



## 1 Introduction

Applicants must satisfy the Australian Engineering Competency Standards for Professional Engineers at Stage 2 to be eligible for registration on NPER in a general area of practice

This Guideline provides a summary of the practice of engineering that may have developed competencies for each discipline-based general area of practice.

Separate guidelines are available for other areas of practice (both general and specific areas).

Administration of the registration scheme is the responsibility of the Associate Director Registration, Engineers Australia.

## 2 General Areas of Practice

### Biomedical Engineering

Biomedical Engineering is concerned with research, design, development, evaluation, manufacture, installation, operation, maintenance, management and control of biomedical devices, facilities and equipment designed to support and enhance human life and help individuals to overcome physical disabilities, the planning and assessment of medical procedures and the development of related data handling facilities. Applicants must have significant training in the life sciences, typically 80 hours of formal education or equivalent, and hold or have held a position of professional responsibility in biomedical engineering.

### Chemical Engineering

Chemical Engineering is concerned with research, teaching, design, development, economics, manufacture, installation, operation, sales, maintenance and management of commercial scale chemical plants and process systems, industrial processing and fabrication of products undergoing chemical and/or physical changes being applied to materials for construction, process systems and equipment for instrumentation and control, and protection of the environment. Applicants must have experience in the safety aspects of design and/or operations. In addition they must have experience in two of the following functions involving process systems and equipment: design, evaluation, operation, materials selection and fabrication.

### Civil Engineering

Civil Engineering is concerned with materials such as steel, concrete, timber, earth and rock, and with their application in the research, design, development, manufacture, construction, operation, maintenance and management of hydraulic, structural, environmental and systems aspects of infrastructure works and services such as water, sewerage, transport, urban development and municipal services, and with building and construction for other infrastructure industries.

### Electrical Engineering

Electrical Engineering is concerned with research, design, development, manufacture, installation, operation, maintenance and management of equipment, plant and systems within the electrical, electronic, communication and computer systems areas, being applied to electrical power generation, transmission, distribution and utilisation, manufacture, instrumentation and control in industry, communications networks, electronic plant and equipment, integration and control of computer systems.

### Mechanical Engineering

Mechanical Engineering is concerned with design, development, research, evaluation, manufacture, installation, testing, operation, maintenance and management of machines, mechanical and mechatronic systems automated systems and robotic devices, thermodynamic and combustion systems, fluid and thermal energy systems, materials and manufacturing equipment and process plant and materials handling systems. This is applied to manufacturing, land, sea and air transportation, electricity generation, mining, minerals and metals processing, food, agricultural and forest products processing, thermal and environmental control systems in buildings and industry, refrigeration and air conditioning systems. Applicants must have experience in the safety aspects of design and/or operation of machines, plant, systems or processes and with noise, airborne and water borne emission controls to reduce environmental impact.

### Structural Engineering

Structural Engineering is concerned with research, planning, design, construction, inspection,

monitoring, maintenance, rehabilitation and demolition of permanent and temporary structures and structural systems and their components and with associated technical, economic, environmental, aesthetic and social aspects. Structures might include buildings, bridges, in-ground structures, footings, frameworks and space frames, including those for motor vehicles, space vehicles, ships, aeroplanes and cranes, composed of any structural material including composites and novel materials.

### 3 Eligibility Requirements for Registration

Applicants must possess an academic qualification (eg. a four year engineering degree), accredited or recognised by Engineers Australia, or recognised equivalent overseas qualification. They must also be able to satisfy the Australian Engineering Competency Standards for Professional Engineers at Stage 2 in the corresponding area of practice.

In addition to their qualifications and experience, applicants will need to demonstrate:

- That the desired general area of practice is a significant part of their professional employment or practice.
- That they practise independently or under general direction in that general area of practice.

## 4 The Application and Assessment Process

### 4.1 Making an Application

The following sections indicate what you must do to register on NPER in a discipline-based general area of practice.

**You do not need to join Engineers Australia to register on NPER.**

### 4.2 Required Documents

*If you are not a CPEng*, you must follow the guidelines in the *Chartered Status Applicant's Handbook*, ([www.engineersaustralia.org.au](http://www.engineersaustralia.org.au) >education >chartered status) (even if you do not intend to join Engineers Australia) and use the application form in it to apply for NPER in the general area of practice you desire.

[The same process will also allow you to obtain Chartered Membership (CPEng) and College Membership if you wish.]

*If you are a CPEng*, you may apply for registration on NPER in your selected general area of practice by using the *Application for Registration on NPER* ([www.nerb.org.au](http://www.nerb.org.au) >applying). You must also submit a Statement of Experience that demonstrates the

competencies you use and evidence of how you have kept up to date in your practice, as explained on the form.

**All applicants must provide clear evidence that they have worked competently in the general area applied for, and show that they have gained competencies through the experience described in this Guideline. Your documents must be reviewed and substantiated by an experienced professional engineer as being a true representation of your recent responsibilities.**

### 4.3 Assessment

*If you are not a CPEng*, you will be assessed for registration under the Australian Engineering Competency Based Assessment System as explained in the *Chartered Status Applicant's Handbook* ([www.engineersaustralia.org.au](http://www.engineersaustralia.org.au) >education >chartered status). When your Engineering Practice Report (EPR) is accepted you will attend a professional interview lasting about one hour as explained in the Handbook.

*If you are a CPEng*, your Statement of Experience and continuing professional development records will be analysed for evidence that you meet the requirements for the desired general area of practice (see Section 3 above). You may be invited to attend an interview with an Assessment Panel established by the relevant College, as explained on the application form.

Your application for recognition in the desired area of general practice, together with appropriate attachments and fees, must be forwarded to: Associate Director Registration, Engineers Australia, 11 National Circuit, Barton ACT 2600