

ENGINEERS AUSTRALIA

ACCREDITATION BOARD

ACCREDITATION MANAGEMENT SYSTEM

FOR

VOCATIONAL EDUCATION AND TRAINING PROGRAMS

(COMPETENCY BASED)

IN THE OCCUPATIONAL CATEGORY OF ENGINEERING ASSOCIATE

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1. NATIONAL GENERIC COMPETENCY STANDARDS AND LINKS WITH PROGRAM ACCREDITATION

Engineers Australia as part of its policy on the accreditation of professional engineering programs (Reference 2) publishes and maintains the National Generic Competency Standards for Professional Engineers, Engineering Technologists and Engineering Associates and has a system for assessing the competencies of applicants against each of these standards. The standards are available in full at www.engineersaustralia.org.au. The standards recognise two stages of competency:

Stage 1 is the level of competency needed for entry to practice as a qualified member of the engineering team, corresponding to completion of an accredited or recognised educational qualification from either the higher education or the vocational education and training (VET) sectors. Graduates of accredited professional engineering programs, accredited engineering technologist programs and accredited engineering associate programs are deemed to have attained the competencies of a Stage 1 Professional Engineer, Engineering Technologist or Engineering Associate as appropriate without further assessment.

Stage 2 is the level of competency expected of an experienced engineering practitioner, and is the requirement for Chartered membership of Engineers Australia as well as professional registration. Attainment of Stage 2 competencies requires a period of experiential formation under appropriate professional guidance. A Chartered Professional Engineer, Chartered Engineering Technologist or Chartered Engineering Associate is competent to practise independently; to the highest standards; committed to maintaining professional currency and is accountable for quality, safety and ethical behaviour within the boundaries of the appropriate career category. Competency assessment is performed by an assessment panel and involves a self-assessment, the writing of a practice report, a professional interview and a commitment to continuing professional development. The published Stage 2 Competency Standards provide a comprehensive definition of Stage 2 practice competencies, and require that Stage 1 enabling competencies have already been demonstrated. The successful attainment of Stage 1 competencies allows the period of guided professional formation, and thus the development of the practice competencies, to begin.

The most common means of attaining the Stage 1 competencies is by graduating from an accredited engineering education/training program in the appropriate occupational category. Engineers Australia accredits engineering education/training programs for professional practice appropriate to the occupational categories of Professional Engineer, Engineering Technologist and Engineering Associate.

The National Generic Competency Standards – Stage 1 Competency Standard for Engineering Associate (Reference 1) provides a basis for assessing persons who do not hold accredited or recognised engineering qualifications at the Engineering Associate level, and who are seeking membership of Engineers Australia. Examples include:

- candidates holding Australian engineering qualifications that have not been accredited or approved by Engineers Australia;
- candidates holding engineering qualifications from overseas countries with which Engineers Australia does not have formal accreditation or mutual recognition agreements;

- candidates holding qualifications in fields related to engineering, not recognised by Engineers Australia, who have substantial experience in engineering practice.

Demonstration of Stage 1 competence in the occupational category of Engineering Associate requires demonstration of the following inherent knowledge base, skills and attributes.

- Foundation knowledge and skills in the application of science, mathematics and engineering science.
- Understanding of engineering and technology in the designated field of practice.
- An ability to apply techniques, tools and resources appropriate to the field of practice.
- Engineering application skills including application of codes and standards; specifying and installing systems; application of standard design procedures; assessment of technical and policy options; observation, analysis, testing, operations and maintenance functions as well as an ability to act as a technical expert and understanding of the business environment.
- Personal and professional attributes including communication skills, the management of information, a capacity for creation and innovation, commitment to professional and ethical responsibilities, leadership and team skills, capacity for lifelong learning and appropriate professional attitudes.

Stage 1 competency is in fact a combination of knowledge and skills as well as engineering application ability and professional competencies.

The specification of the designated units of competency for an engineering VET program for professional practice at the level of Engineering Associate in a particular discipline should, in a generic sense reflect the competencies set out in the Engineers Australia Stage 1 Competency Standard. Developing graduate outcomes satisfying the Stage 1 Competency Standard will ensure that graduates are satisfactorily equipped with the knowledge, skills and attributes essential for entry to practice. The accreditation criteria and associated performance indicators defined in Reference 3 have been devised as a means of assessing the potential for a particular engineering VET program, delivered within an appropriate learning setting, to deliver graduates equipped with the Stage 1 competencies defined in Reference 1.

2. REFERENCES

1	P05EA	Engineers Australia National Generic Competency Standards - Stage 1 Competency Standards for Engineering Associate.
2	P02EA _Comp	Engineers Australia Policy on Accreditation of Professional Engineering Programs.
3	S02EA _Comp	Accreditation Criteria Summary.