



European Network for Accreditation of
Engineering Education

***The European Network for the
Accreditation
of Engineering Education (ENAAEE)
awarding the EUR-ACE[®] label
(www.enaee.eu)***

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ENAAEE - AC Member

ENAAEE authorizes accreditation agencies to award the EUR-ACE Label to engineering degree programmes they accredit, at Bachelor and Master degree level.



*Accreditation
agencies*



*B.Eng & M.Eng
Degree
programmes*

In order to be granted the authority to award the EUR-ACE Label, an accreditation agency must satisfy ENAEE that it carries out programme accreditation in accordance with the EUR-ACE Framework Standards (EFS) of ENAEE.

*Accreditation
agency*



*Respect of EUR-ACE
Framework Standards*

*Authority to
award the
EUR-ACE Label*



The origins of ENAEE ...

- *2000 – ESOEPE: European Standing Observatory ...*
- *2004 – two EU funded projects on the EUR-ACE Label: EUR-ACE (EU countries, LLP programme; PRO-EAST, partner countries, TEMPUS programme)*
- *2006 – Establishment of ENAEE*
- *2007 – First six agencies authorized to award the EUR-ACE Label*
- *2008 – EUR-ACE Spread Project*
- *2009 – Seventh agency authorized*
- *2012 – QUEECA – spreading the EUR-ACE label to Central Asia*
- *2013 - Nine agencies now authorized. Two candidate*

Agencies in final stage of authorization process:

OAQ (Switzerland) and KAUT (Poland)

List of Authorised Agencies, September 2013

FRANCE – CTI – Commission des Titres d'Ingénieur. www.cti-commission.fr.

GERMANY - ASIIN– Fachakkreditierungsagentur für Studiengänge der Ingenieurwissenschaften, der Informatik, der Naturwissenschaften, und der Mathematik e.V. www.asiin.de

IRELAND – Engineers Ireland– www.engineersireland.ie

ITALY- QUACING – Agenzia per la Certificazione di Qualità e l'Accreditamento EUR-ACE dei Corsi di Studio in Ingegneria – www.quacing.it

PORTUGAL – Ordem dos Engenheiros – www.ordemengenheiros.pt

RUSSIA – AEER – Association for Engineering Education in Russia. www.aeer.ru.

ROMANIA – ARACIS – The Romanian Agency for Quality Assurance in Higher Education - www.aracis.ro

TURKEY – MÜDEK – Association for Evaluation and Accreditation of Engineering Programmes. www.mudek.tr

UK - Engineering Council – www.engc.org.uk

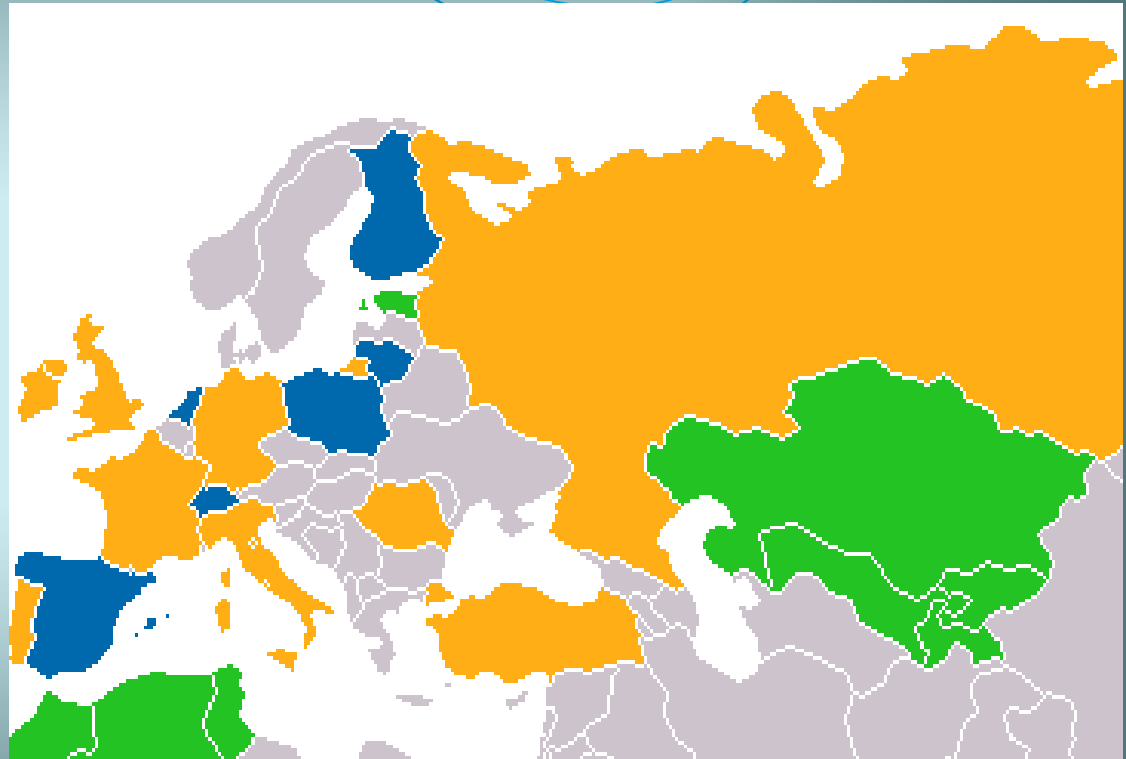
Europe and the EUR-ACE system: the most advanced system of field-specific professional accreditation in Europe

Legend

Yellow: countries with agencies authorized to deliver the EUR-ACE label

Blue: Countries with agencies being under review to deliver the „EUR-ACE „label

Green: Mentoring/EU-Projects



Members of ENAEE

ENAEE has currently 17 full members and 3 associate members through
Engineering Organisations , Accreditation Agencies, Others

Full members

FEANI- Belgium - <http://www.feani.org>
ENGINEERING COUNCIL - United Kingdom - <http://www.engc.org.uk>
CTI – **Commission des Titres d'Ingénieur** –France - <http://www.cti-commission.fr>
ASIIN – Germany - <http://www.asiin-ev.de/pages/de/asiin-e-v.php>
ORDEM DOS ENGENHEIROS -Portugal -
<http://www.ordemdosengenheiros.pt>
CoPI – Conferenza dei Presidi delle Facolta' di Ingegneria Italiane – Italy -
<http://www.confpresing.it>
ENGINEERS IRELAND - Ireland -<http://www.engineersireland.ie>
AEER – Association for Engineering Education in Russia - Russia -
<http://aer.ru/en>
EUROCADRES – Conseil des Cadres Européens - Belgium -
<http://www.eurocadres.eu>
UNIFI – Scuola di Ingegneria dell'Universita degli Studi di Firenze - Italy -
<http://www.unifi.it>
IDA – The Danish Society of Engineers - Denmark -<http://www.ida.dk>
BBT – Switzerland - <http://www.bbt.admin.ch>
MÜDEK – Association for Evaluation and Accreditation of Engineering Programs
- Turkey - <http://www.mudek.org.tr>
IIE – Instituto de la Ingenieria de Espana - Spain - <http://www.iies.es>
ARACIS – The Romanian Agency for Quality Assurance in Higher Education -
Romania - <http://www.aracis.ro>
TEK – Finnish Association of Graduate Engineers - Finland - <http://www.tek.fi>
QUACING – Italy - <http://www.quacing.it>

Associate Members

CLAIU- Belgium - <http://www.claiu.org>
SEFI – Société Européenne pour la Formation d'Ingénieur -
Belgium - <http://www.sefi.be>
IGIP – International Society for Engineering Education -
Austria - <http://www.igip.org>

Structure of ENAEE

The Structure of ENAEE

General Assembly

elects the

Administrative
Council

EUR-ACE label
committee

Promotion
committee

Strategic Planning
committee

- *General Assembly (20 members)*
- *Administrative Council (9 elected members including President, two Vice-Presidents and Treasurer)*
- *Label Committee (Nine qualified representatives of authorised agencies)*
- *Promotion Committee (Chair and nine members appointed by Administrative Council)*

Number of EUR-ACE Labels awarded up to June 2013:

Over 1200 engineering degree programmes in 170 universities in 15 countries have been awarded the EUR-ACE Label by the nine authorized accreditation agencies. These are listed on the publicly accessible database on the ENAEE website

***A global convergence
on engineering education standards***

*A Tuning-AHELO Conceptual Framework of
Expected Desired/Learning Outcomes
in Engineering
(2011)*

*“A Tuning-AHELO Conceptual Framework of Expected Desired/Learning Outcomes in
Engineering”*

OECD Education Working Papers, No. 60, OECD Publishing.

<http://dx.doi.org/10.1787/5kghtchn8mbn-en>

EUR-ACE[®] Framework Standards

Expected programmes
outcomes

Knowledge and
Understanding;
Engineering Analysis;
Engineering Design;
Investigations;
Engineering Practice;
Transferable Skills.

EUR-ACE[®] Framework Standards

A focus
on
investigations

Graduates should be able to use appropriate methods to pursue research or other detailed investigations of technical issues consistent with their level of knowledge and understanding.

EUR-ACE[®] Framework Standards

A focus on
transferable
skills
(keywords)

function as an individual and as a member of a team;
communicate effectively (engineering community and society);
awareness of health, safety and legal issues, societal and environmental context, professional ethics;
project management, business practices, and their limitations;
independent, life-long learning.
team leadership ;
work in international contexts.

Links between CTI and EUR-ACE Frameworks

A unique self-evaluation report and a unique site visit :

- To accredit the programmes (legal obligation to deliver the Master « titre d'ingénieur diplômé »)
- To award the EUR-ACE label

As an accreditation agency, CTI has to comply with :

- Its own approved and published national standards
- The ESG (European standards and guidelines) to be a member of ENQA and registered to EQAR
- The ENAEE (EUR-ACE) framework

Links between CTI and EUR-ACE Frameworks

No major difficulties :

- The ESG's (ENQA) are an overarching framework which does not consider the outcomes
- The procedures of the 3 systems (ENQA, ENAEE, CTI) are quite compatible (SER, visit, reporting, publicity, accountability,...)
- The EUR-ACE criterias have been embedded in the revised CTI criterias (correspondence table)

Links between CTI and EUR-ACE Frameworks

The CTI criteria encompass the EUR-ACE criteria.

The programmes which get the maximum accreditation (6 years) fulfil both criteria and get the EUR-ACE label

The programmes which get intermediate accreditation (3 years) get the EUR-ACE label, with exceptions.

At the end of 2013, the EUR-ACE label has been awarded to

- 400 programmes in French institutions
- 80 programmes in foreign institutions accredited by CTI

International experience of CTI

The actual implementation of an accreditation framework depends on :

- **The national legal context for higher education**
- **The autonomy degree of each institution**
- **The overall vision of their mission by the faculty**
- **The historical and cultural context**

Two views of higher education

- .Dedicated to research and basic science
- .Academic freedom
- .Far from vested interests
- .Emphasis on individual development
- .Knowledge leads to moral development

Von Humboldt Model

- .Quality Assurance
- .Employability
- .Economic development
- .Links with the enterprises
- .Global competitiveness

European area of higher Education
European commission

ENAAEE issues for the next years

- *Revision of the standards (Coordination with the (ENQA) ESG revision)*
- *Mutual recognition*
- *Employers information and involvement*
- *« Professional card » initiative of the European Commission*
- *Coordination with the International Engineering Alliance (Washington Accord)*



Thank you

www.enaee.eu

EUR-ACE Label Authorisation Process for applicant accreditation agencies (1)

- 1. Mentoring Process (optional)*
- 2. Application submitted to ENAEE by the agency*
- 3. ENAEE Label Committee establishes three person Review Team from its membership.*
- 4. Application studied by Review Team to consider if agency satisfies EUR-ACE Framework Standards*
- 5. Review Team conducts site visit to country of applicant agency, including the observance of two accreditation visits and a meeting of the decision making council of the agency.*

EUR-ACE Label Authorisation Process for applicant accreditation agencies (2)

- 6. Review Team makes recommendation to Label Committee*
- 7. Label Committee makes recommendation to ENAEE Administrative Council*
- 8. ENAEE Administrative Council makes decision to accept or reject Label Committee recommendation.*
- 9. If successful, ENAEE issues certificate to authorised agency.*

Total duration of process: approx. 12 months

Benefits for Students/Graduates

- Assurance that the EUR-ACE® programmes they graduated from meet high European and international standards
- Being enrolled in a “EUR-ACE” accredited course facilitates horizontal and vertical mobility application to EUR-ACE® Bachelor and Masters programmes in other HEIs (the ECTNA goes one step further)
- International recognition of degrees as meeting academic standards (link to ERIC/NARICS essential)
- Professional Recognition: Graduates from “EUR-ACE” accredited course have their academic qualifications automatically accepted; regulatory bodies accept EUR-ACE® labelled programmes as meeting requirements for chartered engineer; “EUR-ACE” programs first step of the professional card

Benefits for HEIs

- Assurance that programme meets quality standards set by the European engineering community, interesting marketing tool
- In some cases the EUR-ACE accreditation might develop the capacity to substitute state recognition of programs; automatic inclusion of EUR-ACE”-accredited courses in the FEANI index; integral first step for the European professional card
- Benchmarked against other European programmes, basis for QA of joint/double degree programs
- Reliable information on quality of Bachelor programmes for admission for Master programmes
- Incentives for students to choose EUR-ACE labelled programmes; The European Commission has identified “EUR-ACE” as best practice

Benefits for employers

Successful completion of EUR-ACE labelled programme assures:

- Competences of graduates: Candidate's knowledge, understanding and practical capabilities meet international standards
- Reliable information on quality of degree program
- Not only academic standard of programme checked but also relevance for profession

Benefits for accreditation agencies

- Offering additional quality label to customers (HEIs)
- Certification of quality of accreditation agency according to ESG *and* employers' requirements
- Alternative Route into the EQAR (1)
- Integration into European network of engineering professionals
- Possibility to accredit in other European countries and beyond in which no authorized agency are operating

Benefits for professional engineers organizations

- Guarantee that graduates meet educational requirements for entering into their registers (if organisation has set its educational standard at EUR-ACE level)
- FEANI automatically includes the EUR-ACE® accredited programmes in its Index of European recognized engineering programmes; EUR-ACE automatically recognized as first step in the professional card for Engineers