national coordination). Programmes leading to professional degrees vary in length from 40 to 220 points, depending on their character. There are around 50 professional degrees, approximately 30 of which are more than three years’ in length.

II.3.3. Academic recognition of final qualifications in higher education for purposes of further study

There are both general and specific requirements for admission to doctoral studies. Most long-term study programmes as well as the *kandidatexamen* give eligibility to doctoral studies in the field of specialisation. The general requirement is a higher education degree of at least 120 points, and the specific requirement is a major (60 or 80 points) in the subject concerned. In addition, the ability to pursue doctoral studies should be proved.

II.3.4. Postgraduate degrees

It is possible to obtain a *licentiat-* or *doktorsexamen* in all faculties with the faculty mentioned, for example *teknologie licentiatexamen*. It is also possible to obtain a *filosofie doktorsexamen* at faculties of engineering, not only in the philosophical faculties.

The degrees awarded since 1993 are:

Agronomie doktorsexamen — Doctor of Agriculture

Agronomie licentiatexamen — Licentiate in Agriculture

Ekonomie doktorsexamen — Doctor of Philosophy

Ekonomie licentiatexamen — Licentiate in Business Administration and Economics

Filosofie doktorsexamen — Doctor of Philosophy

Filosofie licentiatexamen — Licentiate in Philosophy

Juridisk doktorsexamen — Doctor of Law

Juris licentiatexamen — Licentiate in Law

Skoglig doktorsexamen — Doctor of Forestry

Skoglig licentiatexamen — Licentiate in Forestry

Teknisk doktorsexamen — Doctor of Philosophy

Teknisk licentiatexamen — Licentiate in Engineering

Teologie doktorsexamen — Doctor of Theology

Teologie licentiatexamen — Licentiate in Theology

Doktorsexamen i farmaceutisk vetenskap — Doctor of Pharmaceutical Medicine

Licentiatexamen i farmaceutisk vetenskap — Licentiate in Pharmaceutical Science

Doktorsexamen i medicinsk vetenskap — Doctor of Medical Science

Licentiatexamen i medicinsk vetenskap — Licentiate in Medical Science

Doktorsexamen i odontologi — Doctor of Odontology

Licentiatexamen i odontologi — Licentiate in Odontology

Doktorsexamen i veterinärmedicin — Doctor of Veterinary Medicine

Licentiatexamen i veterinärmedicin — Licentiate in Veterinary Medicine

III. Special types and forms of final qualifications in higher education

There are few special colleges in Sweden. The State colleges are *Försvarshögskolan* (Military College) and *Polishögskolan* (Police Training College). There are also independent theological institutes which have been given the right to award degrees and a few other independent schools, such as *Ericastiftelsen* for *psykoterapeutexamen* (psychotherapy) and *Stiftelsen Stora Sköndal* for *socionomexamen* (social work).

IV. Regulated professions under EU directives

Regulated professions in Sweden under the first general directive 89/48/EEC are at present:

advokat (lawyer);
brandingenjör (firefighter);
kiropraktor (chiropractor);
logoped (speech therapist);
organist i svenska kyrkan (organist in the Swedish Church);
optiker (optician);
präst (clergyman);
psykolog (psychologist);
psykoterapeut (psychotherapist);
auktoriserad revisor (authorised public accountant);
sjukgymnast (physiotherapist);
sjöingenjör (chief engineer);
sjökaptän (master mariner).

Regulated professions in Sweden under the second general directive 92/51/EEC are at present:

brandbefäl (fireman in command);
brandman (fireman);
fartygselektriker (marine electrician);
fastighetsmäklare (real estate agent);
flygtekniker (aerotechnical technician);
kantor (cantor);
maskinist A och B (ship's mechanic A and B);
maskintekniker A och B (engineering officer A and B);
receptarie (dispenser);
skeppare A och B (skipper A and B);
styrman A och B (ship's mate A and B);
skorstensfejarmästare (chimney technician);
tandhygienist (dental hygienist);
tandsköterska (dental nurse);
trafiklärare (driving instructor).

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**Diagram
education**

of

the

**Swedish
system**

Appendix I

Degrees in Sweden

In Sweden, the length of studies is not expressed as the number of years but as the number of credit points. The system of points (*poäng*) is based on one academic year being 40 weeks. Successful studies with a workload of 40 hours per week can yield 40 points per year.

The following is a list of degrees awarded by universities/institutes/university colleges after three years or more granting eligibility for admission to doctoral studies according to the law of 1977 (see below for the law of 1993).

1977-1993

Architecture and engineering degrees (180 points)

Arkitektexamen

Bergsingenjörsexamen

Civilingenjörsexamen på datateknik-/elektroteknik-/farkostteknik-/industriell arbetsmiljö-/industriell ekonomi-/industriell kemi-/kemiteknik-/

lantmäteri-/maskinteknik-/materialfysik-/materialteknik-/sambäddningsbyggnadsteknik-/teknisk fysik-/teknisk fysik och elektroteknik-/väg och vattenbyggnadslinjen

Science degrees (120, 140, 160 points)

Högskoleexamen/filosofie kandidatexamen på biolog-/datavetenskapliga/fysiker-/geovetar-/kemist-/matematiker-/matematisk-naturvetenskapliga/miljö- och hälsoskyddslinjen

Agricultural science degrees (180 to 200 points)

Agronomexamen

Hortonomexamen

Jägmästarexamen

Landskapsarkitektexamen

Social science degrees (140, 160, 180, 200 points)

Ekonomexamen

Förvaltningsexamen

Internationell ekonomexamen

Juris kandidatexamen

Högskoleexamen på linjen för personal- och arbetslivsfrågor

Psykologexamen

Högskoleexamen/filosofie kandidatexamen på samhällsvetarlinjen/systemvetenskapliga linjen

Socionomexamen

Medicine degrees (180 to 220 points)

Apotekarexamen (160)

Logopedexamen (120)

Läkarexamen

Tandläkarexamen

Veterinärexamen

Education degrees (140, 160, 180 points)

Grundskollärarexamen

Ämneslärarexamen på barnavårds-/hushålls-/idrotts-/slöjd-/textillärlinjen

Ämneslärarexamen på historisk-samhällsvetenskaplig/matematisk-naturvetenskaplig/språkvetenskaplig ämneslärlinje

(Other alternatives have existed earlier which have given eligibility for admission to doctoral studies.)

Ann. and Exam. Degree (120, 140, 160, 170, 180 points)

Högskoleexamen på bebyggelseantikvariska linjen

Högskoleexamen på dans-/design-/fotograf-/konservators-/konsthantverkslinjen

Högskoleexamen/filosofie kandidatexamen på kulturvetarlinjen

Högskoleexamen på kyrkomusikerlinjen

Högskoleexamen på linjen för bild och miljö/fri konst/grafisk design och illustration/industri-design/inredningsarkitektur/textil konst och formgivning/tredimensionell gestaltning/film/TV, radio och teater

Högskoleexamen på mimlinjen/musikdramatiska linjen/musikerlinjen/

reklam och kommunikationslinjen

Högskoleexamen/teologie kandidatexamen på religionsvetenskapliga linjen

Högskoleexamen på skådespelarlinjen

From 1993 onwards

General degrees

Kandidatexamen (often with indication of faculty), 120 points

Magisterexamen (often with indication of faculty), 160 points

Professional degrees (120 to 220 points)

Agronomexamen

Apotekareexamen (now 200 points)

Arbsterapeutexamen

Arkitektexamen

Barn- och ungdomspedagogisk examen

Bildlärarexamen

Brandingenjörsexamen

Civilingenjörsexamen

Grundskollärarexamen

Gymnasielärarexamen

Hortonomexamen

Hushållslärarexamen

Idrottslärarexamen

Juris kandidatexamen

Jägmästarexamen

Konstnärlig högskoleexamen i dans/konst och design/musik/scen och medier

Landskapsarkitektexamen

Logopedexamen

Läkarexamen

Musiklärarexamen

Optikerexamen

Organistexamen

Psykologexamen

Sjukgymnastexamen

Sjuksköterskeexamen

Slöjdlärarexamen

Socionomexamen

Studie- och yrkesvägledarexamen

Tandläkarexamen

Teologie kandidatexamen

Veterinärexamen

In addition to these degrees of at least 120 points, there are degrees from short-term education, both the new general degree, *Högskoleexamen* (80 points) and the following professional degrees:

1977-93

Högskoleexamen på...-linjen (60, 80, 100 points)
... *ingenjörsexamen* or *Ingenjörsexamen på...linjen* (80 to 120 points)
... *teknikerexamen* (80 points)
Högskoleexamen på...-industrilinen (60 points)
Styrmansexamen (80 points)
Lantmästar-, skogsmästar-, trädgårdsteknikerexamen (40 points)
Sjuksköterskeexamen, receptarieexamen (80 points)
Laboratorieassistentexamen (90 points)

From 1996 onwards

Professional degrees of less than 120 points:

Ingenjörsexamen (80, 120 points), from 1996 onwards *Högskoleingenjörsexamen*
Maskinteknikerexamen (80 points)
Maskinteknikerexamen (80 points) plus *Sjöingenjörsexamen* (40 points) = 120 points
Receptarieexamen (80 points)
Social omsorgsexamen (100 points)
Styrmansexamen (80 points)
Styrmansexamen (80 points) plus *Sjökaptensexamen* (40 points) = 120 points
Tandhygienistexamen (80 points)
Yrkesteknisk examen (60 points)
Landskapsingenjörsexamen (80 points)
Lantmästarexamen (80 points)
Skogsteknikerexamen (80 points)
Skogsteknikerexamen (80 points) plus *Skogsmästarexamen* (40 points) = 120 points
Trädgårdsingenjörsexamen (80 points)

Apart from the degrees listed above, there are professional degrees at a higher undergraduate level:

Barnmorskeexamen
Flyglärareexamen
Folkhögskollärareexamen
Psykoterapeutexamen
Specialpedagogexamen

Appendix II

The following is an example of how a study programme leading to a professional degree in the 1977 system and to a general degree in the 1993 system has changed. Please note that there are variations between higher education institutions.

Professional degree before 1993

Ekonomexamen (140 points)

- *Basblock 80 poäng* (basic courses, 80 points):
 - (1) *företagsekonomi 35 poäng* (business administration, 35 points)
 - (2) *nationalekonomi 20 poäng* (economics, 20 points)
 - (3) *handelsrätt 10 poäng* (commercial law, 10 points)
 - (4) *statistik, ADB 15 poäng* (statistics and computer studies, 15 points);
- *företagsekonomi* (business administration) or *nationalekonomi* (economics) *60 poäng* (60 points).

Specific requirements for admission

Mathematics third year and civics second year from theoretical branches of upper secondary school

General degree after 1993

Ekonomie kandidatexamen (120 points)

- *Basblock 80 poäng* (basic courses, 80 points):
 - (1) *företagsekonomi 20 poäng* (business administration, 20 points)
 - (2) *nationalekonomi 20 poäng* (economics, 20 points)
 - (3) plus another 20 points in either business administration or economics
 - (4) plus (partly) free choice, 20 points (e.g. statistics, commercial law, computer studies);
- (partly) free choice 20 points;
- advanced course in the chosen subject under (3) above (business administration or economics) up to 60 points, including thesis, 10 points.

Specific requirements for admission

Mathematics and civics from theoretical branches of upper-secondary school

Ekonomie magisterexamen (160 points)

- (partly) free choice, 20 points;
- in-depth course, 20 points, in the chosen subject under (3) above (business administration or economics) up to 80 points, either as a reading course, 10 points, plus thesis, 10 points, or as a thesis of 20 points.

An example of a professional degree in engineering after 1993

Civilingenjörsexamen (180 points)

Electrical engineering

- Compulsory courses around 120 points: mathematics, physics, applied mechanics, computer science and engineering, electromagnetic theory, electrical measurements, industrial electrical engineering and automation;
- Elective courses around 40 points: specialisation in either electronics or telecommunications, or individual profile;
- Thesis of up to 20 points in one of the approved subjects within electrical engineering, physics or mathematics;

- Around four months of practical experience outside of the academic year (no credit points are granted).

Specific requirements for admission

Mathematics, physics and chemistry third year from natural sciences or technical branch of upper secondary school

United Kingdom

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Abbreviations

A level	Advanced level (of GCE)
AS	Advanced supplementary level (of GCE)
BA	Bachelor of Arts
BSc	Bachelor of Science
BTEC	Business and Technology Education Council
CAP	Continuous application procedure
CNAA	Council for National Academic Awards
CSE	Certificate of secondary education
CSYS	Certificate of sixth year studies
DFEE	Department for Education and Employment
EB	European baccalaureate
GCE	General certificate of education
GCSE	General certificate of secondary education
HMI	Her Majesty's Inspector
HND or C	Higher national diploma or certificate
IB	International baccalaureate
LEA	Local education authority
NCVQ	National Council for Vocational Qualifications
NEAB	Northern Examinations and Assessment Board
ND or C	National diploma or certificate
OU	Open University
SCE	Scottish certificate of education

Glossary

Accreditation

Authorisation given by an official body (e.g. BTEC) to teach courses of an approved standard; to be self-monitoring and self-validating and, in general, to be fully responsible for national awards.

A level

See 'general certificate of education — advanced Level'.

Certificate

Proof that one has successfully completed a course of study or training.

Clearing house

Central office (e.g. Universities and Colleges Admission Service — UCAS) to which students send their multiple applications for places in higher education institutions and which liaises with admissions officers and departments.

Clearing stage

Final period of placement of students at universities and colleges.

Degree

Main, nationally recognised, higher education award for prescribed course of study lasting at least three full-time years after matriculation.

Degree-level course

Course which is not part of a degree but is generally recognised as equivalent.

Diploma
Implies a higher or more intensive level of study than that undertaken for a certificate. May include certificates, may refer to full-time study as opposed to part-time. May refer to secondary education or postgraduate work. May be national or institution-specific.

Dissertation

Long essay or mini thesis requiring survey of the literature and a research exercise, undertaken in fulfilment (partial) of requirements for a Master degree.

First degree

Bachelor degree awarded after three or four years (full-time) of successful coursework after matriculation in a higher education institution.

General certificate of education advanced level

Final secondary school examinations set by national boards, taken at 18, usually in three related subjects, to obtain access to higher studies and professional training.

Graduate

One who has obtained a first degree.

Higher degree

Master's or doctorate degree awarded to graduates after completing study or research requirements. A Master's degree requires a minimum of one postgraduate year, while a doctorate requires three to four years.

Institution of higher education

Institution offering post-secondary-level courses to qualified students for a higher diploma or degree, often in teacher education.

Methodology

Scheme of study or research, practical applications.

Undergraduate

One who has matriculated but not yet obtained a first degree.

I. Higher education system

Altogether about 600 institutions in Great Britain and Northern Ireland offer higher education courses, that is courses leading to qualifications of a standard higher than the general certificate of education advanced level and its equivalents, but over 90% of higher education is provided in the 88 publicly funded university institutions (including the Open University), the one private university, and the 80 other larger colleges.

With the exception of the University of Buckingham, all the institutions of higher education receive their principal funding from central government via the Department for Education and Employment (DFEE). Those funded by central government include the universities, established by royal charter and by statute, and a range of grant-aided institutions, including the voluntary colleges (mainly religious foundations) in England and Wales and the colleges of education in Scotland.

Higher Education Funding Council For England (HEFCE)

The HEFCE was established in May 1992 under the further and higher education act 1992. Its principal task is to distribute funds made available by the government for the provision of education and the undertaking of research by higher education institutions in England.

The HEFCE works closely with the higher education funding councils which were established at the same time for Scotland (SHEFC) and Wales (HEFCW) and the Department of Education for Northern Ireland (DENI)

Business and Technology Education Council (BTEC)

BTEC approves vocational programmes, at sub-degree level, run by colleges and schools, and awards qualifications, which are recognised by employers, educationalists and professional bodies throughout the United Kingdom.

National Council for Vocational Qualifications (NCVQ)

The NCVQ is not concerned with examining or validating, but only with the accreditation of vocational qualifications for entry to and progress within higher education and higher level professional qualifications.

It is perhaps worth noting how British universities enjoy an exceptional degree of freedom of action from the State. In addition to determining the curricula and the manner in which they will be assessed (in collaboration with the professional bodies in medicine, law, engineering, etc., from whom they seek exemptions), universities appoint staff and determine conditions of service, select students within the constraints imposed on numbers, choose their own programmes of research and allocate income as they see fit to teaching or research or other areas of expenditure (except capital expenditure).

The face of the higher education system in the UK has undergone a radical change with the implementation of the further and higher education act 1992. This act abolished the binary line between polytechnics and universities. It gave the polytechnic institutions the right to award their own degrees and, with the consent of the Privy Council (a formal body which advises the Queen), to call themselves universities. All the polytechnics and a small number of colleges of higher education have grasped this opportunity to become universities and changed their names.

The 1992 act also saw the dissolution of the Council for National Academic Awards (CNAA), the role of which was to validate awards in the non-university sector. The Open University has since taken over this role for the institutes of higher education which do not, as yet, have degree-awarding status themselves. In addition to the Open University, some universities, for example Surrey and Brunel, are also performing this function.

I.1. The institutions of higher education

Higher education is offered at universities, colleges and institutes of higher education.

Higher education institutions exist to promote science and the arts through study, scholarship and research, teaching and training in communities of like-minded people.

While these institutions have much in common, universities are more academic and research-oriented and colleges are more vocational, with colleges of music and fine arts almost entirely devoted to artistic practice and theory.

Training for the Churches is provided in theological colleges and seminaries many of which are linked to universities: students may take a degree as part of their course. General entry to the armed services and police force is non-graduate via special colleges which are not part of the higher education system. There is provision for graduate entry to all services.

Colleges and institutes of higher education

Courses leading to first degrees, especially in education, are also available at institutes and colleges of higher education.

The Open University (OU)

The Open University provides courses for those who want to improve their academic credentials, update their professional knowledge or improve their general culture by part-time study at home, using a variety of multimedia distance learning resources. There are no formal entry requirements. Candidates are accepted from 18 years of age onwards.

1.2. Number of students

There are now over 934000 full-time students in higher education of which 92900 are from overseas.

At the end of the 1980s, the British Government committed itself to increasing the participation rate of school leavers in higher education to one in three and projected a rise in (full-time equivalent) student numbers by 50% to 1170000 by the year 2000. By the academic year 1992/93, participation rates had already improved to one in three and a half, which was far in advance of predicted figures.

I.3. Organisation of course of study

In almost all higher education institutions, teaching is concentrated into an academic year of three terms of 10 weeks each, running from early October to late June with three-or-four week breaks at Christmas and Easter and a long summer vacation. However, a few institutions have moved to a semester pattern and adopted a two-semester year. It is usual for students in certain subject areas to spend time away from the classroom: medical students in hospital, engineers and administrators on industrial and commercial placements and language students (and others) on a year abroad. These increase the length of the course of study.

Teaching is traditional as well as innovative. Lecturing remains the time-honoured way of delivering knowledge, though it is now more likely to be supported by an overhead projector, video recorder or computer, rather than the blackboard. The emphasis, however, is on small group, informal teaching and student-centred project work and tutorials so that students are actively and individually involved with their teachers and fellow students. Attendance at lectures is not compulsory. Students are also allocated free time for private study, generally preceding examinations.

Modular degrees give students freedom to structure their degrees from the optional modules provided; such flexibility is characteristic of newer degree studies.

A period of general study, often the first or foundation year, may be followed by increasing specialisation. In order to continue, students must pass the required subject examinations. These are normally repeated in cases of failure.

The following courses can be distinguished:

	<i>Duration</i>	
Certificate courses:	Part-time:	two or three years

Diploma courses: Full-time:	two or three years
Degree courses: undergraduate	Full-time: three to six years
postgraduate	Full-time: one to four years

In general the minimum length of an undergraduate course is three or four years. Some courses are longer; for example, undergraduate degree courses in medicine are of 5 or 6 years duration.

Examinations are normally held at the end of each year with a decision about specialisation being taken after the first. The final examination and the students continuous assessment record are decisive.

Assessment of the progress of the students is likely to be continuous with a key examination at the end of their first or second year as well as at the end of the course. A good student will be awarded a classified honours degree.

Validation

Universities are not only responsible for setting their own standards, but also for awarding their own degrees. For historical reasons, some of them also validate (i.e. guarantee the quality of) first degree courses in some other institutions. As mentioned before, however, validation of non-university higher education is mainly by the OU and some of the other universities.

For the majority of students, courses run for three years and lead to the degree of Bachelor of Arts or of Science (BA or BSc); for some, the course will be much longer and the degree different (see Section II.3 for a detailed description).

A high proportion of students finish the course successfully and on time. This is partly due to the very competitive entry, the small size of classes, individual attention given to students through the tutorial system and the high degree of specialisation at A level.

II. Qualifications and diplomas

The general entry requirements are the same for a degree course at a British university or college of higher education. The course requirements may, however, be different, making it more difficult for a student to obtain a university place in a number of disciplines. No qualification or diploma gives an automatic right to a place anywhere in higher education. Institutions and departments reserve the right to refuse a place to even the most highly qualified student. Admission to higher education is by formal, multiple application through a centralised clearing system. There are a few exceptions to this (that is, institutions requiring direct application).

II.1. Qualifications for admission to higher education

There are no specific entry requirements for non-university higher education as opposed to university higher education. In both cases, the general requirement of three GCSEs and two A levels (advanced level) generally applies (see below for a detailed description). This general requirement marks the boundary between non-higher and higher education.

A distinction is, in fact, made between the academic requirements for entering universities and institutes and colleges of higher education, but it is a qualitative, not a quantitative, one and it is made in the course requirements.

Admission to a higher education course is therefore determined by two factors:

- the general requirement;
- the course requirement.

The general requirement

The general requirement for admission to higher education, whether university, institute or college of higher education, or to any other institution in which degree courses or higher national diploma courses are given, is by any of the following qualifications:

- the general certificate of education (GCE) and the general certificate of secondary education (GCSE);
- the Scottish certificate of education (SCE);
- the BTEC national diploma or certificate;
- the international baccalaureate;
- the European baccalaureate;
- an acceptable overseas qualification;
- maturity (age 21 plus) and relevant experience (but each application is considered individually and on its own merit).

The course requirement

It is not enough for the candidates to offer evidence of a good general education. They must also show that they are adequately prepared to undertake high level study in the field or fields they have selected. This is called the *course requirement*.

The most sought after institutions and departments set high course requirements (for medical places in universities, for example) and also stipulate particular grades or marks in the examinations taken. The more modest, less sought after, departments in institutes and colleges of higher education, as well as in the universities, settle for the minimum general requirements, or something less in the case of mature students.

The general certificate of education (GCE) and the general certificate of secondary education (GCSE)

Secondary schools in England, Wales and Northern Ireland offer courses leading to the general certificate of secondary education. It represents 11 years of general education: six years of primary education, and five years of secondary, and is generally taken at age 16.

The general certificate of secondary education was introduced in 1988, replacing the GCE O level and the certificate of secondary education (CSE) examinations, and now serves as the principal examination for secondary school pupils at 16 plus in England, Wales and Northern Ireland.

The table below shows how the levels of the GCSE examination equate with its two predecessors.

GCSE	O level	CSE
A	A	—
B	B	—
C	C	1
D	D	2
E	—	3
F	—	4
G	—	5

The GCSE is administered by five autonomous GCSE examination groups, four in England and one in Wales. In Northern Ireland, the GCSE is administered by Niccea, the Northern Ireland Council for the Curriculum, Examinations and Assessment. A subject passed at a grade below C is not counted towards university admission.

Admission to higher education, however, requires not only subjects studied at GCSE level, but also subjects studied and passed at general certificate of education (GCE) advanced level (A level).

A level examinations are normally taken two years after GCSE in the sixth form of secondary schools, sixth form tertiary colleges or in colleges of further education.

The GCE A levels represent 13 years of education: six years of primary education, five years of general and two years of specialised secondary education.

Children usually begin courses leading to the GCSE examinations in the fourth year of secondary school (year 10). They occasionally take two or more preliminary examinations (often mathematics and French) at the end of fourth year, but most subject examinations are taken at the end of the fifth year (year 11). Although only a small number of GCSE passes is required for the general requirement for entrance to higher education, students usually take more as part of their general education (between 5 and 10 subjects are taken).

Traditionally, students followed courses in two or three related subjects in the sixth form (years 12 and 13), for example the sciences or the humanities. However, with the introduction of less conventional higher education courses, less traditional combinations of A levels are now more common. There are five official pass grades, A to E, and a candidate not achieving the required standard may obtain an N (narrow failure or near miss) grade.

AS (advanced supplementary) levels were introduced in 1987 and exams taken in 1989 with the purpose of broadening sixth form studies beyond the traditional clusters of science or arts subjects. AS levels are designed to occupy half the teaching and study time of an A level, but are set to the same standard and usually take two years to complete. Like A levels they are graded A to E, with grade standards related to the corresponding A level grade. The syllabuses take account of the shorter teaching and study time available, so that while the quantity of work is less, the quality is the same as required for the equivalent A level grade. Two AS levels can therefore be regarded as the equivalent of one A level and are accepted in place of one A level for university entrance.

International baccalaureate (IB)

Courses leading to the IB are offered in an increasing number of British schools, especially those boarding schools that cater for children with overseas connections. The diploma is given at the end of a two-year period of study, paralleling the A level years, to students who have met its wide-ranging requirements in six study fields. Students should attain a minimum of 24 points to obtain the IB and satisfy university matriculation requirements.

European baccalaureate (EB)

Courses leading to the EB are offered in the nine European Schools — one of which is situated in Culham in Oxford — primarily for the children of staff employed in the Community institutions. The diploma is given at the end of the seventh year of study, in two or more languages, to those receiving 60% or more overall, in continuous internal assessment and examinations of the wide range of subjects taken in the seventh year.

All higher education institutions accept the international and European baccalaureate for the purposes of the general entrance requirement. The student's performance and choice of subjects will determine whether she/he meets the course requirement of a specific institution or department.

The BTEC national diploma or certificate (ND or NC)

The BTEC national diploma or certificate is considered by higher education institutions as fulfilling the general (and sometimes the course) requirement for admission under certain conditions which vary from institution to institution. These are that passes in three of the final examinations should be high (at least 60%) and that there should be evidence of a good education including English language. Appropriate HND or C courses are required to meet the course requirement of some departments.

Courses leading to the diplomas and certificates of the Business and Technology Education Council are offered in public sector institutions. Assessment is local and continuous and is moderated by BTEC.

Scottish certificate of education (SCE)

The examination system in Scotland is different from that in the rest of the United Kingdom. In Scotland pupils take the Scottish certificate of education at standard grade and higher grade which are awarded by the Scottish Examination Board.

The standard grade, which replaced the ordinary grade in 1986, is taken at 16 plus. The examination is similar to the GCSE and has three levels of study: foundation, general and credit. The standard grade awards are based on a seven-point scale, grade 1 being the highest and grade 7 the lowest.

The higher grade examination is a one-year course covering a broad range of subjects and is taken at 17 years of age, after the standard grade. Students take four to five subjects. The higher grade examination is often referred to as 'highers'. In general terms, four highers are regarded as equivalent to two A levels. Passes in highers are required for entry to higher education and professional training.

The certificate of sixth year studies (CSYS) may be taken by a pupil who is in his/her sixth year of secondary school (age 18 plus) and who already has a higher grade pass in the subject(s) being studied for the CSYS. The examination emphasises the need for individual study and most subjects require a dissertation project and report. In the CSYS there are no pass or fail grades, just five grades from A (highest) to E (lowest). Candidates normally take up to three CSYS subjects.

General admission to higher education

GCE/GCSE	Two A levels and three GCSE at grade C minimum Three A levels and one GCSE at grade C
SCE	Three subjects at higher, two/three at standard (grade 3 minimum) Four subjects at higher, two at standard (grade 3 minimum) Two subjects at CSYS, three at standard (grade 3 minimum)
BTEC	60% in three ND/NC final-year subjects
IB	Diploma
EB	Diploma

Students formally apply through the following clearing houses according to the type of institution they hope to attend:

- Universities and Colleges Admissions Service (UCAS);
- Art and Design Admissions Registry (ADAR).

The clearing houses forward the applications to the institutions which make unconditional, or conditional, offers or refuse the application.

Not all higher education institutions use this system. Students have to apply directly to the Royal College of Art, and the OU. Students applying to Oxford and Cambridge Universities apply directly to them, as well as via UCAS.

Institutions may make conditional offers to students expressed as grades or points. For example, three A levels with three A grades may be necessary for entry to Japanese studies at Oxford, while three A levels with three B grades may be required for history at Birmingham.

These may also be expressed in a points system where

at A level:	and at AS level:
A = 10	A = 5
B = 8	B = 4
C = 6	C = 3
D = 4	D = 2
E = 2	E = 1

A student with three As therefore has 30 points, while a student with three Bs has 24.

An institution may also invite the applicant for an interview before deciding whether or not to admit him or her. A good interview can tip the scales in favour of an applicant with a borderline score.

Students who do not meet all requirements

All higher education institutions are willing to consider applications from mature candidates who do not meet the conventional academic requirements. Candidates should be at least 21 and be able to show evidence of academic ability or special capacity or experience in their proposed course of study.

A student who does not immediately qualify to enter a degree course may be admitted to a preliminary year in some institutions.

For overseas students there are special bridging courses which are normally of one year's duration. These make up for the differences between prior education obtained in another country and the prior education required in the UK.

At some universities it is possible to attend lectures and seminars for a year as an auditor or occasional student. These studies do not lead to a diploma or certificate.

II.1.1. Qualifications for admission to non-university higher education

Admission to higher education is granted by the certificates or diplomas already mentioned in Section II.1. In addition to general requirements, there are specific course requirements.

General requirement

The basic entrance requirement for colleges and institutes of higher education is five passes including two at A level (for degree entry) or four passes, including one at A level (for HND course entry).

Course requirements

The requirements for the particular course of study are an important aspect of the admission system. These may vary from one faculty or department to another.

Colleges and institutes sometimes offer places to candidates who have relatively low grades on two A levels or even less.

In the final clearing stages, when students are still looking for places and unfilled courses are looking for applicants, an applicant with modest qualifications may find a place in an institution whose earlier conditional offer he or she had failed to meet.

II.1.2. Qualifications for admission to university

As mentioned in Section II.1, there are a number of certificates or diplomas that grant general admission to higher education. In addition to the general requirements, there are specific course requirements.

A student who fails to reach the general requirement but who has one A level in addition to the required number of GCSEs may enroll in a BTEC higher national diploma course at an institution that also offers a degree in the subject. Eventually such a student may be able to transfer to the degree course.

General requirement

The general requirement consists of four to five subjects at GCSE (minimal grade is C, or the equivalent grade at O level or CSE) and A level of which at least two must be at A level.

Course requirement

Most universities stipulate the three A level passes at specific grade levels (between A and E) which they are prepared to accept, but some make offers of places on the basis of two (good) A levels.

The Open University sets no formal entry requirement.

II.2. Intermediate qualifications in higher education

II.2.1 Intermediate qualifications in non-university higher education

There are no formal intermediate qualifications in university higher education in the UK, but two cases are worth noting. An approximation in the British system to the intermediate qualifications of some continental countries is the BTEC higher national diploma or certificate. This is not conceived of as such, but in practice a student may complete his/her HND alongside and sharing courses with students in the first year of a science/technology degree. If the student's results are sufficiently good, she/he may continue with the course and complete the degree. Conversely, a poor student enrolled for the degree may be able to obtain an HND before leaving the course prematurely.

In education it is also possible to do a two-year diploma in higher education (DipHE). Entry qualifications are usually a little more flexible than those for a degree course. The diploma is complete in itself or may be used as the foundation for further study for either a degree or a professional qualification.

II.2.2 Academic recognition of intermediate qualifications for purposes of further study

A good HND may gain exemption from the first year of the degree in some science subjects and engineering.

In the early stages of a university degree, a student may change course, without losing academic credit. This becomes increasingly difficult after the first year. The holder of a DipHE could also obtain a degree after one or two years of further study.

II.3. Final qualifications in higher education

II.3.1. Final qualifications in non-university higher education

Non-university awards can be conferred by:
the BTEC (diplomas and certificates);
the institutions that give the course.

The established levels of sub-degree awards are:

national certificate (NC)
higher national certificate (HNC),
national diploma (ND),
higher national diploma (HND).

Certificate and higher certificate

Courses of study for a certificate are part-time and last two or three years, depending on the field. They must include a minimum of 10 units. Such certificate programmes were originally intended for people already working in the field and thus gaining their practical experience on the job.

Diploma and higher diploma

Courses of study for the diploma are full-time and last two years, although there are also three-year varieties that include one year of work-study. They must cover a minimum of 16 units.

The programmes for BTEC certificates are concentrated mainly in the economic-administrative and technical sectors, for example business studies, computer studies, management studies, marketing, engineering, and hotel, catering and institutional management. There are also many different diplomas in the fields of art and design, and the physical sciences. BTEC courses are developed locally on the basis of national criteria laid down by BTEC. Students are assessed locally through continuous assessment moderated by BTEC.

II.3.2. Final university qualifications

These are awarded when the student successfully completes the examinations, projects or dissertations prescribed by the subject regulations. The examinations are administered by the institution itself.

They may be set and marked by the staff who teach the courses. An external (visiting) examiner moderates all degree examinations. Courses are increasingly expressed in terms of units which permit the student to accumulate credits.

The student's study load varies from a low number of contact hours per week in an arts subject, to allow time for independent, self-directed private study, to a very high number in medicine or engineering where there is much observation and practice.

The student is sometimes required to undertake a research paper or project, as part of his/her work for a first degree. This is not to be confused with the more demanding dissertation (for the Master's degree) and the thesis (for the doctorate).

No distinction is made in the UK between State and institutional degrees as is the case elsewhere. Universities are empowered by royal charter or act of Parliament to award degrees. Institutes and colleges of higher education award their first degrees in conjunction with the OU or a local university.

The degrees of the sole British private university, the University of Buckingham, are sanctioned by the presence of external examiners drawn from public universities, as is the case in the public universities.

A distinction is made between academic and professional qualifications. The 250 statutory councils, institutes and other professional bodies exercise varying degrees of influence over the content of degree courses leading to the professions and to the qualifying of individuals to act in certain professional capacities, such as doctors, dentists, lawyers, engineers, architects, pharmacists and so on. In this respect, they act as the State does in some other European countries.

In a number of fields, university studies give not only an academic degree but also a professional qualification, for example medical, dental, and veterinary sciences. In others, the professional qualification or specialisation is added on afterwards (e.g. law and (secondary) education).

Degree courses can be grouped in a number of ways. The *Official guide 1994* places them in the following categories:

- agriculture and biological sciences;
- physical and mathematical sciences;
- medical, dental and veterinary sciences and allied studies;
- engineering and technology;
- arts and education;
- languages and literature;
- business, management and social sciences;
- professional and vocational subjects.

The student can work for either an honours degree or an ordinary degree. The honours degree is a more specialised degree requiring a higher level of performance and more time from the student. Many degree courses are categorised as honours with the student being awarded a pass or ordinary degree when he or she fails to make honours standard. In the case of illness or absence, distinguished course work may, in exceptional cases, be rewarded with an aegrotat degree.

An increasing number of degrees now follow a modular structure. Most degrees are single, joint or combined honours, which reflects their specialised or interdisciplinary focus, and graded first class, second class (division 1 or 2), third class or pass to indicate the level of the student's performance. (A good honours degree — i.e. first or second class — is often required for entry to higher degree study or to the professions.)

University education, which can be divided into undergraduate and postgraduate studies, is concluded with the following degrees:

Undergraduate programmes:	the Bachelor's degree		
	the	Master's	degree (Scotland)

Postgraduate programmes: the postgraduate diploma or certificate
 the Master's degree
 the doctorate

Bachelor's degrees

Undergraduate degree courses lead to the award of a Bachelor's degree, BA or BSc, with or without honours, or to an MA in some Scottish universities.

The degree and the field in which it was earned can be indicated by an abbreviation. Traditionally, there is a division between arts and science, abbreviated to A or Sc following the B for Bachelor or the M for Master, i.e. BA, BSc, MA, MSc. 'Science' applies to technical fields and the physical sciences; 'arts' includes all other fields. The number of abbreviations in use is growing, however. For the Bachelor degree alone, there are now abbreviations for some 70 fields.

To make things difficult, there are some exceptions to this system. There are universities, for example, that award only the BA, even in technical fields; and there are fields in which the Bachelor's degree is a postgraduate degree, for example the BLitt.

The undergraduate courses last three or four years.

Academic achievement is measured not only through examinations, but also through the student's continuous performance in tutorials, work groups and practicals, and in essays and projects. Some universities have a system of examining students only after the first and third years; others require examinations at the end of every year. (See examples provided in Appendix IV to illustrate the variety in Bachelor's degrees.)

Master's degrees

The Master's follows successful completion of a good first degree, i.e. first or second class honours. As with the Bachelor's degree, there is a traditional division between arts and science. As mentioned before, the MA (Master of Arts) is an undergraduate degree in three of the four older Scottish universities.

Entry requirements range from a first degree in the subject, normally with honours, to a degree plus postgraduate diploma, the latter being seen as a first step towards the Master's degree. The Master's degree itself, especially the MSc obtained by research or MPhil, is frequently viewed as the first stage of the PhD.

For many postgraduate courses, it is not necessary to have a Bachelor's degree in the same field.

The MA is a one- or two-year degree, full-time or part-time, with continuous assessment and examinations at the end.

It can be a taught or a research degree and is generally a combination of both. It is a more specialised degree than the BA/BSc, in part because of the dissertation. This requires an original inquiry to be undertaken according to an established methodology and after due evaluation of the literature in the field.

In some fields, for example engineering, it is possible for a student to go straight to an MEng rather than to a BEng if he/she has given evidence of high capacity and has undertaken additional work and an extra year.

A Master's degree is awarded to graduates of Oxford and Cambridge after a set period of time following graduation. They need only pay a fee; no further study or examinations are required.

A list of Master's degrees follows in Appendix V and Appendix VII.

Doctorates

The Doctor of Philosophy degree (PhD or DPhil) is a research degree with few, if any, taught components.

The titles Master of Philosophy (MPhil) and Doctor of Philosophy (PhD or DPhil) indicate that the degree was earned mainly through research, and not following instruction.

Doctors have the right to use the title 'doctor' and to put PhD or DPhil, as the case may be, after their names. Their speciality is not indicated in the name of the degree.

The PhD normally requires at least three years of full-time original research — after completing a good first degree — at a higher education institution (usually a university), under the supervision of a senior academic.

To be admitted, candidates have to show evidence of their capacity to undertake individual research and see the work through. If they do not have a research Master's degree already, they may be asked to undertake one. Research begun on the Master's is often continued and expanded for the PhD.

In consultation with a supervisor, they have to determine the topic to be researched. The work will involve a review of the relevant literature and, in the experimental science field, some experimentation to test a hypothesis. When data have been analysed and the thesis written up and submitted the student will be called upon to defend it before an examining board.

Neither the Master's nor the doctorate are graded, although a Master's can be awarded with distinction. Some time limitations may be imposed by the university regulations, within which the degree has to be completed.

Higher doctorates are awarded to candidates who have distinguished themselves by original research in their fields.

Honorary Doctorates

In addition to the earned Master's and doctorate, universities also award honorary senior doctorates (Doctor of Science, DSc/Doctor of Letters, DLitt) to more mature and established workers who have made recognised contributions to public knowledge.

For examples of doctorates see Appendices VI and VII.

II.3.3. Academic recognition of final qualifications in higher education for purposes of further study

The processes of academic recognition, however esoteric they may appear to an uninformed outsider, are well established and clear-cut. The principle that underlies the distinction between general and course requirements at the point of entry to higher education continues to apply throughout the hierarchy of degrees. A first degree does not automatically entitle the holder to enter a Master's course, nor does the possession of a Master's degree necessarily qualify the holder for doctorate work.

In each case further evidence will normally be required of the candidate's fitness for the higher degree course. This evidence may take the form of the class obtained in a good honours degree, a postgraduate diploma or a Master's dissertation with a research basis.

The department of the higher education institution concerned acts autonomously in taking each individual decision; while it is likely to insist on the quality of the candidate's academic achievements, it will also take into account his/her professional experience and personal maturity.

Admission to advanced training also depends on the professional recognition of academic degrees, for example, by the medical or engineering professions. This is assured through the involvement of the professional bodies in determining the contents of the relevant degrees (see above) and their participation in the student's training and research through internships, sandwich or professional attachments and such schemes as the teaching company scheme (this does for other professions what a teaching hospital does for the medical profession).

III. Special types and forms of final qualifications in higher education

There are no special types or forms of final qualifications in higher education.

IV EU directives Regulated professions under

IV.1. Sectoral directives

The sectoral approach has two variants. The first is in effect a harmonisation approach, and it has been applied to doctors, dentists, nurses, midwives, veterinary surgeons and pharmacists.

The harmonisation approach works in the following way. A directive specifies certain minimum criteria which training for the profession in question must meet in all Member States. Member States are required to restrict the activity to those holding a qualification which meets the harmonised standard. Any person who holds the qualification awarded in a Member State is entitled to have it recognised as equipping him or her to practise the profession in all other Member States.

The other approach is known as 'mutual recognition'. There is one sectoral directive of this type covering architectural qualifications. The directive requires Member States to recognise any architectural qualification of university degree standard gained in another Member State, provided it covers certain areas specified in the directive and provided it is of a specified minimum duration. However, unlike the harmonisation directives, it does not specify minimum criteria for the required areas of training.

Since 1975, the following sectoral directives have been adopted.

Doctors

Directive 75/362/EEC of 16 June 1975 (entered into force on 16 December 1976).

Nurses responsible for general care

Directive 77/452/EEC of 27 June 1977 (entered into force on 27 June 1979).

Dental practitioners

Directive 78/1026/EEC of 18 December 1978 (entered into force on 18 December 1980).

Veterinary surgeons

Directive 78/1026/EEC of 18 December 1978 (entered into force on 18 December 1980).

Midwives

Directive 80/154/EEC of 21 January 1980 (entered into force on 21 January 1983).

Architects

Directive 85/384/EEC of 21 August 1985 (entered into force on 10 June 1987).

Pharmacists

Directive 85/443/EEC of 16 September 1985 (entered into force on 1 October 1987).

General practitioners

Directive 93/16/EEC of 5 April 1993 entered into force 1 January 1995.

The Council also agreed a directive in 1977 to make it easier for lawyers to provide services in other Member States (Directive 77/249/EEC of 22 March 1977).

IV.2. The general directive

First general directive 89/48/EEC applies to all professions to which access is in some way restricted by the State and which require at least three years of university-level education. It was adopted in December 1988 for implementation by 4 January 1991.

IV.2.1. Professions regulated under Directive 89/48/EEC

A list of the professions regulated in the United Kingdom for the purposes of Directive 89/48/EEC follows, together with the designated authorities for those professions

Profession	Designated authority
Actuary	Institute of Actuaries
Actuary (Scotland)	Faculty of Actuaries
Advocate (Scotland)	Faculty of Advocates
Analytical chemist	Royal Society of Chemistry
Barrister (England and Wales)	General Council of the Bar for England and Wales
Barrister (Northern Ireland)	Executive Council of the Inn of Court of Northern Ireland
Deck officer, Class 1 (master mariner)	Secretary of State for Transport
Marine engineering (officer, Class 1)	Secretary of State for Transport
Mine manager	Mining Qualifications Board
Mine surveyor	Mining Qualifications Board
Optometrist (ophthalmic optician)	General Optical Council
Patent agent	Chartered Institute of Patent Agents
Patent attorney	Chartered Institute of Patent Agents
School teacher in England and Wales (in publicly regulated schools)	Secretary of State for Education
School teacher in Northern Ireland (in publicly regulated schools)	Department of Education for Northern Island
School teacher in Scotland (in publicly regulated schools)	General Teaching Council for Scotland
Solicitor (England and Wales)	Law Society
Solicitor (Northern Ireland)	Law Society of Northern Ireland
Solicitor (Scotland)	Law Society of Scotland

*Employment in the National Health Service
in the following professions:*

Art therapist	Council for Professions Supplementary to Medicine
Child psychotherapist	Association of Child Psychotherapists
Clinical psychologist	British Psychological Society
Dramatherapist	Council for Professions Supplementary to Medicine

Music therapist	Council for Professions Supplementary to Medicine
Speech therapist	College of Speech Therapists

<i>State-registered practice in the following professions:</i>	<i>Relevant board of the Council for Professions Supplementary to Medicine</i>
Chiropodist	Chiropodists Board
Diagnostic and therapeutic radiographers	Radiographers Board
Dietitian	Dietitians Board
Occupational therapist	Occupational Therapists Board
Orthoptist	Orthoptists Board
Physiotherapist	Physiotherapists Board

Professions regulated by professional bodies incorporated by royal charter

Professional title	Designatory letters	Designated authority
Actuary	FIA	Institute of Actuaries
Actuary (Scotland)	FFA	Faculty of Actuaries
Certified accountant	ACCA	Chartered Association of Certified Accountants
Chartered accountant	ACA	Institute of Chartered
Accountants in England and Wales		
Chartered accountant	ACA	Institute of Chartered Accountants in Ireland
Chartered accountant	CA	Institute of Chartered Accountants of Scotland

Chartered biologist	C.Biol MIBiol	Institute of Biology
Chartered builder	MCIQB	Chartered Institute of Building
Chartered building services engineer	MCIBSE	Chartered Institution of Building Services Engineers
Chartered building surveyor	ARICS	Royal Institution of Chartered Surveyors
Chartered chemical engineer	MIChemE MRSC	Institution of Chemical Engineers
Chartered chemist	C.Chem MRSC	Royal Society of Chemistry
Chartered civil engineer	MICE	Institution of Civil Engineers
Chartered colourist Colourists	C.Col	Society of Dyers and
Chartered electrical engineer	MIEE	Institution of Electrical Engineers
Chartered energy engineer	MInstE	Institute of Energy
Chartered engineer	C.Eng	Engineering Council
Chartered environmental health officer	MIEH	Institution of Environmental Health Officers
Chartered forester	MICFor	Institute of Chartered Foresters
Chartered gas engineer	MIGasE	Institution of Gas Engineers
Chartered geologist	C.Geol FGS	Geological Society
Chartered insurance practitioner (broking)	ACII	Chartered Insurance institute
Chartered insurer (insurance underwriting)	ACII	Chartered Insurance institute
Chartered land surveyor	ARICS	Royal Institution of
Chartered Surveyors		
Chartered loss adjuster	ACILA	Chartered Institute of Loss Adjusters
Chartered manufacturing engineer	MIMfgE	Institution of Manufacturing Engineers
<small>Chartered marketing engineer</small>	<small>MIMarkE</small>	<small>Institution of Marketing Engineers</small>
Chartered marketer Marketing	MCIM	Chartered Institute of
Chartered measurement and control technologist	MInstMC	Institute of Measurement and Control
Chartered mechanical engineer	MIMechE	Institution of Mechanical Engineers
Chartered minerals surveyor	ARICS	Royal Institution of Chartered Surveyors
Chartered mining engineer Engineers	MIMinE	Institution of Mining
Chartered psychologist	C.Psychol	British Psychological Society
Chartered physicist	C.Phys MInstP	Institute of Physics
Chartered physiotherapist	MCSP	Chartered Society of Physiotherapy
Chartered quantity surveyor	ARICS	Royal Institution of Chartered Surveyors
Chartered secretary	ACIS	Institute of Chartered Secretaries and Administrators
Chartered shipbroker Shipbrokers	MICS	Institute of Chartered

Chartered structural engineer	MIStructE	Institution of Structural Engineers
Chartered surveyor	ARICS	Royal Institution of
Chartered Surveyors		
Chartered textile technologist	C.Text ATI	Textile Institute
Chartered town planner	MRTPI	Royal Town Planning
Institute		
Chartered valuation surveyor	ARICS	Royal Institution of Chartered Surveyors
Incorporated engineer	I.Eng	Engineering Council
Public finance accountant	CIPF	Chartered Institute of Public Finance and Accountancy

Registered at stage 3 in the 'Professional engineer' section of the Engineering Council register

		<i>Engineering Council</i>			
	MBCS	British Computer Society			
	ACBSI	Chartered Building			
Societies Institute					
	FCI Arb	Chartered Institute of			
Arbitrators					
	ACIB	Chartered Institute of			
Bankers					
	ACMA	Chartered Institute of			
Management Accountants					
	AIB(Scot)	Institute of Bankers in			
Scotland					
	MIH	Institute of Housing			
	AFIMA	Institute of Mathematics and its Applications			
	MIM	Institute of Metals			
	MIEH	Institution of Environmental Health Officers			
	MIMM	Institution of Mining and Metallurgy			
	ALA	Library Association			
	MRAeS	Royal Aeronautical Society			
	M.Hort (RHS)	Royal Horticultural Society			
	MRINA	Royal Institution	of	Naval	Architects

IV.2.2. Professions **92/51/ECC** regulated by Directive

The following professions are regulated for the purposes of Directive 92/51/ECC in the United Kingdom by their designated authorities.

Professional title	Designatory letters	Designated authority
<small>Association of the Chartered</small> Institute of Building	<small>ACIB</small>	Building
Associate of the Royal Academy of Dance	ARAD	The Royal College of Dance
Associate of The Royal College of Organists	ARCO	The Royal College of Organists
Choir Master	(CHM)	The Royal College of Organist
Engineering Technician	EngTech.	The Engineering Council
Follow of the Royal College of Organists	FRCO	The Royal College of Organists
Housing Practitioner		The Chartered Institute of Housing
Licentiate of the Royal Academy of Dance	LRAD	The Royal Academy of Dance
Licentiate of the Textile Institute	LTI	The Textile institute

Diagram of the educational system in the United Kingdom

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Directory of higher education 1993/94, CRAC professional guide, Hobsons Publishing, Cambridge, 1993.

Education information sheets, Libraries, Books and Information Division, British Council, Manchester, 1993.

Appendix I

General certificate of secondary education (GCSE) examining groups

University of London Examinations and Assessment Council

Stewart House
32 Russell Square
London WC1B 5DN
United Kingdom
Tel. (44-171) 331 40 00

Midland Examining Group

Syndicate Buildings
1 Hills Road
Cambridge CB1 2EU
United Kingdom
Tel. (44-1223) 55 33 11
Fax (44-1223) 46 02 78

Northern Examinations and Assessment Board

Devas Street
Manchester M15 6EX
United Kingdom
Tel. (44-161) 954 11 80
Fax (44-161) 273 75 72

Southern Examining Group

Stag Hill House
Guildford GU2 5XJ
United Kingdom

Fax (44-1483) 30 01 52

Welsh Joint Education Committee

245 Western Avenue
Cardiff CF5 2YX
United Kingdom
Tel. (44-1222) 56 12 31

Northern Ireland Council for the Curriculum, Examinations and Assessment

Beechill House
42 Beechill Road
Belfast BT8 4RS
United Kingdom
Tel. (44-1232) 70 46 66

**General certificate of education (GCE)
examining boards**

University of London Examinations and Assessment Council

(See above)

Northern Examinations and Assessment Board

(See above)

Welsh Joint Education Committee

(See above)

Northern Ireland Council for the Curriculum, Examinations and Assessment

(See above)

Associated Examining Board

Stag Hill House
Guildford
Surrey GU2 5XJ
United Kingdom
Tel.

(44-1483)

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Oxford and Cambridge Schools Examination Board

Elsfield Way
Oxford OX2 8EP
United Kingdom
Tel. (44-1865) 544 21
Fax (44-1865) 51 49 02

University of Oxford Delegacy of Local Examinations

Ewert House
Ewert Place
Banbury Road
Summertown
Oxford OX2 8EP
United Kingdom
Tel. (44-1865) 542 91

University of Cambridge Local Examinations Syndicate

Syndicate Buildings
1 Hills Road
Cambridge CB1 2EU
United Kingdom
Tel. (44-1223) 55 33 11
Fax

(44-1223)

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Appendix II

New universities

Anglia Polytechnic University
University of Central England
in Birmingham
Bournemouth University
University of Brighton
University of the West of England
at Bristol
Coventry University
University of Derby
Education
University of East London
Glasgow Caledonian University
University of Hertfordshire
University of Huddersfield
University of Humberside
Kingston University
University of Central Lancashire
Leeds Metropolitan University
De Montfort University
Liverpool John Moores University
University of Westminster
London Guildhall University
University of North London
South Bank University
University of Greenwich
Thames Valley University
Manchester Metropolitan
University
Middlesex University
Napier University
University of Northumbria
at Newcastle
Nottingham Trent University
Oxford Brookes University
University of Paisley
University of Portsmouth
Robert Gordon University
Technology
Sheffield Hallam University
University of Plymouth
Staffordshire University
University of Sunderland
University of Teesside
University of Glamorgan
University of Wolverhampton
University of Abertay Dundee
University of Luton

Old name

Anglia Polytechnic
Birmingham Polytechnic

Bournemouth Polytechnic
Brighton Polytechnic
Bristol Polytechnic

Coventry Polytechnic
Derbyshire College of Higher
Education
Polytechnic of East London
Glasgow Polytechnic
Hatfield Polytechnic
The Polytechnic of Huddersfield
Humberside Polytechnic
Kingston Polytechnic
Lancashire Polytechnic
Leeds Polytechnic
Leicester Polytechnic
Liverpool Polytechnic
Polytechnic of Central London
City of London Polytechnic
The Polytechnic of North London
South Bank Polytechnic
Thames Polytechnic
Polytechnic of West London
Manchester Polytechnic

Middlesex Polytechnic
Napier Polytechnic of Edinburgh
Newcastle Polytechnic

Nottingham Polytechnic
Oxford Polytechnic
Paisley College
Portsmouth Polytechnic
Robert Gordon Institute of
Technology
Sheffield City Polytechnic
Polytechnic South West
Staffordshire Polytechnic
Sunderland Polytechnic
Teesside Polytechnic
The Polytechnic of Wales
Wolverhampton Polytechnic
Dundee Institute of Technology
Luton College of Higher Education

Also note that in addition to the above name changes associated with institutions gaining university status, the former Cranfield Institute of Technology has now changed its name to Cranfield University (Cranfield Institute of Technology already had university status).

Appendix III

Degree structure: traditional versus 'new' universities

UK degrees are increasingly modular in structure: whilst modularisation was pioneered by the new universities, it has now become the norm for most UK higher education courses. The contrasting examples given below are therefore only illustrative of the range of structures currently on offer.

University of Durham (founded in 1832; collegiate)

BA (Honours) Business Economics

First year

Four compulsory subjects:

- introduction to economic theory
- applied economics
- introduction to accounting and finance
- introduction to management

Second year

Three compulsory subjects:

- microeconomics
- macroeconomics
- economic data analysis

and one other from:

- financial and management accounting
- financial economics
- management in organisations

Third year

At least four options from:

- financial and management accounting
- financial economics
- industrial and labour economics
- management in organisations
- strategy and international business
- one further course (from the economics options list)
- dissertation

Middlesex University (formerly Middlesex Polytechnic)

Middlesex University was one of the first in the country to organise all its courses within a credit accumulation framework, called the Middlesex academic credit scheme. The standard value of a module is 20 credit points (60 points in the case of a project or dissertation).

BA (Honours) Business Economics

First year

Four compulsory modules:

- introduction to microeconomics
- introduction to macroeconomics
- quantitative methods
- information technology

Two modules from:

- mathematics
- business law
- accounting and finance

the making of modern Europe

Language

other (subject to approval)

Second year

Three compulsory modules:

the economics of the firm

macroeconomics

quantitative methods 2 or introduction to econometrics

Three modules from:

finance

Britain and the international economy

business information systems or computing methods for economists

mathematics and modelling

mathematical methods in economics

modern business history

international trade

employment law

industrial and commercial law

business accounting

language (French or other)

other (subject to approval)

Third year

Three compulsory subjects/modules:

business economics

industrial economics

dissertation (core for placement students only)

Two to four modules from:

business finance

economics and organisation of transport systems

economics of human resources

international finance

monetary economics

economics of finance and investment

contemporary European economic policy

dissertation

any other from the economics set or elsewhere, subject to agreement

Appendix IV

Bachelor's degrees

BA	Bachelor of Arts
BAcc	Bachelor of Accountancy, University of Glasgow
BAdmin	Bachelor of Administration, University of Dundee
BA(Econ)	Bachelor of Arts in Economics and Social Studies, University of Manchester
BA(Ed)	Bachelor of Arts (Education), University of Hull
BAgr	Bachelor of Agriculture, Queen's University, Belfast (and National University, Dublin)
BA(Law)	Bachelor of Arts in Law, University of Exeter and University of Sheffield
BAO	Bachelor of Obstetrics, Queen's University, Belfast (and National University, Dublin)
BArch	Bachelor of Architecture
BChD Cambridge	Bachelor of Dental Surgery, University of
BCL	Bachelor of Civil Law
BCom	Bachelor of Commerce, University of Birmingham and University of Edinburgh
BCombStuds	Bachelor of Combined Studies, University of Nottingham
BD	Bachelor of Divinity
BDS	Bachelor of Dental Surgery
BE	Bachelor of Education
BEng	Bachelor of Engineering
BEng & Man	Bachelor of Mechanical Engineering, Manufacture and Management
BEng(Tech)	Bachelor of Engineering (Technology), University of Wales Institute of Technology
BFA	Bachelor of Fine Arts, University of Oxford
BH	Bachelor of Humanities, University of London
BLD	Bachelor of Landscape Design, University of Manchester
BLib	Bachelor of Librarianship, University of Wales
BLing	Bachelor of Linguistics, University of Manchester
BLitt	Bachelor of Letters
BLS	Bachelor of Library Studies, Queen's University, Belfast
BM	Bachelor of Medicine, University of Southampton
BM,BCh	Conjoint degree of Bachelor of Medicine, Bachelor of Surgery, University of Oxford
BM, BS	Conjoint degree of Bachelor of Medicine, Bachelor of Surgery, University of Nottingham
BMedBiol	Bachelor of Medical Biology, University of Aberdeen
BMedSci	Bachelor of Medical Science
BMedSci in speech Science	Bachelor of Medical Science (Speech), University of Sheffield
BMet	Bachelor of Metallurgy, University of Sheffield
BMSc	Bachelor of Medical Science, University of Dundee
BMus	Bachelor of Music
BN	Bachelor of Nursing, University of Glasgow and University of Wales
BN Nursing Studies Manchester	Bachelor of Nursing, Nursing Studies, University of Southampton/Bachelor of Nursing, University of Manchester
BPharm	Bachelor of Pharmacy
BPhil	Bachelor of Philosophy
BPhil(Ed)	Bachelor of Philosophy (Education), University of Birmingham
BPI	Bachelor of Planning, University of Manchester
BS	Bachelor of Surgery, University of London and University of Newcastle
BSc	Bachelor of Science
BSc	Bachelor of Science in Polymer Science and Technology (CNAA)
BSc(Agr)	Bachelor of Science in Agriculture, University of Aberdeen
BSc(Arch)	Bachelor of Science (Architecture), University of Dundee
BScEcon	Bachelor of the Faculty of Economic and Social Studies, University of Wales, UWIST
BSc(Econ)	Bachelor of Science in Economics
BSc(Eng)	Bachelor of Science in Engineering

BSc(For)	Bachelor of Science in Forestry, University of Aberdeen
BSc(Town and Regional Planning)	Bachelor of Science (Town and Regional Planning), University (Town and Regional Planning) of Dundee
BSc (Social Sciences)	Bachelor of Science in the Social Sciences, University of Southampton
BScTech	Bachelor of Technical Science, University of Sheffield
BSc(Tech)	Bachelor of Science (Technology), University of Sheffield
BSocSc Manchester	Bachelor of Social Science, University of Birmingham, University of Keele and University of Manchester
BSSc	Bachelor of Social Science, Queen's University Belfast
BTech	Bachelor of Technology
BTh	Bachelor of Theology
BTP	Bachelor of Town and Country Planning, University of Manchester and South Bank University
BVetMed	Bachelor of Veterinary Medicine, University of London
BVM&S	Bachelor of Veterinary Medicine and Surgery, University of Edinburgh
BVMS	Bachelor of Veterinary Medicine and Surgery, University of Glasgow
BVSc	Bachelor of Veterinary Science, University of Bristol and University of Liverpool
ChB	Bachelor of Surgery
LLB	Bachelor of Laws
MusB	Bachelor of Music, University of Cambridge and University of Manchester
VetMB	Bachelor of Veterinary Medicine, University of Cambridge

Appendix V

Master's degrees

ChM	Master of Surgery
LLM	Master of Laws
MA	Master of Arts
MA (Architectural Studies)	Master of Arts (Architectural Studies), University of Sheffield
MAcc	Master of Accountancy, University of Glasgow
MA(Econ)	Master of Arts in Economic and Social Studies, University of Manchester
MA(Ed)	Master of Arts in Education, Queen's University, Belfast and University of Leicester
MAgr	Master of Agriculture, Queen's University, Belfast
MAgrSc	Master of Agricultural Science, University of Reading
MA(LD)	Master of Arts (Landscape Design), University of Manchester
MA(MUS)	Master of Arts (Music), University of Bristol
MAO	Master of Obstetrics, Queen's University, Belfast
MAppSci	Master of Applied Science, University of Glasgow
MArch	Master of Architecture
MA(RCA)	Master of Arts, Royal College of Art (Photography)
MArt/RCA	Master of Arts, Royal College of Arts
MA(Theol)	Master of Arts in Theology, University of Manchester
MA(UrbDes)	Master of Arts in Urban Design, University of Manchester
MBA	Master of Business Administration
MB, BCh	Conjoint degree of Bachelor of Medicine, Bachelor of Surgery
MB, BChir	Conjoint degree of Bachelor of Medicine, Bachelor of Surgery, University of Cambridge
MB, BS Newcastle	Conjoint degree of Bachelor of Medicine, Bachelor of Surgery, University of London and University of Newcastle
MB, ChB	Conjoint degree of Bachelor of Medicine, Bachelor of Surgery
MBSoc	Master in Business Science, University of Manchester
MCB	Mastership in Clinical Biochemistry
MCD	Master of Civic Design, University of Liverpool
MCDH	Master of Community Dental Health, University of Birmingham
MCh	Master of Surgery
MChD	Master of Dental Surgery, University of Wales
MChir	Master of Surgery, University of Cambridge
MChOrth	Master of Orthopaedic Surgery, University of Liverpool
MCom	Master of Commerce
MCommH	Master of Community Health, University of Liverpool
MDes(RCA)	Master of Design, Royal College of Art
MDS	Master of Dental Surgery
MDSoc	Master of Dental Science
MEd	Master of Education
MEd(EdPsych)	Master of Education (Educational Psychology), University of Birmingham
MEdPsych	Master of Educational Psychology, University of Sussex
MEdStud	Master of Educational Studies, University of Leicester
MEng	Master of Engineering
MFA	Master of Fine Art, University of Newcastle and University of Reading
MJur	Master of Jurisprudence, University of Birmingham
MLing	Master of Languages
MLib	Master of Librarianship, University of Wales
MLitt	Master of Letters
MLS	Master of Library Science, Queen's University, Belfast and Loughborough University of Technology
MMA	Master of Management and Administration, Cranfield University
MMedSci	Master of Medical Science, University of Leeds, University of Nottingham and University of Sheffield
MMet	Master of Metallurgy, University of Sheffield

MMSc	Master of Medical Sciences, University of Dundee
MMus	Master of Music
MMus, RCM	Master of Music, Royal College of Music
Degree of MPA	Master of Public Administration, University of Liverpool
<small>MPh</small>	<small>Master of Public Health, University of Dundee, University of Glasgow and University of Leeds</small>
MPharm	Master of Pharmacy
MPhil	Master of Philosophy
MPsychMed	Master of Psychological Medicine, University of Liverpool
MRAD	Master of Radiology (Radiodiagnosis) or
MRAD(D)	(Radiotherapy), University of Liverpool
MS	Master of Surgery
MSc	Master of Science
MScD	Master of Dental Science, University of Wales, Welsh National School of Medicine
MSSc	Master of Surgical Science, University of Dundee
MScTech	Master of Technical Science, University of Sheffield
MSW	Master in Social Work, Queen's University, Belfast, University of Sussex and University of York
MTD	Master of Transport Design, University of Liverpool
MTech	Master of Technology
MTh	Master of Theology
MTheol	Master of Theology, University of Durham, University of Edinburgh and University of St Andrews
MTP	Master of Town and Country Planning, University of Manchester
MusM	Master of Music, University of Cambridge and University of Manchester
MVM	Master of Veterinary Medicine, University of Glasgow
MVSc	Master of Veterinary Science
MS(Dent)	Former degree of Master of Surgery (Dental Surgery), University of London
MScEcon	Master in Faculty of Economic and Social Studies, University of Wales and University of Wales
Institute of Technology	
MSc(Econ)	Master of Science in Economics
MSocSc	Master of Social Science, University of Birmingham
MSc(Social Sciences)	Master of Science in the Social Sciences, University of Southampton

Appendix VI

Doctorates

DChD	Doctor of Dental Surgery, University of Wales
DCL	Doctor of Civil Law
DDS	Doctor of Dental Surgery
DDSc	Doctor of Dental Science
DEng	Doctor of Engineering, University of Bradford, University of Liverpool and University of Sheffield
DLitt	Doctor of Letters
DM	Doctor of Medicine, University of Nottingham, University Oxford and University Southampton
DMet	Doctor of Metallurgy, University of Sheffield
DMus	Doctor of Music
DPhil	Doctor of Philosophy
Dr(RCA)	Doctor of the Royal College of Art
DSc	Doctor of Science
DScEcon	Doctor in the Faculty of Economics and Social Studies, University of Wales
DSc(Econ)	Doctor of Science (Economics) or in Economics
DSc(Eng)	Doctor of Science (Engineering), University of London
DSc(Social Sciences)	Doctor of Science in the Social Sciences, University of Southampton
DScTech	Doctor of Technical Science, University of Sheffield
DSocSc	Doctor of Social Science, University of Birmingham
DTech	Doctor of Technology
DVetMed	Doctor of Veterinary Medicine, University of London
DVM	Doctor of Veterinary Medicine, University of Glasgow
DVM&S	Doctor of Veterinary Medicine and Surgery, University of Edinburgh
DVSc	Doctor of Veterinary Science, University of Liverpool
PhD	Doctor of Philosophy
PhD(RCA)	Doctor of Philosophy (Royal College of Art)
LittD	Doctor of Letters
LLD	Doctor of Laws
MD	Doctor of Medicine
MusD	Doctor of Music, University of Cambridge, University of East Anglia and University of Manchester
RDVS	Doctor of Veterinary Surgery, University of Glasgow
ScD	Doctor of Science, University of Cambridge, University of East Anglia (Honorary)
MSSc	Master of Social Science, Queen's University, Belfast

Appendix VII

Engineering degrees

First

BSc	Bachelor of Science/Engineering
BEng	
BSc(Eng)	
BA	
BTech	
MEng	

Master's

MSc	Master of Science/Engineering
MEng	
MPhil	
BPhil	

Doctorate

PhD	Doctor of Philosophy
DPhil	

Medical degrees

First

MB.BCh	Conjoint degree: Bachelor of Medicine and Bachelor of Surgery			
MB.BChir				
MB.BS				
MB.ChB				
BM.BCh				
BM.BS				
BAO	Bachelor of Obstetrics			
BM	Bachelor of Medicine			
BMedBiol	Bachelor of Medical Biology			
BMedSci	Bachelor of Medical Science			
BMSc	Bachelor	of	Medical	Science

Higher

MD MCh	Doctor of Medicine
MD MChir	Master of Surgery
MD MS	
MD ChM	
DM MCh	
DM MS	
MAO	Master of Obstetrics
DM	Doctor of Medicine
MMedSci	Master of Medical Science
MMSc	Master of Medical Sciences

Dental degrees**First**

BDS	Bachelor in Dental Surgery
BChD	

Higher

MDS	Master of Dental Surgery
MChD	
MDS	Master of Dental Surgery/Science
MS(Dent)	
MScD	
MDentSc	
DDS	Doctor of Dental Surgery/Science
DDSc	
DChD	

Veterinary degrees**First**

BVSc	Bachelor of Veterinary Science
BVMS	
BVM&S	
VetMB	

Higher

MSc - Master of Veterinary Science (MSc)

MSc

PhD

DVM

DVM&S

DVSc

DSc

Doctor of Veterinary Science/Medicine