

International Frameworks for Accrediting Engineering Education

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**European Network for Accreditation of
Engineering Education (ENAEE)**

International Accreditation Frameworks

Response to mobility policy of European Union, Bologna process, and multi-national companies.

Mutual recognition of agreed standards of engineering education.

Of potential value to employers, students, graduates, HEIs, accreditation agencies, professional engineering associations.

IEA and ENAEE Frameworks

The major frameworks that monitor standards of accrediting agencies.

IEA administers the Washington (15 signatories) and Sydney (7 signatories) Accords.

ENAEE administers EUR-ACE 1st and 2nd cycle standards (7 authorised agencies).

EUGENE Academic Network (European and Global Engineering Education) proposed a detailed comparison of the two frameworks.

Framework Characteristics

Framework should

- Respect national traditions in education.
- Apply to all branches of engineering.
- Recognise new teaching methods.
- Encourage new branches of engineering.

Framework should be consistent with other international standards:

- European Qualifications Framework.
- Standards and Guidelines for QA in EHEA.
- Dublin descriptors.

IEA and ENAEE Framework Structures

IEA

Washington Accord (Chartered Engineers) and Sydney Accord (Incorporated Engineers) have different profiles, and different levels.

ENAEE

EUR-ACE framework is designed to include both profiles.

In EUR-ACE, 1st and 2nd cycles are progressive, with similar content at different levels.

Framework Comparison

Framework should make statements about:

- Specification of programme content.**
- Specification of programme level.**
- Specification of resources.**
- Decision making procedures.**

EUGENE comparison only of published content and level and not of implementation.

Method of Comparison

Developed glossary common to IEA and ENAEE.

For each 'learning outcome' in one framework are there matching 'learning outcomes' in the other? Then repeat for the reverse comparison.

Three pairs of comparisons:

- Washington Accord and EUR-ACE 2nd cycle**
- Washington Accord and EUR-ACE 1st cycle**
- Sydney Accord and EUR-ACE 1st cycle.**

Main conclusions

Contents are equivalent (mathematics, analysis, design, etc).

Washington Accord and EUR-ACE 2nd Cycle both use 'forefront' to define level. But how to interpret? Equivalent level within some uncertainty.

Similarly Sydney Accord and EUR-ACE 1st cycle are similar in level, but the uncertainty is greater.

Some differences in the use of defined words in the two frameworks.

Forefront

Forefront of a branch of engineering or a specialization is the knowledge of recent developments in practice and research. In a field of study that combines knowledge from different branches, the forefront is interpreted as that of the combination and not of the individual branches.

Future

EUGENE report is now finalised and will shortly be a public document.

ENAAE and IEA have agreed to discuss the differences in their frameworks.

Would agreement between IEA and ENAAE be a step towards global standards?

Report

The full report on the comparison will be published on the EUGENE website:

www.eugene.unifi.it

Thank you