

# Commission des Titres d'Ingénieur

# **Self-Evaluation Guide for Engineering Education Programmes**

# **Outline**

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#### **Self-Evaluation Guide for Engineering Education Programmes**

#### **Outline**

#### A. Vocation & organisation: establishment, school, education & training

The school has objectives, an organisation and material resources which are consistent with its validated vocation.

#### A 1 GENERAL POLICY & STRATEGY

The school has both an overall vocation and specific objectives for training its graduates. Both the vocation and the objectives are clear and coherent within the school's educational context. The school fulfils this vocation and attains these objectives.

#### A 2 EDUCATION & TRAINING POLICY

The education and training of graduates is completed by a coherent and diversified set of high-level education/training courses designed in accordance with the school's vocation.

#### **A 3 IDENTITY & AUTONOMY**

The school's identity is clearly-defined and recognizable, as is its status as an independent legal entity.

#### **A 4 ORGANISATION & MANAGEMENT**

The organisation of the school ensures that the school's educational development plan and its training programme are carried out successfully. The organisation is supported by efficient, transparent decision-making processes.

#### A 5 IMAGE, REPUTATION & COMMUNICATIONS

The school ensures that it is attractive to its various partners and that its image is linked to its educational development plan, as well as to its regional, national and international standing. Communications, which are coherently organised both inside and outside the school, contribute to the enhancement of the school's reputation.

The school provides sufficient up-to-date and objective information of quality about the school, its proposed educational study programmes and the degrees awarded.

#### **A 6 HUMAN RESOURCES**

The people employed by the school enable its educational development plan to be successfully defined and attained.

#### **A 7 MATERIAL RESOURCES**

Various material resources enable the educational development plan to be successfully carried out.

#### **A 8 FINANCIAL RESOURCES**

The school's financial operations are organised in such a way as to ensure judicious use of available financial resources.

#### B. OPENNESS & PARTNERSHIPS: establishment, school, education & training

Both the school and the establishment fully acknowledge that their quality is a consequence of two essential factors: broadening the educational programme and working in partnership with other players. The school provides links between the educational programme and the different partners who support it. (Cf. F 3 Openness towards other players)

#### **B 1 RELATIONS WITH INDUSTRY**

The school is attentive to and orients its educational development plan to coincide with foreseeable changes in its related professional context. (Cf. B 2 Relations with Research Organisations)

#### **B 2 RELATIONS WITH RESEARCH ORGANISATIONS**

Links with internal and external research organisations allow the school's educational development plan to be accomplished.

#### **B 3 EUROPEAN & INTERNATIONAL LINKS**

The school's international position and outlook guarantee student and staff mobility. European and international recognition of the school should allow the students and staff access to learning at a multicultural level. This is an important factor in the current context of economic globalisation and should, in turn, enhance managerial recruitment opportunities. European and international partnerships compel the school not only to provide quality teaching programmes, but also to act as an acceptable host establishment for international students.

#### **B 4 RELATIONS ON NATIONAL LEVEL**

The school actively seeks recognition on a national level.

#### **B 5 LINKS WITH LOCAL AREA & REGION**

The school initiates and maintains long-lasting and reciprocally beneficial links with local companies, local authorities and local education/training and research organisations.

#### **C. STUDENT ADMISSION**

Student admission for integrated master degrees (presented by specialization where applicable). The school admits students in accordance with its vocation and objectives (Cf. D 1 Education & Training Objectives and D 2 Anticipated Skills)

#### **C 1 STRATEGY & OBJECTIVES**

The school formulates its admissions policy and strategy in such a way as to achieve its education and training objectives.

#### **C 2 ORGANISATION & ADMISSION METHODS**

The organisation of admission to the school is coherent with its educational and professional objectives. The school organises admission in a rigorous manner and provides clear information on the subject to the general public.

#### C 3 ADMISSION ROUTES (FIELD, LEVEL, SELECTIVITY, DIVERSITY)

Criteria for admission are coherent with both the school's education/training programme and with employment prospects.

Admission objectives and employment prospects are clearly publicised.

The school examines both the breadth and the level of the admission candidates' former studies, particularly in the basic sciences relevant to the diploma/degree.

The school verifies that the candidate's previous studies/training and abilities will allow him/her to attain the school's educational objectives, to be awarded the corresponding degree/diploma and thus to be able to become a practising engineer. The school ensures that diverse educational backgrounds are represented.

#### C 4 TYPOLOGY OF CANDIDATES FOR ADMISSION

The students come from different geographical regions and represent varied social backgrounds.

#### D. EDUCATION &TRAINING FOR INTEGRATED MASTER DEGREE

Education/Training for the Integrated Master Degree (Detailed by specialisation where applicable)

#### **D 1 EDUCATION &TRAINING OBJECTIVES**

The student acquires knowledge and skills during a long period of higher education studies consisting of multi-disciplinary academic studies in addition to technological and industrial placement training. The practical experience is essential to developing concrete and practical abilities.

#### **D 2 ANTICIPATED SKILLS**

The educational and training objectives are expressed in terms of knowledge, abilities or possibly competence/skills which are either general (necessary for all engineering professions), or specific (connected to a field or to a specialization) as per defined engineering professions.

Expressing these objectives should allow the different players involved to define or fine-tune a programme of studies, the teaching methods used, and the means of assessment of the skills acquired at the end of the degree course. Defining these objectives well can contribute to the way the school communicates with all the parties involved, especially with admission candidates, graduate students, and professionals.

Point by point, this document elaborates on the Standards-Cadre criteria defined by EUR-ACE, and develops, where applicable, the orientation proposed by the CTI. This will enable the school to draft entry files for the 'Répertoire National des Capacités Professionnelle's (National Directory of Professional Skills) (RNCP) (Cf. R and O VII. 3. 4).

This document corresponds to a particular category of engineer, i.e., orientated towards study/development projects and towards project management. It can also be adapted to other engineering branches (e. g. production of goods and services).

- I Scientific and Technical Dimension
- II Economic and Industrial Dimension
- III Personal and Cultural Dimension

#### D 3 CONTENTS OF EDUCATION &TRAINING PROGRAMME (definition of programmes)

The contents of the education/training programme and of the processes associated with it should guarantee that the training objectives are attained.

#### D 4 EDUCATION &TRAINING PROGRAMME (implementing the programme)

The school implements the education/training programme in accordance with the European directives.

It develops teaching methods adapted to its objectives.

It verifies the results obtained and monitors the students' progress.

#### **D 5 INDUSTRIAL EXPERIENCE (PLACEMENTS)**

Industrial experience, which is especially emphasised, is considered of prime importance in the training of an engineer.

# D 6 HIGHER EDUCATION VIA APPRENTICESHIP & CONTINUING PROFESSIONAL DEVELOPMENT LEADING TO INTEGRATED MASTER DIPLOMA/DEGREE (Engineering)

Alternate ways of pursuing an education/training programme for an Integrated Master Degree (i.e. which are different from the traditional pathways), are also offered by the school.

#### **D 7 STUDENT LIFE**

The school considers that the quality of student life is fundamental to reaching its education and training objectives, and therefore makes a significant contribution to this aspect of its vocation.

#### D 8 EVALUATION OF EDUCATION &TRAINING PROGRAMME & RESULTS

A regular and systematic evaluation of the teaching is organised and results in making improvements where appropriate.

#### **D 9 AWARDING INTEGRATED MASTER DEGREE & DIPLOMA SUPPLEMENT**

Being awarded the title of an Integrated Master Degree makes it effectively possible for the graduate to carry out functions as a fully-qualified engineer. Having acknowledged this, the school takes appropriate measures to ensure that its academic level and the degree awarded correspond to the requirements of the profession.

#### **E. EMPLOYMENT OF GRADUATE ENGINEERS**

NB: Studies related to the analysis of professions and specific positions occupied by newly-qualified graduates can either be outsourced or carried out jointly with other establishments or organisations.

#### **E 1 PROFESSION WATCH**

The school takes measures to keep abreast of and to prospectively assess the employment situation in the relevant professional areas, as it does with regards to the positions occupied by newly-qualified graduates.

#### **E 2 PREPARATION FOR EMPLOYMENT**

The school places special emphasis on orientation and preparation for employment and on its future graduates' professional careers.

#### **E 3 GRADUATES' FIRST EMPLOYMENT**

The school ensures that its graduates' first jobs fully correspond to the objectives (set forth above).

#### **E 4 COHERENCE: ADMISSIONS, EDUCATION & TRAINING, EMPLOYMENT**

Admissions and education/training are in keeping with professional positions occupied by graduates of the school.

#### **E 5 PROFESSIONAL LIFE**

The school has set up career placement services for the students.

#### F. QUALITY MANAGEMENT & ONGOING QUALITY DEVELOPMENT

### **F 1 QUALITY MANAGEMENT POLICY**

The school requires high standards of quality in the administration of its activities and applies the European recommendations in matters regarding quality.

#### **F 2 INTERNAL QUALITY MANAGEMENT**

The school reviews and evaluates its own management practices and raises questions as to the quality and possible improvements in the results of its activities.

## F 3 OPENNESS TOWARDS INTERESTED PLAYERS: for each party concerned

The school has identified the main players concerned: primarily, companies (large corporations, small and medium-sized companies, companies starting up), the professional environment, society and the state, human resources and students. The school is also attentive to other interested players: other local establishments, foreign establishments, and regional public authorities.

Openness to interested players guarantees that the school's quality management procedures are carried out in a collaborative way.

# F 4 EXTERNAL QUALITY ASSURANCE (CTI)

The school conforms to the External Quality Assurance Procedures set up and required by the CTI.

# **F 5 OTHER EXTERNAL EVALUATION & CERTIFICATION**

The school meets the evaluation requirements of other outside evaluation organisations.