



SOCRATES/Erasmus Thematic Network
Università degli Studi di Firenze



E4 Thematic Network

Enhancing Engineering Education in Europe

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Volume B

Glossary of Terms relevant for Engineering Education

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FOREWORD

The Thematic Network *E4 – Enhancing Engineering Education in Europe* aims primarily at developing the European dimension of higher engineering education, by favouring greater mobility, better integration of skilled personnel throughout Europe, exchange of skills and competence, and easier communication between academics and professionals. Since the very beginning of its work, E4 participants confirmed the need, already noted in previous experiences and analogous Networks, of a European "Glossary of Terms relevant for Engineering Education". In fact, too frequently, in international meetings and report writing, confusions arise as to correct meaning and the choice of terms, due to several factors: an improper translation from the original language into English (which remains the most used idiom in international activity) and the variety of the European educational structures.

E4 has therefore undertaken the preparation of such a Glossary with the aim, besides the traditional one of explaining the meaning of the quoted terms, of unifying the terms applied in the context of Engineering Education. Therefore, whenever possible we have indicated for each meaning what we think is the most appropriate word or phrase among possible alternatives. Further comments are in *italic*.

The final draft version of the Glossary is now proposed: its effectiveness will be immediately tested in the preparation of the forthcoming final documents of E4, but we believe it may become a useful tool for all those reading or writing about Engineering Education.

The body of the Glossary is in English, and so is Annex 1, that describes the different structures of European Engineering Education in relation with the reform started with the Bologna Declaration. Definitions of sentences and compound terms are listed in alphabetical order under the most important word: e.g. you will find "continuing education" under "education". Terms used specifically in one European Country will be presented in a series of "National" Annexes, in this first version limited to Germany (Annex 2-DE) and some other extremely incomplete examples.

This Glossary has been prepared within Transversal Action 2 of E4, by an *ad hoc* working group under the responsibility of the European Society of Engineering Education (SEFI). The group was co-ordinated by Valeria Bricola, with the supervision of Professor Giuliano Augusti, of the University "La Sapienza" of Rome, Promoter of E4 Activity 2, and Dr.-Ing. Günter Heitmann, of the Technical University of Berlin, Promoter of Activity 1. Anders Hagström, Kruno Hernaut, Horst Hodel, Jack Levy, Francesco Maffioli, Iacint Manoliu, Jean Michel and Alfredo Soeiro actively and effectively contributed to the preparation of the Glossary.

The first phase of the preparation of the Glossary consisted of research and the collection of many relevant sources: works not completed by previous Thematic Networks, existing glossaries, unpublished papers. We thus arrived at a document with a considerable number of terms, many of which presented several possible definitions: this was clear evidence of the many alternative possibilities given to the same word, in different contexts and in different countries, or even in the same context or in the same Country, and further confirmed the usefulness of proposing a unified Glossary. After long meetings and deep discussions, the *ad hoc* group has arrived at the list presented here.

We are perfectly aware that a language is *per se* in constant evolution, as well as any particular, sectorial, language is. Therefore, this work could not and does not pretend to be "the ultimate glossary". On the contrary, also because of the limits imposed by the composition of the authors' group (none of us is a professional linguist) and by time constraints, it may be incomplete.

We shall be extremely grateful to all the readers and users of this Glossary who may let us know their critical remarks and comments, and to suggest additions and/or modifications. The Glossary is submitted to the publisher in August 2003 to be included

amongst the final printed documents of E4, but it is planned to keep it continuously updated, on the E4 web site: <http://www.unifi.it/tne4>.

Giuliano Augusti, Valeria Bricola, Günter Heitmann

GLOSSARY

ABET

Accreditation Board of Engineering and Technology (U.S.A.).

Ability (see also *Capacity*)

Ability, *Capability*, *Capacity*, and *Potential* all mean “power to do something”.

Ability often implies skill (mathematical ability). *Capability* implies the possession of the required qualities, (the capability of a good engineer to design energy-efficient solutions).

Capacity suggests the power to receive or absorb (a capacity for learning languages).

Potential applies to an inherent but untried power (a person with leadership potential).

Access to higher education

The process by which candidates apply and are considered for admission to a higher education study programme.

Accreditation

May refer to study programmes, institutions or prior learning.

Accreditation of programmes

The process by which a qualification, a course or a programme comes to be accepted by an external body to be a satisfactory quality and standard. Accreditation involves a periodic audit against published standards of the engineering education at the appropriate level. It is essentially a peer review process, undertaken by appropriately trained and independent panels comprising both engineering teachers and engineers from industry.

Note: when no third-party is involved, E4 recommends using the term "recognition" rather than "accreditation". Quality Assurance should not be identified with accreditation, but rather be a prerequisite of it.

Accreditation of institutions

Accreditation is a formal, published statement regarding the quality of an educational institution, that provides some (but not necessarily only) accredited study programmes. It may also refer to a provider of non-formal study programmes.

Accreditation of Prior Learning (APL)

A process by which individuals can claim and gain credit toward qualifications based on demonstrated learning that has occurred at some time in the past.

Admission to higher education institutions and programmes

The process which allows qualified applicants entry to pursue higher education studies at a given institution. Sometimes the admission process involves an entrance examination.

Assessment

The total range of written, oral and practical tests, as well as projects and portfolios, used to decide on the student's progress in the Course Unit, Module, or Study Programme. These measures may be mainly used by the students to assess their own progress (formative assessment) or by the University to judge whether the course unit or module has been completed satisfactorily against the learning outcomes of the unit or module.

Note: the term also refers to the process for establishing the educational quality of a higher education institution or programme.

Assessment criteria

Description of what the learner is expected to do, in order to demonstrate that a learning outcome has been achieved.

Continuous Assessment

Tests taken within the normal teaching period as part of an annual or the final assessment.

Self Assessment

Process of appraising your own skills, knowledge, attitudes etc. (e.g. your contribution to an annual appraisal).

Attitude

The way a person regards something or tends to behave towards it, often in an evaluative way.

Awarding body

A body issuing certificates or diplomas, which formally recognise the achievements of an individual, following an assessment procedure.

Bachelor (see also *Degree*)

Usual term for *First Cycle Degree* (FCD) awarded after successful completion of a First Cycle Study Programme. Often used with extension to indicate a discipline or a specific profile of the course (Bachelor of Arts (B.A.), Bachelor of Science (B.Sc.), Bachelor of Engineering (B.Eng.) etc.). (For a peculiar use in German, see Annex 2-DE).

Note: in some Countries (e.g. USA) it is also used as an academic qualification at lower level than FCD.

Benchmark

Reference point or standard against which progress or achievements may be compared.

BEST

Board of European Students of Technology.

Bologna Declaration

An Agreement of 33 Countries, signed in Bologna in June 1999 by their Ministers of Education, to establish a “European Higher Education Area” and adapt the national education systems to a common “European Higher Education System” by 2010.

Note: it covers all disciplines.

Bologna process

Term often used to refer to the process of *convergence* (see) of the European systems of higher education, in accord with a series of Declarations of Higher Education Ministers (Paris, 1998; Bologna, 1999; Prague, 2001; Berlin 2003).

Branch of study (see also *Discipline, Field, Specialty*)

Specialisation within a given field of study (e.g. Mechanical Engineering, Electrical Engineering). It can also refer to a specialisation within a broader branch (e.g. Hydraulic Engineering, within Civil Engineering).

Capability (see *Ability*)

Capacity (see also *Ability*)

The ability of individuals and organisations or organisational units to perform functions effectively and efficiently over the long-term.

Certificate

The official document stating the completion of studies meeting specific requirements. Note: in the UK it is also used at sub-degree level, e.g., 'Certificate in Work Study'.

Certification

The process by which a recognition is granted to persons meeting pre-determined standards.

Certification of competences

The process of formally validating knowledge, know-how and/or competences acquired by an individual following a standardised assessment procedure. It may result in the issuing of certificates or diplomas by an authorised awarding body.

CESAER

Conference of European Schools for Advanced Engineering Education and Research.

Class

Group of students following a course for a determined period of time (usually a term, semester or academic year). Sometimes used as a special type of teaching activity (e.g. Sub-group, Laboratory). (For a peculiar use in Italian, see Annex 2-IT, *Classe*).

Competence

A wide concept which embodies the ability of an individual to transfer skills and knowledge to specific situations.

Note: the term can also refer to organisations.

Competence list (see *Profile*)

Core competence (see also *Core Skills*)

The basic, fundamental competence of an individual, with regards to specific demands.

Contact hour

A time-tabled period involving teaching staff and students, part of a formal study programme.

Continuing Education (see under *Education*)

Continuing Education Unit (see under *Education*)

Continuous Professional Development

The planned acquisition of knowledge, experience and skills, and the development of personal qualities necessary for the execution of professional and technical duties throughout an engineer's professional life (see also *Continuing Education*).

Convergence (see also *Harmonisation*)

Policy aimed at making national systems gradually more similar to each other (this is e.g. the aim of the *Bologna Process* (see) with reference to the higher education systems within Europe).

Course

It may refer to a complete study programme or to a single component (such as *Unit* or *Module*) of a study programme.

Elective Course

A course unit chosen from a predetermined list.

Intensive Course

A short course usually of one to four weeks concentrating on a particular topic.

Internet Course (see also *Distance Education*)

A course that is fully or largely communicated through the Internet. The course provider often has a web page with relevant course information.

Course Unit

The basic division of a study programme usually consisting of a self-contained, formally structured learning experience with a coherent and explicit set of learning outcomes and assessment criteria.

Course Module

A course unit or a sub-division of a course unit.

Creativity

The *ability* to produce new ideas or connections. Creativity underpins (but is not the same as) *innovation* (see).

Credit (see also *ECTS*)

The “currency” used to measure student workload in terms of the notional learning time required to achieve specified learning outcomes. To each course unit a certain amount of credits are assigned. A credit system facilitates the measurement and comparison of learning outcomes achieved in the context of different qualifications, programmes of study and learning environments.

Credit accumulation

In a credit accumulation system the achieved learning outcomes must total a specified number of credits order to successfully complete a term, an academic year or a full study programme. Credits are awarded and accumulated if the achievement of the required learning outcomes is proved by assessment.

Credit transfer

The acceptance of credits obtained for one purpose, to be used as credits towards another purpose in the same or another institution.

Curriculum (see also *Study Programme*)

Comprehensive description of a study programme. It includes learning objectives or intended outcomes, contents, assessments procedures.

Core Curriculum

Basic part of curriculum with regard to each engineering branch.

Cycle (see also *Degree*)

A study programme leading, if successfully completed, to an academic degree. One of the objectives indicated in the Bologna Declaration is the “adoption of a system based on two

main cycles, undergraduate and graduate”. Doctoral studies are generally referred to as the third cycle.

Degree

Qualification awarded to an individual by a recognised higher education institution after successful completion of a prescribed study programme. In a credit accumulation system the programme is completed through the accumulation of a specified number of credits awarded for the achievement of a specific set of learning outcomes.

First Cycle Degree

According to the Bologna Declaration, it is a qualification awarded after the successful completion of first cycle studies which last a minimum of three years of full time studies.

(See Annex 1)

Second Cycle Degree

A qualification awarded after the successful completion of second cycle studies.

(See Annex 1)

Third Cycle Degree

A qualification awarded after the successful completion of third cycle studies.

(See Annex 1)

Double degree

A degree is defined "Double degree" when there are two or more Higher Education Institutions each awarding its own degree to the student who fulfilled the prescribed requirements. In the USA, sometimes used for *Dual degree* (see).

Joint degree

Single document jointly issued by all H.E. Institutions involved (in addition or not to the degree of one of the Institutions).

Note: sometimes people include double degrees in the category of joint degrees: this can create many misunderstandings, not only among the students.

Dual degree

Degree in two disciplines (or two branches).

Diplom-Ingenieur [Dipl.-Ing.] (see Annex 2-DE)

Diplom-Ingenieur Univ. [Dipl.-Ing.Univ.] (see Annex 2-DE)

Diplom-Ingenieur (FH) [Dipl.-Ing.(FH)] (see Annex 2-DE)

Diploma

A document stating that a student has earned a qualification from an educational institution. May refer to any qualification or award (from high school, college, university, etc.) but in some countries it characterises specific awards or titles. (See Annex 2)

Diploma supplement

An annex to the original qualification designed to provide a description of the nature, level, context, content and status of the studies that were pursued and successfully completed by the holder of the qualification. It aims at improving the

international transparency and the academic/professional recognition of qualifications.

Discipline

Word used with different connotations. Not recommended for use. Instead use *Field of study*, *Branch of study*, *Subject*.

Doctor

Usually, the holder of a title awarded after successful completion of a Doctorate Programme, sometimes characterised as Ph.D. (Doctor of Philosophy). When used without extension, the title usually refers to a Doctor of Medicine. The term "Doctor" is used also in higher and honorary titles: *Doctor honoris causa*, *Doctor of Science*, etc. (For a peculiar use in Italian, see Annex 2-IT).

Doctorate

A study programme leading towards a high level qualification recognised as qualifying someone for research and/or academic work. It will include a substantial amount of original work presented in a thesis. In the European Higher Education System it is generally identified with the third cycle study.

Doktor-Ingenieur [Dr.-Ing.] (see Annex 2-DE)

Dottorato di ricerca, Dottore di ricerca (see Annex 2-IT)

E4 -Enhancing Engineering Education in Europe

A *Thematic Network Project* (see www.ing.unifi.it/tne4) operative in 2000-2004.

ECTS (see also *Credit*)

Acronym for *European Credit Transfer System*, developed by the European Commission in order to increase the transparency of educational systems and facilitate the mobility of students across Europe through credit transfer. It is based on the general assumption that the global workload of an academic year of study is equal to 60 credits.

Education (see also *Training*)

The act, process or art of imparting knowledge, understanding, skills and attitudes normally given by formal education providers like schools, colleges, universities, or other educational institutes. Education may be general or related to specific fields (e.g. Engineering education).

Continuing Education

Any form of education, vocational or general, resumed after an interval following initial education. (It may include, for example, education for full-time mature students, liberal adult education, part-time degrees and diplomas, post-experience professional education and training courses, staff development, open-access courses and regional development through open and distance learning).

Continuing Education Unit

Measure originating in the USA and designed to provide a record of an individual's continuing education (non-academic credit) achievements (see also *Credit*): it is usually considered the equivalent of ten *contact hours* (see).

Distance Education (see also *Internet Courses*)

Instructional delivery that does not constrain the student to be physically present in the same location as the instructor. Historically, distance education meant correspondence study. Today, audio, video, and computer technologies are more common delivery modes.

Higher Education

All types of study programmes at the post secondary level which are recognised by the competent authorities as belonging to its higher education system.

Higher Education Institution

An establishment providing higher education. (See *Higher Education*)

Higher Education Programme (See *Study Programme*)

European Higher Education Area: see under *European*.

Employability

The capability an individual demonstrates, within the prevailing socio-economic circumstances, to find a job, keep it and update his occupational competencies.

Engineer

A person qualified by education, training and/or experience to practice the art and science of engineering. The qualifications leading to the title of "engineer", "professional engineer", etc. vary considerably from country to country (see also *Recognition*).

Entrance Examination (see *Admission*)

Equivalence

The recognition by an organisation/competent authority that a course unit, a study programme or degrees awarded by different institutions of higher education in the same or different Countries are equivalent. When not considered complete, equivalence is often qualified as *substantial equivalence*.

Erasmus

A European programme included since 1994 under the umbrella of the wider Socrates programme. "Erasmus" started in the late '80s as "European Action Plan for the Mobility of University Students" and developed through several consecutive programmes, mainly - but not only - connected with students' exchange.

ESOEPE

European Standing Observatory for Engineering Profession and Education.

EUCEET

European Civil Engineering Education and Training, a Thematic Network operative in 1998-2001.

Eurlng

A title conferred by FEANI to an individual qualified to enter their register of Professional Engineers.

European Higher Education Area (EHEA) (see *Bologna Declaration*)

European Higher Education System (EHES) (see *Bologna Declaration*)

Evaluation

The process of examining and judging.

Examination (See also *Assessment*)

Normally formal written and/or oral tests taken during or after the end of a course unit. Other assessment methods are also in use.

Fachhochschule (see Annex 2-DE)

FEANI

European Federation of National Engineering Associations.

Fellowship (See *Scholarship*)

Field of study (See also *Branch of Study*)

The main subject area of a study programme (e.g. Engineering). Within a *field of study* there may be different *branches*.

Franchise

The situation where an institution agrees to authorise another institution (nationally or internationally) to teach an approved programme whilst normally retaining overall control of content, delivery, assessment and quality assurance arrangements.

Grade (or Mark)

An evaluation in the form of a letter or number given to a student after an examination, test, paper, project, at the completion of a course unit in order to indicate the level of proficiency demonstrated by that student.

GPA

Grade Point Averaging scheme, used in some US universities.

Graduate or Postgraduate studies

A course of study following a first cycle degree and usually leading to a second cycle degree.

Grande Ecole (see Annex 2-FR)

Grant (See *Scholarship*)

Harmonisation (see also *Convergence*)

The process of increasing compatibility and comparability of educational systems and/or outcomes of similarly aimed study programmes.

H3E – Higher Engineering Education for Europe

Higher Engineering Education for Europe, a *Thematic Network Project* (see) operative in 1996-99.

Hochschule (see Annex 2-DE)

ICT teaching

Teaching/studying/learning making use of information and communication technology. Usually takes place in e-learning environments.

Independent Study

A learning activity run independently by the student outside the classroom (in library, at home etc). Sometimes referred to as "private study" or "individual study".

Ingenieur (see Annex 2-DE)

Innovation

The successful implementation of creative ideas.

Integrative thinking

The ability to bring a variety of factors to bear simultaneously on complex problem-solving tasks.

Interactive Media

A facility that enables for a two-way interaction or exchange of information.

Internship (see *Placement*)

Know-how

A problem-solving capability based on experience (cf. *Understanding*).

Knowledge

An imprecise term in everyday use which embraces *factual knowledge*, sometimes used to refer to anything that has been learned.

Laboratory (in educational context)

Practical class where the students perform tests or experiments and are supervised by a staff member and/or assistants.

Laurea (see Annex 2-IT)

Laurea specialistica (see Annex 2-IT)

Learning

The process whereby individuals acquire knowledge, skills and attitudes through experience, reflection, study education and/or instruction.

Learning agreement

Document required for the mobility of Erasmus students. It is concluded between the three parties involved (sending institution, hosting institution and student) and specifies the task assigned to the student for his/her study period abroad.

Contextual Learning

Contextual learning is learning beyond the classroom. With hands on experience, it stresses the development of authentic problem-solving skills and is designed to blend teaching methods, content, situation, and timing (see also *Non-formal Learning*).

Distance Learning (see also *Distance Education*)

Any form of learning in which the teachers and students are not in the same place.

Formal Learning

Learning typically provided by an education or training institution, structured (in terms of learning objectives, learning time or learning support) and usually leading to certification.

Informal Learning

Learning resulting from daily life activities related to work, family or leisure. It is not structured (in terms of learning objectives, learning time or learning support) and does not lead to certification.

Non-formal Learning

Learning which is embedded in planned activities that are not explicitly designated as learning, but which contain an important learning element. (see also *Contextual Learning*)

Learning Objectives

The specific knowledge, skills and/or abilities that students are expected to learn.

Learning Outcomes

The specific knowledge, skills and/or abilities gained by the successful completion of a unit or whole programme of study.

Lifelong Learning

All learning activity undertaken throughout life, with the aim of improving knowledge, skills and competence, within a personal, civic, social and/or employment-related perspective.

On Site Learning

See *Internship, Stage, Placement*

Open Learning System (see also *Distance learning*)

Aims at increasing educational or training opportunities especially for those excluded from traditional systems through educational, administrative, social or psychological reasons. It includes flexibility in order to improve accessibility. Often indicated by the expression "ODL - Open and Distance Learning".

Problem Based Learning (PBL)

Learning stimulated and directed by solving small scale, predominantly teacher determined problems with specified learning objectives usually within a certain subject or course, preferably performed by groups of students. The problem solving process requires the problem related acquisition of knowledge and skills and is in general not the application of previously acquired knowledge based on traditional courses.

Project Oriented Learning (POL)

Learning taking place through working in groups of students on complex problems, often real-life or research related, usually encompassing a range of (partly open-ended) problems and requiring system approaches and the integration of contents and methods of different subject areas or even disciplines.

Lecture

Theory (basic concepts or facts) or examples presented by a lecturer to an entire class of students. Typical length of a lecture is one hour.

Level

A threshold standard of achievement within a hierarchy of levels, e.g. within a qualifications framework.

Level descriptors

Specifications of generic standards or intended learning outcomes with regard to a certain level in a qualifications framework or a multi-tier educational system.

Lycée (see Annex 2-FR)

Master

Usual term for *second cycle degree* (see *degree*); it can be characterized as Master of Arts (M.A.), Master of Science (M.Sc.), Master of Engineering (M.Eng.) etc. (For its special meaning in Italian and in German, see Annex 2-IT and Annex 2-DE).

Mark (see *Grade*)

Mobility

The ability and possibility of an individual to move - and to adapt - to new environments.

Multimedia

A general term that refers to the presentation of information by integrating a variety of methods of delivery, e.g. text, video, audio, still images and graphics.

Notional Learning Time

The number of hours an average student will take to achieve specified learning outcomes and gain credits.

Open and Distance Learning (see *Distance Learning* and *Open Learning System*)

Outcomes (see *Learning Assessment*)

Parchment

The official credential or scroll testifying the attainment of a qualification.

Peer Review

External review and evaluation of the quality and effectiveness of an institution's academic programs, staffing and structure, carried out by a team of external evaluators ("peers") who are specialists in the fields reviewed and knowledgeable about higher education in general. Reviews may be based on self-evaluation (see) and on site visits (see) and refer to standards set by the accrediting organisations or on quality standards set more broadly.

Placement

A planned period of learning normally outside the institution at which the student is enrolled, where the intended learning outcomes are an integral part of his/her programme. Sometimes referred to as *Internship* or *stage*.

Placement staff

A person or persons designated by the institution to arrange and/or approve placements and support students during the placement period.

Placement provider

Persons, partnerships, companies, institutions and organisations providing opportunities for placement.

Placement supervisor/mentor

A person, designated by the placement provider, who is responsible for the supervision of the student while on placement.

Politecnico (see Annex 2-IT)

Polytechnic (see Annex 2-UK)

Potential (see *Ability*)

Prerequisites

Any prior conditions or specific courses that must be fulfilled before access to another programme or part of programme.

Profession

An activity, access to which, the practice of which, or one of the modes of pursuit is subject, directly or indirectly, to legislative, regulatory or administrative provisions concerning possession of specific higher education (and possibly training) requirements.

Regulated Profession

A profession which is subject to rules set by national legislation.

De facto/ De jure **Professional Recognition** see under *Recognition*

Profile

List of attributes for specific competencies.

Study Programme

A study programme refers to a set of course units or modules to be taken in order to acquire a specific set of credits.

Convergence of programmes (see also *Harmonisation*)

Increasing similarity between the final outcomes of courses, even if the processes of achieving these outcomes differ (see *Bologna Declaration*).

Intensive Programme (see *Intensive Course*)

Full Time Study Programme

Programme that can be completed in the minimum stipulated time.

Part Time Study Programme

Programme that is planned to be completed in a longer period than the stipulated one.

Project

In general, a set of planned, interrelated activities aimed at achieving defined objectives. In Engineering education it may also be a study task developed by one or more students.

Qualification

A generic term that usually refers to an award granted for the successful completion of a study programme, in accordance with the standard set by an institution of education in a particular field of study.

Higher Education Qualification

Any degree, diploma or other certificate issued by a competent authority attesting the successful completion of a higher education programme.

Qualification giving access to higher education

A certificate issued by a competent authority attesting the successful completion of an education programme giving the holder the right to be considered for admission to higher education.

Professional Qualification

The set of requirements necessary for access to a profession, especially a regulated profession.

Quality in higher education

The extent to which a course, the teaching activities and the provider's facilities help students achieve worthwhile learning goals.

Quality Assessment (QA) (see also *Accreditation*)

Process usually carried out by an external body. QA assesses the performance of a Higher Education Unit against written objectives that might be determined solely by the Higher Education Unit or by agreement between it and the Assessing Authority.

Quality assurance

The process by which an institution maintains the quality of its provision by planned and systematic actions.

Recognition

The provision by which a body or institution (the recogniser) considers another body or institution (the recognised) appropriate or competent for a certain purpose.

Academic Recognition

A formal acknowledgement, by a competent authority or a higher education institution, of academic qualifications as an indication of the capabilities obtained in a study programme or part of it. Such recognition may refer to an individual or be included in a recognition agreement between education institutions or authorities. Usually this is sought as a basis for access to further studies (cumulative recognition) or as a recognition allowing some exemptions in a programme offered by the host institution (recognition by substitution, such as in *ECTS* (see)).

Competent Recognition Authority

A body officially charged with making binding decisions on the recognition of qualifications.

Professional Recognition

A distinction can be drawn between *De facto Professional Recognition* and *De jure Professional Recognition* (see below).

De facto Professional Recognition (cf. *de jure Professional Recognition*)

Refers to situations where the profession is not regulated. In that case, after the completion of a study program, Engineers may be recognised on the basis of their academic degree.

De jure Professional Recognition (cf. *de facto Professional Recognition*).

A formal acknowledgement by a competent authority of the professional qualifications and/or capabilities of individual applicants to practice their profession at a specified level of responsibility. It refers to the *right* to practice and the professional status accorded to a holder of a qualification.

Sandwich Course

A study programme when periods at the university are alternated with periods in industry.

Scholarship (Fellowship, Grant, Studentship)

Financial support provided to a student to cover, in total or in part, fees and/or living expenses. It may come from national governments, charitable foundations or private sectors.

SEFI – Société Européenne pour la Formations des Ingénieurs

European Society for Engineering Education.

Self-evaluation

The review and evaluation by an Institution of the quality and effectiveness of its own academic programs, staffing and structure, based on standards set by an outside quality assurance body, carried out by the institution itself. Self-evaluations usually are undertaken in preparation for a quality assurance site visit by an outside team of specialists. Results in a self-evaluation report (see *Peer Review*).

Self-study material

Instructional materials used for study with little or no teacher involvement. These can include books, videotapes, computer softwares, etc.

Semester

Half an academic year.

Seminar

Didactic activity in which the teacher and/or the students select and discuss a particular topic or subject.

Site visit

Evaluation by a team of peer reviewers who examine the institution's self-evaluation, usually including interview with faculty, students and staff; and examine the structure and its academic performance.

Skill

The ability to carry out a task properly, correctly and/or efficiently. An organised and co-ordinated pattern of mental and/or physical activity in relation to an object, person, event or display of information. Skills may be described as perceptual, motor, manual, intellectual, social, etc., according to the context or the most important aspect of the skill pattern.

Core skills

Those skills which are needed in a wide range of tasks and which are essential for a successful performance in those tasks.

Measurable skills

The skills for which there are clear performance criteria.

Transferable skills

Skills which can be used in different work and learning environments, in other words, which can be transferred from one situation to another.

SOCRATES

European Commission programmes on Education, started in 1994.

Specialty (see also *Branch*)

Can be used as a synonym for *Branch* with particular reference to "new" branches.

Stage (see *Placement*)

Student

A person officially enrolled in a part-time or full-time study programme.

Studentship (see *Scholarship*)

Subject

A taught course, sometimes used instead of *Course Unit*.

Substantial equivalence (see under *Equivalence*)

Syllabus (cf. *Curriculum*)

List of topics (content) of a *Course Unit*. In the USA it is also used for the content of a *Study Programme*.

Technische Hochschule (See Annex 2-DE)

Technische Universität (see Annex 2-DE)

Term

A part of an academic year (usually a third).

Thematic Network Projects

A co-operation between departments of higher education institutions and other partners (e.g. academic organisations or professional bodies). The main aim of these programmes is to enhance quality and to define and develop a European dimension within a given academic discipline or study area. Alternatively, they can investigate a topic of an inter- or multidisciplinary nature, or other matters of common interest. Co-operation within Thematic Networks is expected to lead to outcomes which will have a lasting and widespread impact on universities across Europe in the field concerned.

Thesis

A formally presented written report, based on independent work, which is required for the award of a degree (generally a second cycle degree). In the case of a doctorate it must contain elements of original research.

Training

Systematic instruction and programs of activities and learning for the purpose of acquiring skills for particular jobs. It is worth emphasising the importance of integrating education and training and that there is no clear dividing line between the two (see also *Education*).

Transcript

The official record or breakdown of a student's progress and achievements. Many modular credit-based education systems employ detailed transcripts that show the individual grades for units undertaken.

Transferability

Condition that favours the recognition of vocational or academic degrees and study credits in situations other than those in which they are originally awarded, including the recognition of credits and studies by different educational institutions.

Transparency

The public visibility necessary to identify and compare the value of qualifications and procedures at sector, regional, national and international levels.

Tuning

Tuning Educational Structures in Europe, a European Union financed project operative in 2000-2002.

Tutorial

Didactical activity with a relatively small number of students per staff member, often involving problem solving. Students are expected to take an active part.

Undergraduate studies

A course of study leading to a first cycle degree. (See Annex 1)

Understanding (Cf. *Know-how*)

The capacity to use scientific concepts creatively in problem-solving', for example in explaining new phenomena, designing new artefacts, diagnosing unfamiliar faults and determining how to correct them, asking searching questions, etc.

Università telematica (see Annex 2-IT)

Universität (see Annex 2-DE)

University

An institution officially recognised for the purpose of providing higher education.

University of Applied Sciences (see Annex 2-DE)

Virtual University

A university that caters to distance learners and has no physical classrooms.

Validation

May refer to a study programme or a process of informal/non-formal learning.

Validation of a study programme

The process by which an awarding institution judges that a programme of study leading to an award is of appropriate quality and standard. This can be a programme of its own or that of a linked or subordinate institution.

Validation of informal/non-formal learning

The process of assessing and recognising a wide range of skills and competencies which people develop through their lives and in different contexts, for example through education, work and leisure activities.

Vocational Education and Training

Education and Training which aims to equip people with employable skills and competences.

Web-based Education (See *Internet Course*)**Workload**

The extent of time for all learning activities required for the achievement of specified learning outcomes.

MAIN SOURCES

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