



# GUIDE TO THE FEANI EUR ING REGISTER

(“EUR ING GUIDE”)

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Supersedes all previous editions of the Guide to the FEANI Register EUR ING**

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## TERMINOLOGY USED IN THE EUR ING GUIDE

<u>Education:</u>	Learning leading to a diploma in an engineering programme, provided by a university or another establishment of higher education, accepted by FEANI.
<u>University Programme/Training:</u>	<p>The "intrinsic" part of the engineering programme, i.e. learning in engineering through lectures, discussions, reading, exercises, laboratory work, research, engineering project etc., provided by a university or another establishment of higher education, accepted by FEANI, as being of university level.</p> <p>This can include Training which is defined as follows: The "extrinsic" part of the engineering programme, i.e. learning through a programme - the aim of which is to increase knowledge through work within technical fields, for instance on a construction site, in a factory, laboratory, office or other working environment, defined, supervised and approved by a university or another establishment of higher education - as being a "practical" part of engineering programme.</p>
<u>Professional Competence:</u>	A professionally competent person has the attributes necessary to perform the activities within the profession to the standards expected independently in employment or practice. Six competence categories have been defined: see 3.1.
<u>Continuous Professional Development:</u>	Continuous Learning gained during working life after the completion of <u>Education</u> (as defined above). CPD is defined as a process by which <u>Professional Competence</u> is gained, being aware of current development in engineering and particularly in their chosen specialism. CPD can be acquired in a variety of ways – e.g. reading, seminars, meetings, discussions, further study, etc.
<u>Professional Engineering Experience:</u>	The ability to apply the learning outcomes gained during study to real world situations. These are assessed as working experiences or learned competences.
<u>Formation:</u>	The totality of learning through <u>Education</u> and <u>Professional Engineering Experience</u> and <u>CPD</u> .

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N. B.: In this text, "he" and "his" are taken respectively for "he/she" and "his/her".



## **INTRODUCTION**

### **1.0 FEANI**

The European Federation of National Engineering Associations (short title FEANI) brings together national engineering associations from European countries as National Members. It was founded in 1951. The headquarters are located in Brussels.

FEANI's objectives are described in the Article S5 of the FEANI Statutes ("Purposes").

In pursuit of its aims, FEANI maintains a EUR ING Register to which individuals may be admitted provided they meet the specified minimum requirements.

## **THE FEANI EUR ING REGISTER**

### **2.0 Purpose**

The purpose of the EUR ING Register is:

- a. To facilitate the movement of practising engineers inside and outside the FEANI ambit and to establish a framework of mutual recognition of qualifications in order that engineers who wish to practice outside their country can carry with them a recognition of ability.
- b. To give sufficient data about the formation of the individual engineer for the benefit of a prospective employer.
- c. To encourage a continuous updating of the quality of engineers by setting, monitoring and reviewing standards.
- d. To provide a source of information about the great variety of formation systems in Member Countries.

### **3.0 Concept**

Educational and professional systems in Europe vary considerably. Their value is judged by FEANI by the professional competence of the engineer who emerges from them. Differing systems can coexist.

A description of the professional competence expected by FEANI is given in article 3.1 below.

#### **3.1 Professional Competence**

Engineers aware of their professional responsibilities should strive to achieve competence in 6 categories. These are:

1. Knowledge and Understanding
  - A thorough knowledge of the principles of engineering, based on mathematics and a combination of scientific subjects appropriate to their discipline
2. Engineering Analysis
  - An ability to apply appropriate theoretical and practical methods to the analysis and solution of engineering problems.

3. Investigations
  - An awareness of continuous technical change and the cultivation of an attitude to seek innovation and creativity within the engineering profession.
4. Engineering Design
  - Knowledge of the use of existing and emerging technologies relevant to their field of specialization.
  - Knowledge of standards and regulations appropriate to their field of specialization.
5. Engineering Practice
  - A general knowledge of good engineering practice, in their field of engineering and the properties, behaviour, fabrication and use of materials, components and software.
6. Transferable Skills
  - An understanding of the engineering profession and an obligation to serve society, the profession and environment, through commitment to apply the appropriate code of professional conduct.
  - An ability in engineering economics, quality assurance, maintainability, and use of technical information and statistics.
  - An ability to work with others on multidisciplinary projects.
  - An ability to provide leadership embracing managerial, technical, financial, and human considerations.
  - Communication skills and an obligation to maintain competence by continuous professional development (CPD).
  - Fluency in European languages sufficient to facilitate communication when working throughout Europe.

#### Level of Competences

As a recommendation for a professional level of competences the descriptors of the European Qualifications Framework (EQF) level 6 or above can be used. This is coherent to several frameworks like Washington Accord (IEA)<sup>1</sup>.

#### **4.0 Structure**

FEANI considers that a minimum level of initial engineering education is required.

However, in order to achieve a minimum acceptable level of professional competence, Professional Engineering Experience is additionally necessary. Both, Engineering Education and Professional Engineering Experience combine to a required level of Engineering Formation.

Therefore, FEANI lays down minimum standards for required Education, Experience and thus Formation. These standards are the threshold which opens the right to EUR ING registration. They are defined in articles 5.2 and 5.3 below.

Accordingly, the EUR ING Register comprises

Registration of European Engineers, EUR ING, on the basis of formation. The registration takes place on FEANI European level in responsibility of the European Monitoring Committee.

Registration as "European Engineer" gives the right to be called European Engineer in the language of the National Member and to use the professional title EUR ING (invariable in all member countries) with the national title, if lawful.

## **5.0 Minimum standards**

The standards stipulated below are the minimum required for admission to the EUR ING Register and represent stages towards the professional competence described in Article 3.1.

### **5.1 FEANI INDEX - List of Schools and Programmes**

FEANI has set up and maintains a List of Schools and Programmes - the FEANI INDEX - from FEANI Member Countries which meet the FEANI education standard and are accredited or officially recognized at national level. They must have curricula making it possible for candidates to develop towards professional competence as described in 3.1. In this list the official duration of the education in FEANI terms, the academic title and the characteristics of each programme are specified.

In an International Section, the FEANI INDEX furthermore lists countries outside the FEANI area having special agreements with FEANI about mutual recognition of accreditation systems. This is in particular the IEA Washington Accord.

### **5.2 Minimum standards for registration**

In FEANI terms, the elements of engineering formation are the completed engineering Education with the elements **B**, and **U** and Professional Engineering Experience **E**, where:

- B** represents a high level of secondary education validated by one or more official certificates awarded at about the age of 18 years.
- U** represents a year (full-time or equivalent) of approved University Programme either given by a university or other recognized body at the university level, recognized by FEANI and included in the FEANI INDEX - the "List of Schools and Programmes".
- E** represents a year (full-time or equivalent) of relevant Engineering Experience (see 7.2 b) assessed and approved by a body accepted by FEANI.

The minimum standards for Education are based on the following criteria:

**B + 3 U**

i.e. the completion of an engineering programme, containing at least a three-year university programme/Bologna 180 ECTS, based on entrance condition B.

For different categories of Education, FEANI considers different formation standards, those are described in 5.3 and 5.4.

### 5.3 Minimum standards for normal cases for registration as EUR ING

#### 5.3a Education (Schools and Programmes) is listed in FEANI INDEX

The minimum standard for engineering formation is the balance of

**7 years**

comprising a minimum for engineering education of **B + 3 U** (official programme duration) – 180 Bologna ECTS - and a minimum for Professional Engineering Experience of **2 E**.

The balance up to 7 years can be covered by an appropriate number of E years

**B + 3 U + 2 (U / E) + 2 E**

**Note:** For applicants whose education took place in the FEANI area (=FEANI member countries) but with programmes that are not listed in the FEANI INDEX, case 5.4b applies.

#### 5.3b Education outside of FEANI area

For applicants whose engineering education took place outside of FEANI area, the Programme must be officially recognized in a FEANI Country (by the government, professional associations, NMC) as equivalent to one listed in the INDEX (e.g. programmes in the Washington Accord). The same minimum balance of 7 years of engineering formation and the same formula for formation as in 5.3a applies:

**B + 3 U + 2 (U / E) + 2 E**

FEANI does not give general decisions about whether a particular local diploma or degree is regarded as equivalent to those accepted in FEANI countries, except for accreditation systems accepted by FEANI and/or listed in the International Section of the FEANI INDEX (Washington Accord).

### 5.4 Minimum standards for other cases for registration as EUR ING

Other cases are applicants who have gained the status of a professional engineer in a FEANI Member Country without having had an engineering education covered by 5.3.

#### 5.4a University graduates with Education in Mathematics or Natural Sciences

Applicants holding a university degree in Mathematics or Natural Science from a School listed in INDEX or, if outside of FEANI area, officially recognized in a FEANI Country (by the government, professional associations, NMC) as equivalent to one listed in the INDEX are also eligible for registration if they can prove a minimum of 8 years of Professional Engineering Experience and therefore meet the standard:

**B + Education + 8E**

#### 5.4b Special Cases

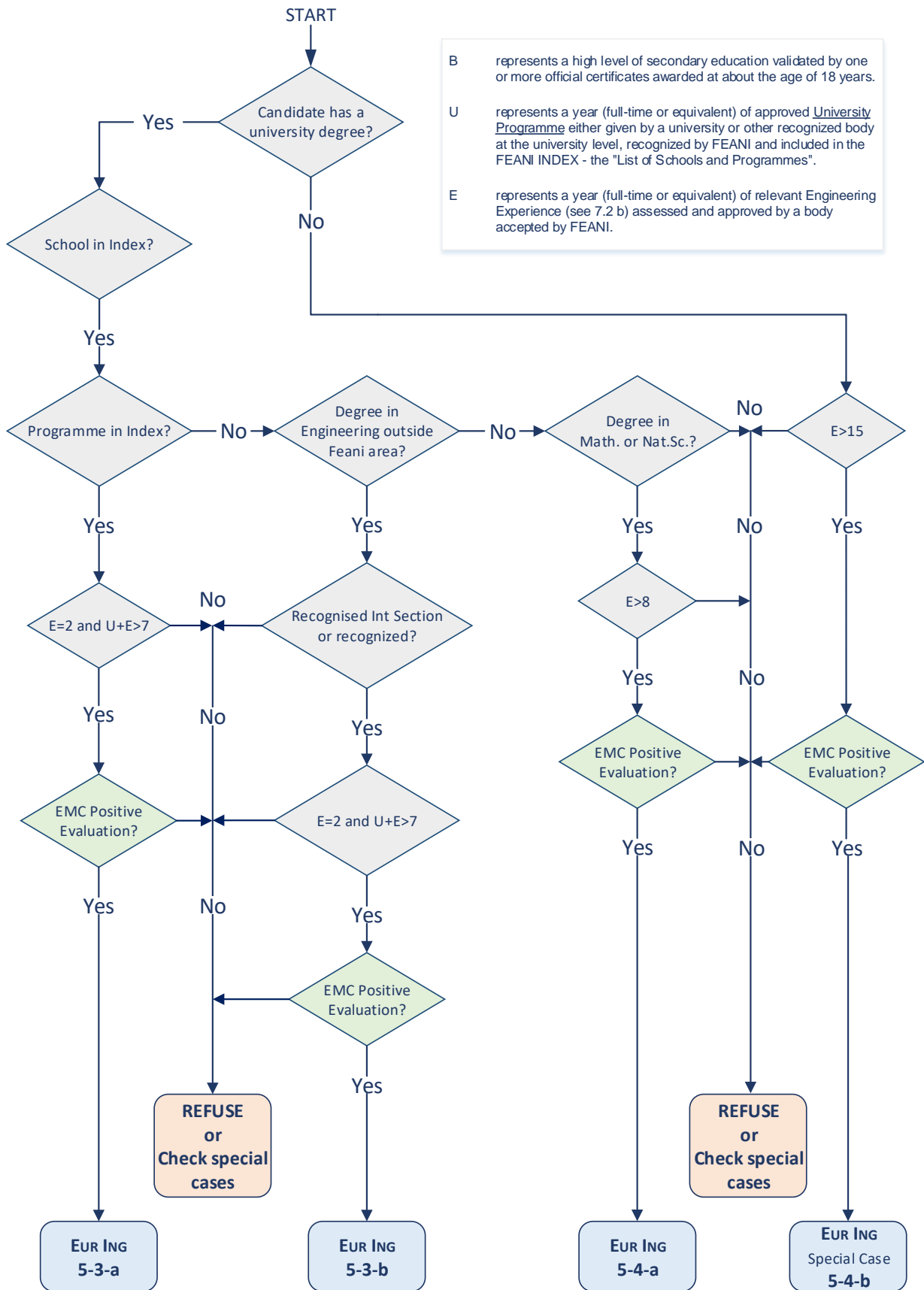
There are cases where the professional engineering performance required for registration has been developed on the basis of a type of education not covered by 5.3 and 5.4a). **This case also applies for applicants whose education took place in the FEANI area (=FEANI member countries) but with programmes that are not listed in the FEANI INDEX.**

Nevertheless, it is possible to consider such alternative routes. Very strict procedures, however, have then to be followed, (see 7.1), and the applicant must have at least 15 years of Professional Engineering Experience recognized by FEANI:

15E
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The different routes as described in 5.3 and 5.4 are visualized in the below diagram:



## OPERATION OF THE EUR ING REGISTER

### **6.0 FEANI bodies**

The European Monitoring Committee, EMC, of FEANI (see 6.1) is responsible for the EUR ING Register and for modification of the standards in the light of changing technology or other developments. Standards are accordingly reviewed at regular intervals of not more than 5 years.

The EUR ING Register is maintained by The European Monitoring Committee, EMC, assisted by National Monitoring Committees, NMCs (see 6.2) and is administered by the FEANI Secretariat General which keeps records of the registrations.

#### **6.1 The European Monitoring Committee, EMC**

The European Monitoring Committee, EMC, is a European body consisting of independent experts coming from but not representing the various parts of Europe.

The EMC decides on registration as EUR ING and validates the work of the NMCs in order to maintain a European-wide standard.

The EMC approves the accreditation of Schools and Programmes in already recognized systems and advises the Executive Board on the approval of educational systems not previously recognized by FEANI.

The detailed procedures for the work of the EMC are laid down in the "*Handbook for the EMC*".

#### **6.2 The National Monitoring Committee, NMC**

The National Monitoring Committee, NMC, is a national body, established in every FEANI country, composed of representatives from national engineering associations, industry and education.

It is the task of a NMC:

- To check and review the Education background and Professional Engineering Experience of an applicant before proposing registration as EUR ING to the EMC.
- To keep the EMC well informed on the structure of engineering education and the standard of the individual Schools and/or Programmes.
- To review any changes and/or additions to the approved list of Schools and Programmes and notify the Secretariat General.

The detailed procedures for the work of the NMCs are laid down in the "*Handbook for the NMCs*".

## PROCEDURES

### **7.0 Application**

Application is open only to individuals if they are members of an engineering association represented in FEANI. Applications must be made to National Members, not directly to FEANI.

Individuals apply to be registered on the basis of formation complying with one of the categories listed in 5.3 or 5.4.

Applicants must follow the instructions using the latest EUR ING application form, the required documentation must be attached and a fee determined by the National Member must be paid.

A National Member is not obliged to support an application involving a School or Programme from another Member Country. NMs are however invited to consider all programmes that are in the INDEX.

Successful candidates will be included in the EUR ING Register centrally maintained by the Secretariat General.

Persons registered as EUR ING must abide to the “FEANI Position Paper on [Code of Conduct: Ethics and Conduct of Professional Engineers](#)“.

Any application not approved will be returned to the National Member with reasons.

#### 7.1 Checking of applications

##### a. Education

The NMC concerned checks whether the school/programme successfully completed by the candidate appear in the FEANI INDEX or are officially recognized in the country as equivalent to those listed in the INDEX.

##### b. Professional Engineering Experience

The NMC checks that the duration of the Professional Engineering Experience meets the minimum requirement and is of such a nature that one may expect the applicant to achieve the professional engineering competence as portrayed in 3.1. FEANI accordingly expects that such Professional Engineering Experience will include the following:

1. Knowledge and Understanding
2. Engineering Analysis
3. Investigations
4. Engineering Design
5. Engineering Practice
6. Transferable Skills

In order to enable the NMCs to review the applicant's Professional Engineering Experience, the application should be accompanied by a CV.



FEANI does not give general decisions about whether a particular local diploma or degree is regarded as equivalent to those accepted in FEANI countries, except for accreditation systems accepted by FEANI and/or listed in the International Section of the FEANI INDEX (Washington Accord).

## 7.2 Certificates

The registration as EUR ING is attested by a certificate prepared by the Secretariat. The certificate gives a readable and visible description of the duration and type of education. A parchment suitable for framing is also provided.

A special certificate is used for Special Cases. The formation gained will be clearly described.

## 7.3 Update of registration / validity

FEANI is the issuing body of the EUR ING professional title.

The EUR ING title may be retained as long as the holder observes the 'FEANI Position Paper on Code of Conduct: Ethics and Conduct of Professional Engineers' (see FEANI website).

However, EUR INGS that are over 70 years old are moved from the Register to a separate "passive" list as they are expected to have retired/be no longer active as a professional engineer (unless they contact FEANI to correct this).

Updates of registration may be asked, in principle every ten years, through relevant NMCs.

## 7.4 Finances

FEANI and each National Member bear the cost of the administrative work involved in operating the EUR ING Register and are entitled to recover this cost by charging fees to the applicants.

## **POINTS OF CONTENTION**

### **8.0 Cases of doubt**

All cases of doubt or difficulty, relating to individual applications, are referred to the European Monitoring Committee for decision. An individual may appeal within one month in writing against this decision to the FEANI Executive Board, whose decision is final.

Brussels, October 2013

#### Attachment:

FEANI Position Paper on [Code of Conduct: Ethics and Conduct of Professional Engineers](#)