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

Pr. Bernard Remaud
CTI- Expert/Advisor for International projects
ENAEE - AC Member
ENAEE authorizes accreditation agencies to award the EUR-ACE Label to engineering degree programmes they accredit, at Bachelor and Master degree level.
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.
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


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.


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

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
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://www.aeer.ru/en
EUROCADRES – Conseil des Cadres Européens – Belgium - http://www.eurocadres.eu
UNIFI – Scuola di Ingegneria dell’Università 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 Ingeniería de España – Spain - http://www.iies.es
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
Structure of ENAEE

- 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)

EUR-ACE® Framework Standards

Expected programmes outcomes

Knowledge and Understanding;
Engineering Analysis;
Engineering Design;
Investigations;
Engineering Practice;
Transferable Skills.
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.
A focus on transferable skills (keywords)

**EUR-ACE® Framework Standards**

- 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
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
ENAEE 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