

EUR-ACE®: THE EUROPEAN SYSTEM OF ACCREDITATION OF ENGINEERING EDUCATION AND ITS RELEVANCE FOR CIVIL ENGINEERING



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Globalization has stressed the international dimension of higher education, in particular in fields with per-se an international character, like engineering. Employability of engineering graduates are more than ever dependent on the international acceptability of the skills and abilities that they have acquired. It is fair to state that, while institutional accreditation may be significant to assure the quality of the teaching-learning process in each higher education Institution (HEI), only outcome-based programme accreditation can guarantee - to both the HEIs and the potential employers - that the graduates of a specific programme acquire the desired set of skills and abilities. And an internationally recognized qualification integrating a “national” programme accreditation, greatly facilitates employability and mobility of the graduates.

A good example for a mechanism for international recognition of qualifications is the European-based EUR-ACE Accreditation System, which provides a common framework for outcome-based accreditation of engineering programmes as suitable “entry routes to the engineering profession”, at the First- (Bachelor) and Second- (Master) Cycle levels, and provides a European quality label to programmes that meet the standards.

The EUR-ACE Accreditation System is essentially a bottom-up system, in which national (or possibly regional) Agencies accredit engineering

educational programmes, and the European Network for Accreditation of Engineering Education (ENAE) authorizes such Agencies to add a common quality label (the EUR-ACE[®] label) to their accreditation, after checking that their procedures and requirements satisfy the “EUR-ACE Framework Standards for Accreditation of Engineering Programmes” maintained by ENAE itself (which implies satisfaction of the well-known “European Standards and Guidelines for Quality Assurance in Higher Education”, in short ESG). In this way, the EUR-ACE Framework Standards do not substitute for national standards, while national differences and other specific requirements can be accommodated, and the experience of long-established national accreditation agencies (like the French CTI and the British Engineering Professional Institutions) is fully exploited.

The EUR-ACE Framework Standards are valid for all branches of engineering and all profiles of study, and distinguish only between First- and Second-Cycle programmes, as defined in the European Qualification Frameworks, but are applicable also to “integrated programmes”, i.e. programmes that lead directly to a Second-Cycle (Master) engineering degree. This flexibility not only allows to accommodate national differences of educational and accreditation practice, but can also - as discussed in the last part of this lecture – allow to consider differentiations between different branches (or “disciplines”).

The implementation of the EUR-ACE system started in 2007: at the time of writing, more than 900 EUR-ACE Labels have been awarded to First- and Second-cycle engineering programmes. Seven national Accrediting agencies, based in seven different countries throughout the European Higher Education Area (France, Germany, Ireland, Portugal and United Kingdom within the EU, Russian Federation and Turkey outside the EU) are at present authorized to deliver the EUR-ACE Label, while a similar number of other national accrediting agencies are already under review by the ENAE “EUR-ACE Label Committee” for being authorized (and for a few the process is in a very advanced stage); other national Agencies are in the process of adapting their accreditation criteria and processes for compliance with the EUR-ACE Accreditation System, possibly with the help of “mentors” nominated by ENAE. Some of these “new” Agencies (e.g. ARACIS of Romania and SKVC of Lithuania) are “general” QA/Accreditation Agencies that accredit engineering programmes among others; the establishment of subject-specific Engineering Accreditation Agencies is instead being pursued in some countries (e.g. Italy). The actual implementation varies from country to

country; e.g. the French Agency (CTI) accredits only at the Master level, while the Turkish MÜDEK has required and obtained the authorization to award only First-Cycle EUR-ACE labels.

EUR-ACE has been quoted by the European Commission as an example of good practice in the “Report on progress in quality assurance in higher education” (September 2009) and mentioned also in the publication “The EU contribution to the European Higher Education Area”, issued in March 2010 in occasion of the “Bologna Anniversary Conference”.

As already stated, currently the EUR-ACE labels do not distinguish between engineering “branches”. Indeed, to this effect there are strong differences in accreditation practice among EHEA countries: e.g., in France the CTI “habilitates” a unique title of engineer (“ingénieur”), while the contrary happens in the UK, whose tradition is based on the “Institutions” of the different branches.

Consequently, there is an open discussion within ENAEE whether to stick only to the undifferentiated EUR-ACE labels based on the EUR-ACE Framework Standards, or to introduce differentiated labels that could exploit also the branch-level descriptors developed by relevant Technical Associations, like e.g. EUCEET in the Civil Engineering field and the European Federation of Chemical Engineering.

This lecture intends to contribute to this discussion with an up-to-date review of the situation, and some personal remarks and proposals by the lecturer.