Giuliano Augusti

Past President, European Network for Accreditation of Engineering Education (**ENAEE**), 2006-2012; Presidente, Agenzia per la Certificazione della Qualità e l' Accreditamento EUR-ACE dei Corsi di Studio in Ingegneria (**QUACING**).

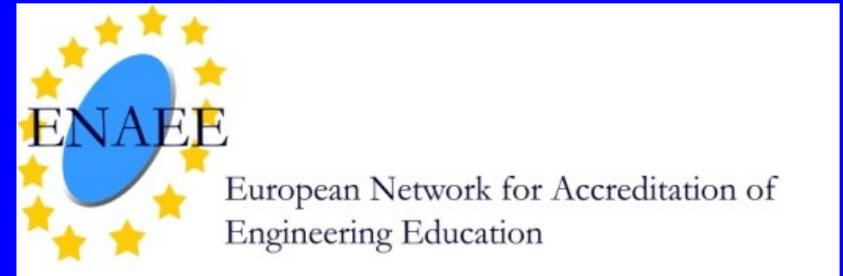# Accreditation of Engineering Programmes in Europe

(i.e. in the European Higher Education Area – EHEA)

St.Petersburg (SPbSPU), 2 July 2012

EUR-ACE® :
the European Quality label for Engineering

run by **ENAEE**, a network of 19 Associations (Eng. Education Societies, Engineering Accreditation Agencies, Engineers' Professional Associations...

presented by

Giuliano Augusti
Past President, ENAEE (2006-2012)

Engineering is a "global" profession:
hence, trans-national recognition is essential.

In 1989, eight National organizations started the so-called
Washington Accord
that, as of 2011, has 14 signatories and 6 "provisional members"

In the Washington Accord,

"qualifications accredited or recognised by other signatories are recognised by each signatory as being substantially equivalent to accredited or recognised qualifications within its own jurisdiction"

No similar initiative in Europe up to 2004.
European engineering graduates encounter significant difficulties in recognition of academic and professional qualifications, and consequently in trans-national mobility.

Lack of a European accreditation system of engineering education accepted on the continental scale.

To fill this lack was (and is) the basic motivation of the whole EUR-ACE exercise, started in 2004: in these eight years significant results have been achieved
(but much is still to be done).

The EUR-ACE accreditation system was envisaged by the EU-supported EUR-ACE project (2004-06) to make up for the lack of a European accreditation system of engineering education accepted on the continental scale.

To implement the EUR-ACE system, the European Network for Accreditation of Engineering Education (ENAEE) www.enaee.eu was founded in February 2006 by 14 concerned Associations.

ENAEE/EUR-ACE adopt the following definition:

Accreditation of an [Engineering] Education Programme

is the result of a process to ensure **suitability of** p**rogramme as entry route to the** [*engineering*] **profession,** by means of

- Periodic assessment against accepted standards
- Peer review of written and oral information by trained and independent panels including academics and professionals

The "quality" and "relevance" of accredited degrees
Is guaranteed at all "levels",
but accreditation refers to education only, not whole formation

European Accreditation of Engineering Programmes
EUR-ACE®

EUR-ACE is "**programme** accreditation"; to qualify it better, it can be called "**pre-professional accreditation**"

a) a synthesis of existing national Standards:

EUR-ACE Framework Standards for the Accreditation of Engineering Programmes

b) a proposal for the Organization and Management of

the **EUR-ACE Accreditation System**

The EUR-ACE Standards and all other relevant documents are available on the site of ENAEE **www.enaee.eu** or **www.eur-ace.eu**

The EUR-ACE Framework Standards, that were compiled as a "synthesis" between existing national Standards, are **outcome-based**, i.e. specify the **Programme (**or **Learning) Outcomes** to be satisfied. They:

- Are valid for all branches of engineering and all profiles

- Distinguish between **First** and **Second Cycle** programmes, as defined in the European Qualification Frameworks

- Are applicable also to "**integrated programmes**", i.e. programmes that lead directly to a Second Cycle degree

- **Describe the abilities that the graduates must achieve but not how they should be taught**

- Can accommodate national differences of educational and accreditation practice

8

The EUR-ACE® Framework Standards require the assessment of a programme for **Quality Assurance** to consider not only the **Programme Outcomes**, but also all the following items:

- 1. Needs, Objectives and Outcomes;

- 2. Educational Process;

- 3. Resources and Partnerships;

- 4. Assessment of the Educational Process;

- 5. Management System

and for each item specify the criteria to be assessed.

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Full text of EUR-ACE® Framework Standards on **www.enaee.eu** & **www.eur-ace.eu**

How does the **EUR-ACE® accreditation system** work?

- **National (or Regional) Agencies accredit** EE programmes;
- If the Agency satisfies appropriate Quality requirements, **and** the accredited programmes satisfy the **EUR-ACE Framework Standards**, ENAEE authorizes the Agency to **"add"** the **EUR-ACE® quality label** to the national accreditation, thus giving it an international value.
- The EUR-ACE® label distinguishes between **FIRST CYCLE and SECOND CYCLE DEGREES**, in accord with the European Qualification Frameworks.
- "Integrated (long) Programmes" can be awarded the **SC** label.

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The last points underline the consistency of EUR-ACE with the "Bologna" approach, and allow to define it
"European Accreditation …"

Sample EUR-ACE® Label Certificate

with new (2011) logo: the relevant programme is designated as a **FIRST [**or **SECOND] CYCLE EUROPEAN-ACCREDITED ENGINEERING programme;** the respective graduates can call themselves either **EUR-ACE**® **Bachelor** or **EUR-ACE**® **Master**

This is to certify that the xxx programme

Official name of the education programme in original language (and in English)

provided by

Name of Educational Institution, and Faculty or Department, (if applicable)

accredited by

(Accrediting Agency)

on **(dd month yyyy)** until **(dd month yyyy)**

satisfies the outcomes of **Second Cycle** programmes specified in the **EUR-ACE Framework Standards for the Accreditation of Engineering Programmes**, and therefore for the above period of accreditation is designated as a **SECOND CYCLE EUROPEAN-ACCREDITED ENGINEERING PROGRAMME.**

For the European Network for Accreditation of Engineering Education (ENAEE)   Logo   For xxx

The President   The xxx
).   xxxx
                                                                     Signature
....
I.Wasser

Brussels, xx Month 200x   xx, xx Month 200x

Six Agencies [the relevant partners of the EUR-ACE project (2004/06)], were authorized to deliver the EUR-ACE Label (EUR-ACE-authorized) in November 2006 and confirmed in October 2008:

- **ASIIN** (Accreditation Agency for Study Programs in Engineering, Informatics, Natural Sciences and Mathematics), Germany
- **CTI** (Commission des Titres d' Ingénieur), France
- **Engineers Ireland**
- **RAEE** (Russian Association for Engineering Education)
- **Engineering Council**, United Kingdom
- **Ordem dos Engenheiros**, Portugal

A seventh Agency was authorized in January 2009:

- **MÜDEK** (Association for Evaluation and Accreditation of Engineering Programs), Turkey

Awarded EUR-ACE labels as of December 2011:

First Cycle Degrees: **379**

Second Cycle Degrees (incl. "Integrated Degrees"): **527**

Overall total: **906**

The EUR-ACE Database will be updated by ENAEE in June 2012

13

At present, a number of applications from other Agencies that want to be EUR-ACE-authorized have been received and are being considered:

- **NVAO (**Accreditation Organisation of Netherlands and Flanders)
- **ARACIS,** QA Agency, Romania (*)
- **SKVC,** QA Agency, Lithuania (*)
- **OAQ,** QA Agency, Switzerland
- **KAUT,** Accreditation Committee for Technical HE Institutions, Poland
- **QUACING**, Agency for QA & Accr.Engrg.Programmes, Italy

(*) "Candidate Agency" (has overcome a preliminary check)

Moreover:

- **CTI** (jointly with **AEQES,** the French-Belgian HE Accreditation Agency) will accredit and award the EUR-ACE label to engineering programmes in French-language Belgian HEIs;
- **FINHEEC**, Finnish QA Agency, is organizing an internal structure in order to present the application;
- other contacts are under development.

14

Summing up,
ENAEE is creating a two-tier system of **European-accredited engineering programmes**.

Variants to accommodate specific national needs and/or additional qualifications (e.g. for specialized degrees or specific profiles) are not excluded.

Indeed, the EUR-ACE label is an "addition" to a national accreditation, and can be regarded as a quality guarantee of an accepted common basis to programmes providing an entry route to the engineering profession.

The experience of national accreditation bodies, old-established in several European countries, is fully exploited.

This approach and the essential distinction between FCD and SCD make the EUR-ACE system at the same time flexible and simple and should allow it to be spread world-wide.

Third Cycle (Doctoral) and Continuing Education are not (yet) considered.

Any Higher Education Institution throughout Europe and the world that want the EUR-ACE FC or SC Label for one or more of their engineering programmes, even if no EUR-ACE-authorized Agency exists in their country, can apply through one of the EUR-ACE Agencies, following its procedure.

Alternatively, they can contact directly the ENAEE Secretariat, that will direct them to the most convenient Agency.

For up-to-date information, application forms, etc., visit www.enaee.eu or www.eur-ace.eu

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