



ECSA's International Educational Agreements: Recognition and Benchmarking

ECSA is a signatory to a number of international agreements. Three of these cover the benchmarking and recognition of engineering educational programmes, and a total of four are focused on mobility at the professional level.

The Washington Accord, dating from 1989, with ECSA having been a signatory since 1999, is an agreement on the mutual recognition of degrees that provide the educational foundation for Professional Engineers or equivalent designations. Similarly, the Sydney Accord, dating from 2001, with ECSA as one of the founding signatories, covers the recognition of educational qualifications for technologists. The smaller and younger Dublin Accord provides mutual recognition of qualification types for technician education. The current signatories of the accords are listed on the International Engineering Alliance website: www.ieagreements.org.

The three educational agreements are of similar form and all operate under a common set of rules and procedures and with a common secretariat. For a national accrediting body to become a signatory, it must first demonstrate that it has an accreditation system. It then spends at least two years in provisional status, during which it may further develop its accreditation criteria and processes to meet the accord requirements. While in provisional status, the body's accredited qualifications do not enjoy recognition by the other signatories.

The move from provisional status to full signatory involves an evaluation visit by a team from three other signatories. The team observes the accreditation process in action and must form a judgement of whether the standards applied and accreditation processes are substantially equivalent to those of other signatories. The full meeting of signatories receives the verification team's report and votes on the admission of the body to full signatory status.

Once admitted as a full signatory, obligations involve periodically reporting on the accreditation operation and being reviewed at least once every six years by a visiting team. Signatories must from time to time provide reviews for visits to new applicants and existing signatories. ECSA has recently had its Washington Accord review visit where a team of three members from three different signatories observed ECSA's accreditation visits to two universities. The Sydney and Dublin Accord reviews are due in about two years time.

Programmes accredited by one signatory are recognised by other signatories as being substantially equivalent to their own accredited degrees. For example, if a person with an accredited degree from another Washington Accord signatory, say Canada, applies to ECSA for registration as a Candidate Engineer or Professional Engineer, he or she is immediately recognized as having met ECSA's educational requirement. Recognition of South African Accredited degrees works smoothly in most cases, particularly when the accrediting body and registering body in the other country are the same.

The second important dimension of the educational agreements is the benchmarking of educational standards for education of engineers, engineering technologists and engineering technicians. In 2004, delegates from the three educational accords developed their Graduate Attributes. These are statements of the expected outcomes of educational programmes. These cover the use of knowledge, problem solving, design, experimentation, impact assessment and ethics. A significant advance that was made in the development of the Graduate attributes is an objective differentiation of the levels of performance expected of the graduates of engineer, engineering technologist and engineering technician programmes. The differentiation in the knowledge base between the three types of programmes is also indicated clearly in the document.

The Graduate Attributes represent a consensus among a number of significant accrediting bodies and most of the signatories have aligned their accreditation criteria with this document. The Graduate Attributes contain more information than national standards and provide a useful reference for academics working on defining curricula.

The Graduate Attributes have companion definitions of Professional Competencies, that is, the outcomes that characterise the competence of engineers, engineering technologists and engineering technicians at the point of professional registration. The *Graduate Attributes and Professional Competencies*, revised in 2009, are available on the International Engineering Alliance website.

ECSA is confident that the standards for the BEng/BSc (Eng) programmes that it accredits are comparable with the Graduate Attributes. The required outcomes match as do the level descriptors. Technology qualifications, that is BTech degrees and National Diplomas in engineering fields are not yet formally aligned with the corresponding graduate attributes. A process is underway where the existing national specifications for these qualifications structured according to the former NATED 151 document will be replaced by standards that are registered on the National Qualifications Framework. The new standards have been developed to align with the relevant parts of the Graduate Attributes.

The complexity of the change to the new standards is compounded by the requirement that qualifications comply with the Higher Education Qualifications Framework. A process is underway to plan the transition to the new structure and standards - a subject in itself for a future Bulletin.