European civil engineering
and professional qualification

The following information on Civil engineering profession in Europe is based on a survey launched in 2005 by the European Council of Civil Engineers (ECCE), on recent information collected by CNISF for Germany (VDI), Italy CNI), Spain (IIE), UK (ICE) and on information from other sources (CTI¹ and CEFI², Websites), for Belgium, Ireland (IEI) and Netherlands.

Professional regulation: definition

Professional engineers may require formal professional recognition in order to practice and/or perform certain civil engineering acts, according to each country's professional regulations. Rules for professional recognition were defined in the European Directive 2005/36/EC aiming “to promote the free movement of professionals, while ensuring an adequate level of qualification” (http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2005:255:0022:0142:en:PDF

The Directive 2005/36/EC, article 3, clarifies the rules related to the "Recognition of professional qualifications" in each European countries and applies the following definition:

"Regulated profession: a professional activity or group of professional activities, access to which, the pursuit of which, or "one of the modes of pursuit of which is subject, directly or indirectly, by virtue of legislative, "regulatory or administrative provisions to the possession of specific professional qualifications; in "particular, the use of a professional title limited by legislative, regulatory or administrative "provisions to holders of a given professional qualification shall constitute a mode of pursuit".

As far as the civil engineering profession (or some acts of civil engineering) is concerned, this profession is regulated in some European countries (typically the southern and eastern European countries) and not in others.

In countries where the profession is regulated, a professional civil engineer must be recognized (the title of engineer is protected) and registered by a Competent Authority (association, professional Order, or ministry) to practice or undertake some designated acts. Example: Greece, Italy, Portugal and Spain.

Conversely, in countries where the profession is "unregulated" any person may practice as a civil engineer. Example: France, Ireland and UK.

In addition, some countries have only protected titles for their civil engineers but do not request a registration by a Competent Authority. They would be considered, for the purposes of the application of the European Directive, as countries where the profession is regulated but “partially-regulated”. Example: Belgium, Netherland and Germany.

¹ CTI: Comité des Titres d'Ingénieur – Committee of Engineer's Titles
² CEFI: Comité d'Etudes pour la Formation des Ingénieurs – Study Committee for Engineer's Training
The following table summarizes the situation in some European countries:

<table>
<thead>
<tr>
<th>Country</th>
<th>Type</th>
<th>Qualification to practice civil engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ireland</td>
<td>Type 1a</td>
<td>Unregulated</td>
</tr>
<tr>
<td>UK</td>
<td>Type 1a</td>
<td>Unregulated</td>
</tr>
<tr>
<td>France</td>
<td>Type 1b</td>
<td>Unregulated</td>
</tr>
<tr>
<td>Belgium</td>
<td>Type 2</td>
<td>Partially regulated</td>
</tr>
<tr>
<td>Germany</td>
<td>Type 2</td>
<td>Partially regulated</td>
</tr>
<tr>
<td>Netherlands</td>
<td>Type 2</td>
<td>Partially regulated</td>
</tr>
<tr>
<td>Greece</td>
<td>Type 3</td>
<td>Regulated</td>
</tr>
<tr>
<td>Italy</td>
<td>Type 3</td>
<td>Regulated</td>
</tr>
<tr>
<td>Portugal</td>
<td>Type 3</td>
<td>Regulated</td>
</tr>
<tr>
<td>Spain</td>
<td>Type 3</td>
<td>Regulated</td>
</tr>
</tbody>
</table>

**Type 1, non-regulated:** the civil engineer's title is not protected and not compulsory and no qualification is requested, other than the degree of universities or colleges to practice civil engineering:

- Type 1a : with Chartered Engineer qualification registered by IEI (Ireland) or ICE (UK)
- Type 1b: without Chartered Engineer qualification

**Type 2: partially-regulated:** the civil engineer's title is protected by civil law and is compulsory to, but no other qualification than the degree of universities or colleges is requested to practice civil engineering.

**Type 3: regulated:** a civil engineer shall be recognized and registered by a Competent Authority, such as a Ministry, a Professional Order or a professional association, to practice civil engineering.

The rules applied to civil engineers professional qualification in accordance with the EC Directive, are detailed for each of the above European countries, in the Appendix.
APPENDIX

BELGIUM

The engineering profession is not regulated in Belgium i.e. it is not mandatory to be registered to practice the civil engineering profession. However, the Engineer's title is protected by Law dated 11 September 1993.

The Flemish Koninklijke Vlaamse Ingenieursvereniging vzw http://www.kviv.be/, KVIV, is the only professional organisation uniting the university trained engineers, having obtained a degree after 5 years of study from Flemish universities which have conferred on them the legally protected title of “ingenieur”, abbreviated “ir.”.

Within the French-speaking, the Federation Royal d'Associations Belges d'Ingenieurs Civils et d'Ingenieurs Agronomes http://www.fabi.be/ plays the same role.

FRANCE

This country has no recognition / qualification procedures for civil engineers. The engineer's profession qualification is not regulated in France.

Moreover, the title of engineer is not regulated by any law in France. Only the engineer's diploma is protected by the French law. The engineer's diplomas are accredited for each University and "Ecoles d'ingénieurs" by CTI (Commission des Titres d'Ingénieur). CTI is an independent body fully involved in the development of the European Higher Education Area, established by the French law dated 10 July 1934. http://www.cti-commission.fr/spip.php?page=sommaire-en

CTI is especially in charge to certify that a diploma issued by a University or "Ecole d'ingénieurs" corresponds to an engineering curricula complying with Bac + 5 years and with the degree of education expected for an engineer, in order to make a clear distinction with the diploma of "Technician" (Bac + 3 years). No French University or Ecole d'ingenieurs is allowed to issue an engineer diploma, which is not recorded on the official list of diplomas accredited by CTI.

Consequently the French engineers have not to make a registration at CTI. It is up to each University or Ecole d'ingenieurs to get the relevant accreditation from CTI for issuing a certified engineer diploma to students at the end of their curricula.

However, a professional insurance is required for an individual engineer (consultant for example) in regards of his liability in case of damage of the construction he designed. If a firm employs an engineer, the firm is responsible for the design of the structure of a project and its completion in the engineer's place.

The CNISF holds the French Register of Engineers, a non-regulatory register, which is a data-base listing the engineers graduated from "Ecoles d'ingénieurs" – French Engineer High School" by reference to the corresponding Alumni Associations, CNISF's members. Free access on CNISF website: http://www.cnisf.org/gestion/logon.php?operation=repertoire
GERMANY

Description

The Law protects the Engineer's title, but the profession is not regulated: to act as civil engineer in Germany, it is not necessary to be registered by a local authority or a professional Order.

However, independent engineers (Consultants) must be members of the Engineer's Chamber where they live, to practice their profession.

University degree qualification

The Bologna process introduced the two tier system: this is completely changing the German education system, but not only for civil engineers. All German universities have to follow this line and most of them are commencing this system with the enrolment of students no later than the winter semester 2005/2006.

The education offered for a Bachelor’s degree in civil engineering is open to all universities, the required duration is six, seven or eight semesters and it trains students for employment. The subsequent education for a Master's degree is also open to all universities and the required duration is two years, one and a half years, or one year - depending on the time taken to achieve the Bachelor degree. The given title of Master's Degree shall include the difference in education as "more research" or "more practically" oriented. The Bachelor degree will not have such an indication.

All new study programmes must be modularized. Their content has to be judged by the study load and credited by ECTS1. All programmes have to be accredited by agencies, which are officially accredited by the government.

In the field of civil engineering there are two such agencies:

- ASIIN the accreditation agency for education in engineering and natural sciences and informatics under the umbrella of (but not a section) of the German VDI (Verein Deutscher Ingenieure);

- the agency ASB of study programmes in building and construction is an agency directed by the German building industry and the Chambers of Engineers of the Länder.

Both agencies follow the recommendations of the German building associations and companies to provide an education of at least three and a half years for a Bachelor degree and of at least five years for a Master degree in Civil Engineering.

Engineer association: VDI (Verein Deutscher Ingenieure)

VDI is the main professional association for engineers which registers 150 000 members. It plays an important role for research, innovation and technical development. Among its members, 12 000 experts, all volunteers, are divided into 600 scientific or technical committees. VDI is an important association for technical regulation: 2 000 directives or recommendations has been published by VDI.

VDI is developing with other 15 members of FEANI, the Engineer ING card – a kind of professional passport - to facilitate the mobility of engineers in Europe and abroad.
GREECE (GR)

1) The Technical Chamber of Greece is the official organisation to certify that A.C.E.G. is the only association to represent civil engineers all over Greece. Registration by the Technical Chamber in Greece is requested by law.

2) The Association of Civil Engineers of Greece (ACEG)

Association of Civil Engineers of Greece (A.C.E.G.-Σ.Π.Μ.Ε.) has 17,000 diploma civil engineers as members from every part of Greece.

The A.C.E.G. was established in 1961 as a private civil association by Court permission. There are not associated societies but local branches in the main cities of Greece.

ACEG operates as an independent scientific non-profit organisation. Its goal is to further enhance the scientific level of Greek civil engineers, to defend their financial & professional interests and to participate in the study and application of national programmes, which will improve the technical infrastructure of Greece.

Address and contact details: The Association of Civil Engineers of Greece (ACEG) Address: 89 Kallirois Street, 11745 Athens, Greece Phone: (+30) 210923 8170 Fax: (+30) 2109238800 E-mail: spme@tee.gr Internet: www.spme.gr

IRELAND

The professional title and the engineer's professional qualification do not require to be registered by a professional Order.

However, a registered professional title from the Institution of Ireland Engineers (IEI), "the Chartered Engineer CEng MIEI" provides an internally recognized formal recognition of the engineer's professional competence.

To obtain the title of Chartered Engineer, the candidate has to achieve the 2 following steps:

1. Proof of the required educational base: to be graduated as "Bachelor of Engineering with honor's" after 4 university years (from 2013, the training period will be increased up to 5 years);

2. Proof of professional experience: assessed by his peers, after 4 years of practice.

The Irish Law protects the title of Chartered Engineer. It is internationally recognized.

The Chartered Engineer adheres to the Engineers Ireland code of ethics in all areas of their engineering practice. Among the 20 000 members of Engineers Ireland, 3500 are Chartered Engineers.

For further information, look at: http://www.engineersireland.ie/membership/registered-titles.aspx
ITALY

In each region, there is an "Order of engineers", which registers the engineers of this region. At the State level, the National Council of Engineers regulates the regional Orders under the National Council of Engineers (CNI). It is mandatory for an Italian engineer to be registered by a professional Order to practice some activities ruled by law and to sign official documents such as official construction drawings.

1.1 Description
The steps to become Civil Engineer in Italy are the following:

1.2 Steps to Achieve the Recognition / Qualification
Submit elements to: Ministero della Giustizia
Next step: Evaluation of the dossier by a Conference of Services formed by representatives of the Competent Ministries and of the professional Bodies
Next step: Award of a direct recognition decree or a decree subject to adaptation measures.
Final recognition by: Ministero di Giustizia (if no adaptation measures are required); Ministero di Giustizia and Consiglio Nazionale degli Ingegneri (if adaptation measures are required).

1.3 Contacts for the Recognition /Qualification Entity
Name: Ministero della Giustizia
Web address: http://www.giustizia.it/giustizia/it/mg_3_4_11.wp?tab=w

1.4 Elements to submit
- Original academic diploma (certified copy with legal translation is admitted)
- Original academic diploma with disciplines: (certified copy with legal translation is admitted)
- Other education diplomas (not mandatory but suggested)
- Curriculum Vitae (in Italian)
- Registration in homeland professional association
- Other documents: (application in Italian)
  a) Study plan certifying the content of the exams, in Italian; the legal translation is useless. - (document particularly recommended for engineers);
  b) Documentation on the professional experience – compulsory when the profession is not regulated in the Member State of origin, strongly recommended in other cases to reduce the adaptation measures;
  c) Details relevant to documents and modalities to submit them are below the form of the application on the site of the Ministero at the following page: http://www.giustizia.it/resources/cms/documents/Com_europea.rtf

1.5 Minimum conditions to be accepted
- Minimum number of university years: 5 years for level A (Civil Engineer), 3 years for level B (Junior Civil Engineer)
- Minimum years of professional activity:
  a) NO, if the profession of Civil Engineer is regulated in the Member State of origin and the candidate holds the requirements to have access/exercise the profession in that State.
  b) NO, if the candidate holds a regulated education certified by the competent authority of the Member State of origin.
  c) 2 years, if coming from a Member State not regulating the profession and not holding a regulated education.
NETHERLANDS

The engineering profession is not regulated in Netherlands. However, the official academic title "ingenieur (ir/ing)" is protected by law.


University engineering education entails 5 years study and the education of the universities of professional education entails 4 years study. Graduates of engineering faculties at Dutch universities of technology are awarded the degree of 'Master of Science' in Dutch 'ingenieur' (abbreviation 'ir.') and are allowed to use the title ir., which is protected by law. Graduates of the Dutch universities of professional education are awarded the degree of 'Bachelor of Engineering’ in Dutch 'ingenieur' (abbreviation 'ing.') and are allowed to use the title ing., which is protected by law. KIVI NIRIA has only one grade of membership -'member'- and there is no professional title.

PORTUGAL

To act as an engineer in Portugal, it is mandatory to be registered by the Order of Civil Engineers.

1.1 Description
The steps to obtain the title of “Engenheiro Civil” in Portugal are the following:

1.2 Steps to Achieve the Recognition / Qualification
Submit elements to: Ordem dos Engenheiros (Order of Engineers)
Final recognition by: Ordem dos Engenheiros

1.3 Contacts for the Recognition /Qualification Entity
Name: Margarida Gomes - Mmgomes@ordemdosengenheiros.pt
Web address: http://www.ordemengenheiros.pt/

1.4 Elements to Submit
- Copy of Original academic diploma;
- Copy of Original academic diploma with disciplines;
- Other education diplomas;
- Curriculum Vitae;
- For foreigners: registration in homeland professional association.

1.5 Minimum Conditions to be Accepted
- Number of university years: theoretical is 4 years but it is difficult with less than 5
- Minimum years of professional activity: theoretical is zero but it is strongly recommended to have some years of professional activity
SPAIN

An engineer must be registered by the Ministry of Public Works

1.1 Description
The steps to obtain the title of “Ingeniero de Caminos, Canales y Puertos” in Spain, are the following:

1.2 Steps to Achieve the Recognition / Qualification
Submit elements to: Public Works Ministry - Ministerio de Fomento
Final recognition by: Public Works Ministry - Ministerio de Fomento

1.3 Contacts for the Recognition /Qualification Entity
Name: Public Works Ministry - Ministerio de Fomento
Web address: www.fomento.es

1.4 Elements to Submit
- Original academic diploma
- Original academic diploma with disciplines
- Curriculum Vitae
- For foreigners: Registration in homeland professional association

1.5 Minimum Conditions to be Accepted

Number of university years: 5+
UNITED KINGDOM

To get employment as a civil engineer in the UK, an engineer does not have to be a Chartered Civil Engineer. Most employers would normally ask to see academic papers and a CV of professional experience. However, if the engineer was a Chartered Civil Engineer, the employer would have the knowledge that the person's academic and professional qualifications had been reviewed by the ICE qualification process which includes Professional review by peers. To become a Chartered engineer it is necessary to be sponsored & proposed by members before being elected to become a Member. Some Members have been expelled for unprofessional conduct.

1. ICE PROFESSIONAL QUALIFICATION

1.1 Description
As described above, a civil engineer does not need permission or registration to work in the UK. However, if they wish to obtain ICE professional qualification they will need to achieve the following 3 steps:

1. Proof of the required educational base. This is decided by ICE on the basis of them holding an accredited degree at the required level or by passing an academic assessment of their unaccredited qualifications to the same level.

2. Proof of the required professional experience. There are a number of areas of experience which the candidate must prove they have had before they can apply for Professional Review. This is proved either by completion of a formal ICE training agreement, or by submission of a career appraisal.

3. Successful completion of a Professional Review. This application requires the submission of reports and sponsors. The Review is a face-to-face interview with experienced ICE Members in which the candidate must demonstrate that he meets the required standard of competence in the 9 attributes for the grade they wish to obtain, followed by a short written assignment.

Details of this route and the attributes required are available in ICE 3001A Routes to Membership (MICE).

The civil engineer must pay annual subscription fees to ICE to maintain their membership, and to the Engineering Council (paid via ICE) to maintain their registration, and must abide by our code of conduct.

Steps to achieve the Recognition / Qualification
Submit elements to: Applications are submitted to ICE’s Exemption and Recognition Panel. All information about eligibility and the application process is on our website: http://www.ice.org.uk/joining/joining_european.asp
Next step: The Panel assesses the application to ensure the candidate has the required academic knowledge and that they possess the required attributes for ICE Membership
Next step: If the candidate has not demonstrated in their application that they meet ICE’s requirements, they will be offered a compensation measure of aptitude test or adaptation period.
Final recognition by: ICE and Engineering Council. When the application is approved or compensation measure successfully completed, the candidate is admitted to ICE Membership and will be registered with the Engineering Council.
1.2 Contacts for the Recognition / Qualification Entity
Name: ICE Exemption and Recognition Panel. Email erp@ice.org.uk
Web address: http://www.ice.org.uk/joining/joining_european.asp

1.3 Elements to submit
All Member States should only ask for what is allowed under the Directive as prescribed by the European Commission Code of Conduct. This specifies what can be requested and how the application process should be managed. It should be ensured that all ECCE members are familiar with this document, which can be downloaded from this page:
http://ec.europa.eu/internal_market/qualifications/general-system_guides_en.htm

- Original academic diploma: No, the code of conduct states that originals cannot be requested. ICE may ask for certified copies and certified translations of the diploma(s).
- Original academic diploma with disciplines: No, as above, originals cannot be requested. If the diploma is not accredited by FEANI, ICE may ask for the course transcripts to be provided so that ICE can confirm if the course meets the requirements.
- Other education diplomas: YES if it is second cycle or higher
- Curriculum Vitae: ICE provides an application form to assist the candidate to submit the information ICE needs to assess that the candidate meets the requirements for membership. A CV is not asked to be submitted as a separate document, but details of career history and training are requested as part of the application form.
- Registration in homeland professional association: Proof of this is requested if the profession is regulated in the candidate’s home Member State, and ICE will also contact the relevant competent authority to confirm the candidate’s registration there.
- Other documents:
  1. Certified copy of passport or ID card is required.
  2. Candidates must provide written evidence that they possess the required attributes for ICE Membership so that this can be assessed by the Panel. The application form is designed to help them provide this information.
  3. It is optional for the candidate to provide a supporting statement from a senior engineer (who can verify and support the evidence they provide about the attributes in the application form)
  4. It is also optional for the candidate to provide a record of their professional development activities (it is a requirement for Members to undertake “continuing professional development” so they will have to do this once they join ICE).

1.4 Minimum conditions to be accepted

Number of university years: ICE do not set a minimum, but there are minimum levels of qualification that correspond to the grades of membership available. These are comparable to the required levels of qualification as set out in the Directive in article 11.

Minimum years of professional activity: NO. There is no minimum number of years, however the candidates must be able to demonstrate that they possess the attributes for membership. A period of professional activity is essential to be able to obtain these attributes, but it will depend on the candidate’s career how long it takes them to achieve this.

Others:
- It is important to emphasize that for both academic qualifications and professional activity, ICE assesses the level of the knowledge and experience obtained by the candidate, rather than on the length of time it took to achieve them.
- The title or Chartered Engineer is protected which is not the case of the title of engineer in UK