

Accord Accreditation – Best Practice for a Diverse World

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Deputy Chair Washington Accord, Chair Accreditation Board Engineers Australia

ACCREDITATION AT THE INTERNATIONAL LEVEL

Facilitating mobility for international engineering practice has resulted in the development of options for international level accreditation of engineering programs.

The major models of accreditation operating at the international level are:

- The Accords of the International Engineering Alliance (IEA),
- The European Network for Accreditation of Engineering Education (ENAE) EUR-ACE® label, and
- The work of the Accreditation Board for Engineering and Technology Inc (ABET) internationally.

While there may appear to be little difference between them and work on harmonisation is underway, the intellectual frameworks and outcomes are distinct.

International Accreditation Models Accreditation Board of Engineering and Technology (ABET)

Purposes

- A. ABET is a membership not – for – profit corporation based in the United States and incorporated in New York focused on quality assurance and world leadership in fulfilment of its purposes. It is a federation of societies organised for the public good. Its purposes are educational, charitable and scientific.
- B. To further the public welfare, ABET assures quality through the accreditation of educational programs, thereby assuring the competence of graduates entering professional practice. ABET accomplishes this through the development and promulgation of accreditation criteria.

Article 2 Constitution (2015, accessed March 2016)

ABET operates as a vehicle for accreditation of individual institutions world-wide. In this environment its structure and procedures parallel those of the ENAE, although it does not credential authorized agencies to work on its behalf. It is also a signatory to the International Engineering Accords and in that context operates as the accreditation agency for the USA.

European Network for Accreditation of Engineering Education (ENAE)

Purposes

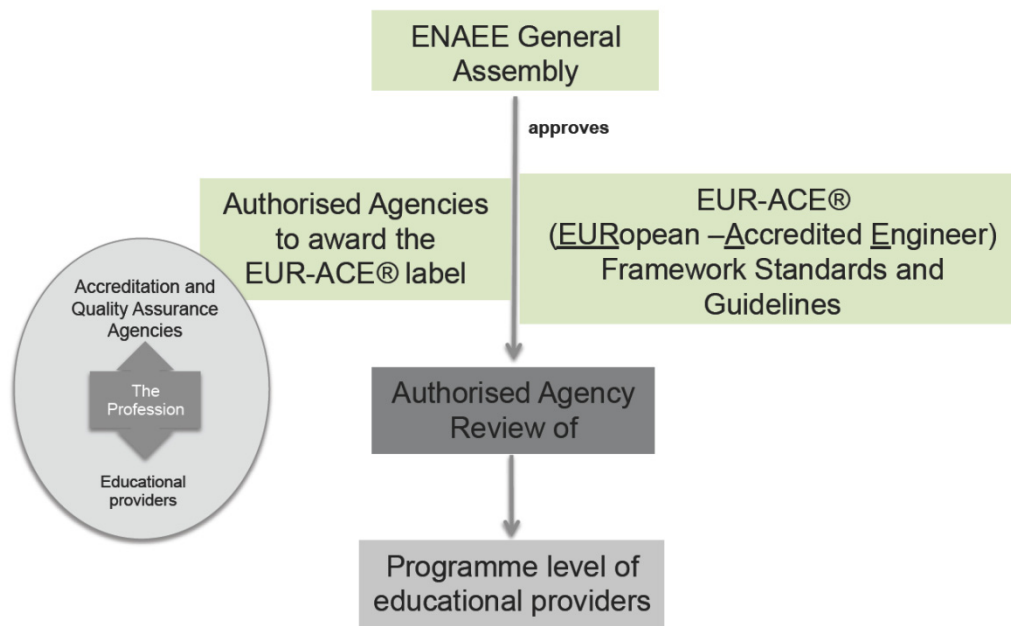
The association pursues scientific and pedagogical goals. It intends to build confidence in systems of accreditation of engineering programmes within Europe and to promote the implementation of accreditation practice for engineering education systems in Europe and worldwide.

ENAEF carries out its mission by evaluating quality assurance and accreditation agencies in the EHEA in respect of their standards and procedures when accrediting engineering degree programmes.

Those agencies which satisfy ENAEF in respect of these matters are authorised by ENAEF to award the EUR-ACE® label to the engineering degree programmes which they accredit. It should be noted that ENAEF does not accredit engineering degree programmes. Using the standards specified in this document (EAFSG), ENAEF evaluates the policies and procedures implemented by accreditation and quality assurance agencies which have applied for authorisation to award the EUR-ACE® label to the engineering degree programmes which those agencies accredit.

Article S5 - Statutes.

European Network for Accreditation of Engineering Education (ENAEF)



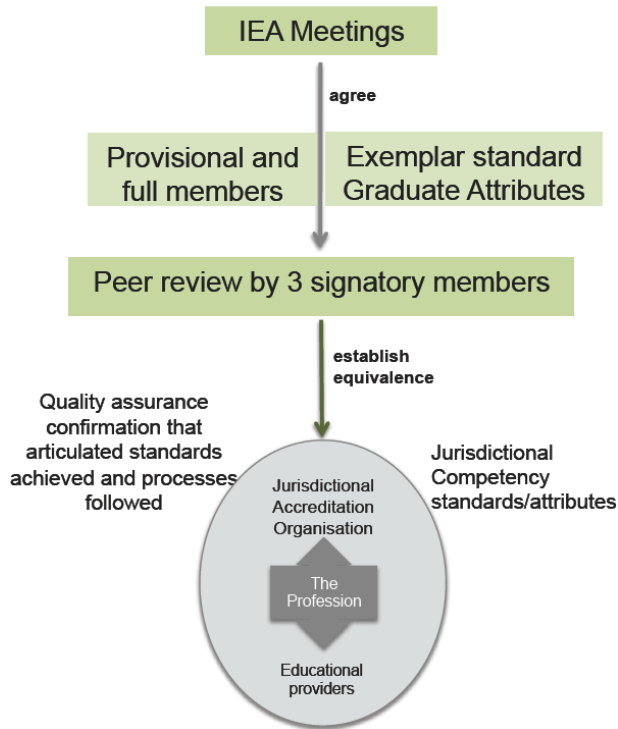
International Engineering Alliance (IEA)

The International Engineering Alliance seeks to improve engineering education and competence globally through widening the recognition and uptake of its constituent Accords (education) and Agreements (practice).

The Washington Accord, Sydney Accord and Dublin Accord are three multi-lateral agreements between groups of jurisdictional agencies responsible for accreditation or recognition of tertiary-level engineering qualifications within their jurisdictions who have chosen to work collectively to assist the mobility of engineering practitioners... holding suitable qualifications.

*p1 International Engineering Alliance: Educational Accords.
Accords Rules and Procedures 13.6.14 as at 25.6.15*

International Engineering Alliance (IEA)



Global Environment



Similarities in the Models

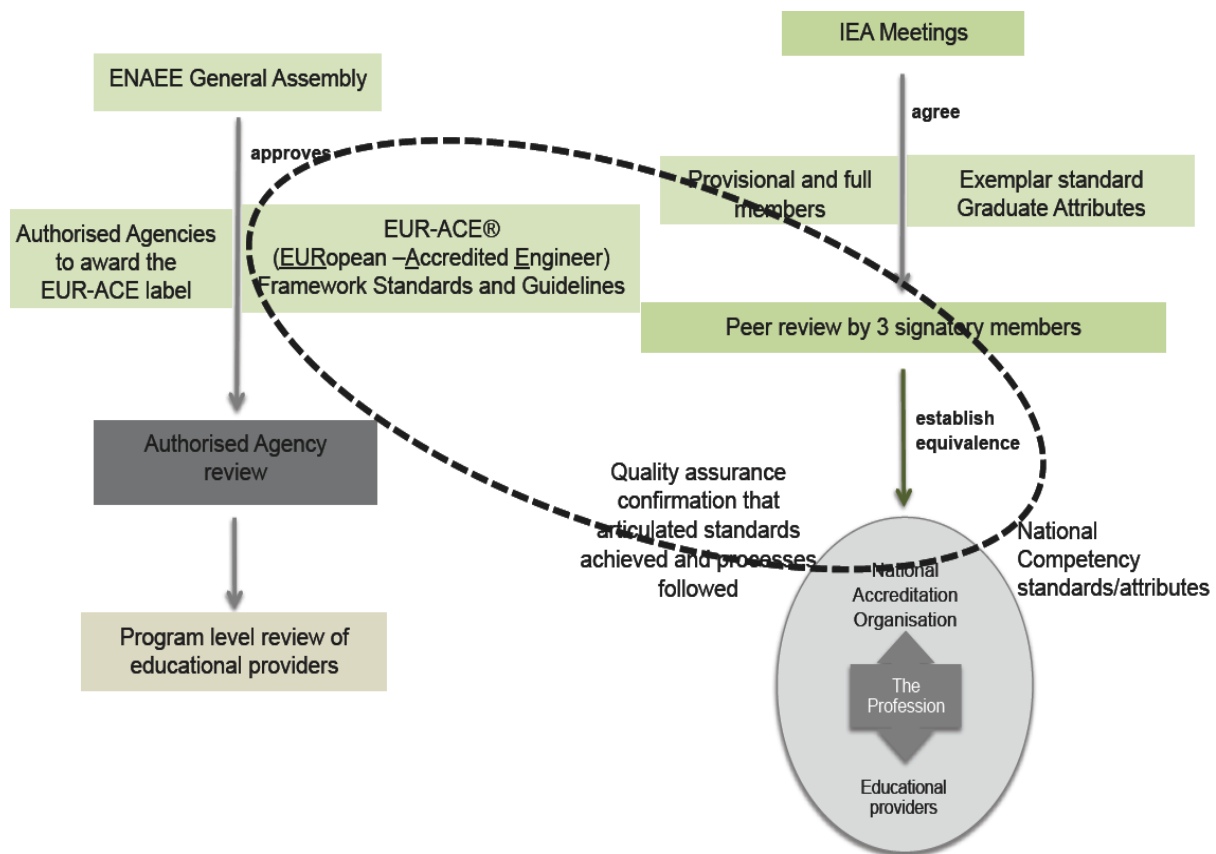
There are many similarities between these international accreditation models as they all focus on ensuring the quality of educational outcomes for engineering education.

They draw on quality assurance system based methodologies. They work collaboratively:

- The 2015 IEA/ENAAEE publication: “Best practice in Accreditation”
- Discussions on harmonising our lexicons.

There are points of difference.

Differences in the Models



Consistent/compliant & substantial equivalence

There are subtle differences and opportunities arising from the way in which each model uses and conceptualises:

... ARE CONSISTENT/COMPLIANT WITH THE ...
 MUTUAL RECOGNITION OF SUBSTANTIAL EQUIVALENCE

Consistent/Compliant

ENAAEE

... ARE CONSISTENT/COMPLIANT WITH THE ...

The EUR-ACE® Standards and Guidelines for Accreditation of Engineering Programmes (EAFSG) are

Compliant with the overarching Framework for Qualifications for the European Higher Education Area (EQF).

The Programme Management requirements are consistent with the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG)

p2 2. Standards and Guidelines for Accreditation of Engineering Programmes

ENAAEE requires quality assurance and accreditation agencies awarding the EUR- ACE® label to apply the standards described here.

p11 2.3 Standards and Guidelines for Accreditation Agencies

Mutual Recognition

IEA

MUTUAL RECOGNITION OF SUBSTANTIAL EQUIVALENCE

“The signatories have exchanged information on, and have examined, their respective processes, policies and procedures for granting accreditation to engineering academic programs and have concluded that these are comparable.

“Through the Washington Accord.... The signatories recognise the substantial equivalence of such programmes in satisfying the academic requirements for the practice of engineering at the professional level.”

p4 Accord Rules and Procedures 13 June 2014

The Accords validate jurisdictional accreditation systems, embedding the diversity arising from cultural and jurisdictional imperatives.

Mutual Recognition

Assessing substantial equivalence is a complex matter.

p50 Accord Rules and Procedures 13 June 2014

The experience of the existing signatories is that an assessment based on documentation is only a first step – necessary but not sufficient. Confidence can only be achieved through a detailed evaluation, including close interaction between the applicant and signatories including visits to observe accreditation/recognition procedures.

Ultimately, the applicant must demonstrate that the level and content of the studies of accredited/recognised programmes are substantially equivalent to those of the current signatories.

p50 Accord Rules and Procedures 13 June 2014

Mutual Recognition

The Accords then are a living compact made by each signatory that they will approach deliberations with confidence:

- We can gain insight from our different cultural, socio-political and legal environments.
- We can find common ground and build a strong network from our collective understanding.
- We can negotiate, learn and transform in good faith as we create the terms of our engagement.

Mutual Recognition - Challenges

It is Hard Work

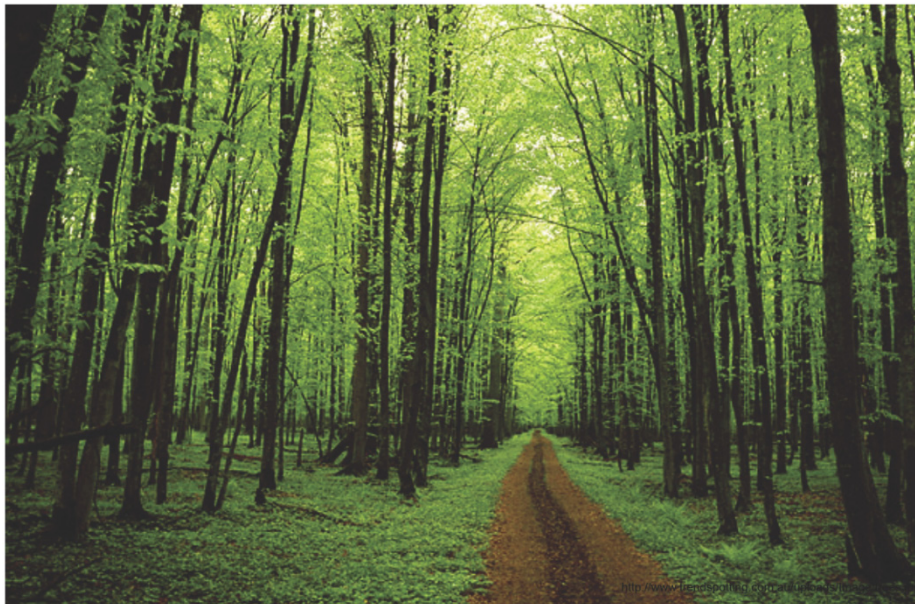
- It requires continuous maintenance and nurturing and close interaction
- It can be easy to slip into actions derived from unintended, subtle claims about ‘our way’ superiority
- To misunderstand across our language nuances in our haste to make things happen
- To deploy ‘short-cut’ metrics, pro-formas, standards and other tools that draw us away from the uncertainty and energy of continuous relationship building and close interaction.

Mutual Recognition – Challenges

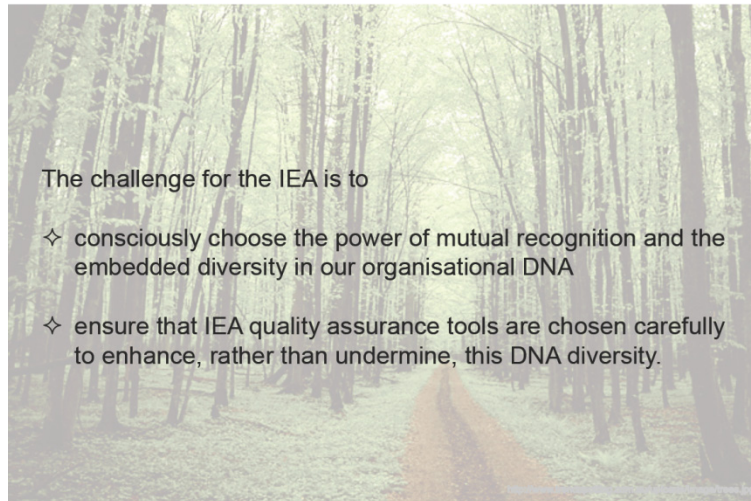
The Accords operate in the global education marketplace and seek to ensure quality and standards.

As with all systems, there are opportunities both for unconscious and conscious manipulation of the system.

The Allure of Certainty



The Allure of Certainty



The value of maintaining diversity



The Value of Maintaining Diversity

There are a number of reasons why mutual recognition of substantial equivalence, although a hard route, adds significant value to accreditation and enhances international practice.

Sociological, anthropological and ecosystem studies suggest that diversity in our systems drives innovation and capacity to meet complexity, disruption and change.

Whenever a system is captured by one culture, by one world view, or one intellectual tradition and iterates to one metric (standard) of success, its capacity for intellectual flexibility and agility is significantly reduced.

Models of Accreditation

Minimal Model

- Often numeric and law-based
- Provides a prescription for a minimal core and very general parameters for the rest of the curriculum
- Does not encourage continuous improvement.

Input-Output Model

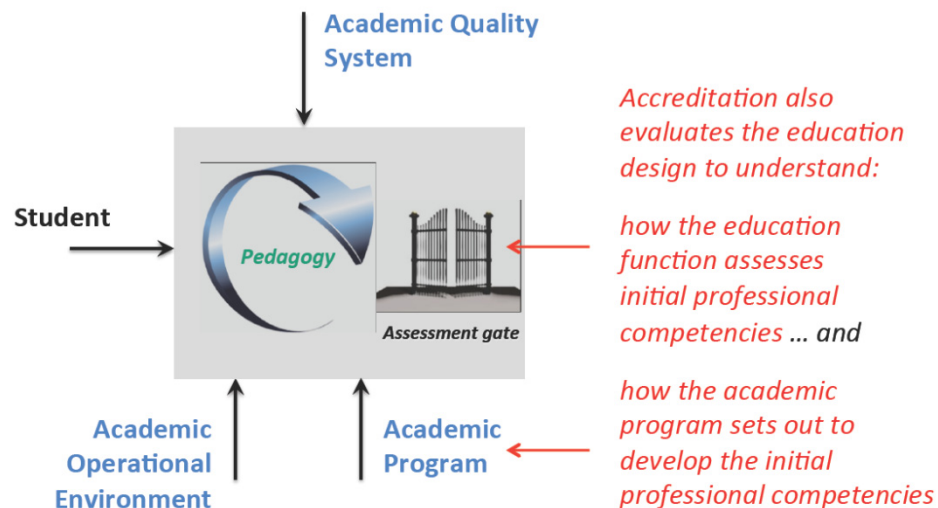
- Often involving direct prescriptions of curriculum and faculty composition
- Makes the accrediting process uniform and potentially fair
- Relatively easy to maintain
- Stifle innovation and creativity in the curriculum

Outcome Model

- Focuses on the objectives and outcomes of the program
- Requires evidence of measurement and attainment of objectives and outcomes
- Too much data may be collected and analyzed periodically

Courtesy of NBA: Extract from 3 day workshop on Outcomes Based Accreditation, Dr. D.K. Paliwal et al

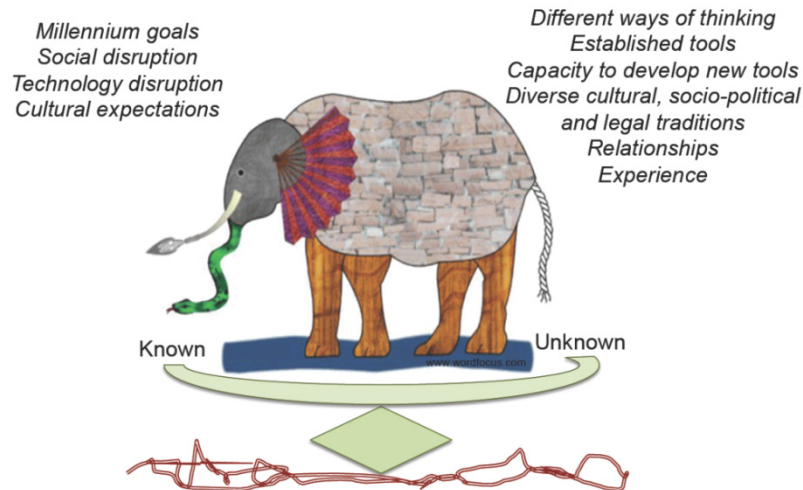
Accreditation is ‘Reverse Engineering’ of the Education Design



Courtesy of:
Lincoln Wood PhD CPEng NER
National Manager, Accreditation
Professional Standards & Practice

28 January 2016

The value of maintaining diversity



Next Steps

For the Accords:

- This is a time of consolidation of our understanding, drawn from our collective experiences to date.
- To value and engage with the intellectual traditions that underpin the other international accreditation systems.
- To enhance international accreditation pathways built on the richness of our diverse world views.

Accord Accreditation – A Best Practice for a Diverse World

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Prof. Elizabeth Taylor AO, 10 years with the Maritime Services Board of NSW in design then construction management. Joined University of Technology, Sydney as an academic and completed alaw degree. Resigned from the position of Pro Vice-Chancellor and Executive Dean, Faculty of Sciences, Engineering and Health, CQ University in 2009. Now consulting as an External Member, Gate Reviews, Capability Acquisition and Sustainment Group, Defence.

Currently Chair, RedR (Registered Engineers for Disaster Relief) Australia and RedR International. Also Chair, EA Accreditation Board and elected Deputy Chair, Washington Accord, International Engineering Alliance in June 2015. Appointed Officer of the Order of Australia in 2004. Honorary Fellow of Engineers Australia and Fellow of the Australian Institute of Company Directors. Elected to Fellow, Academy of Technological Sciences and Engineering in 2015. Included in Engineers Australia's list of Australia's 100 Most Influential Engineers every year from 2004 to 2011, 2013 to 2015.