



**ASIA PACIFIC ECONOMIC COOPERATION**

**APEC ENGINEER**

**HANDBOOK FOR  
APEC ENGINEER REGISTRATION**

**(GUIDELINES FOR APPLICANTS)**

**AUSTRALIA**

With a supplement referring to the

**EMF INTERNATIONAL REGISTER OF  
PROFESSIONAL ENGINEERS (IntPE)**

Enhance your INTERNATIONAL professional engineering career opportunities

Apply for

APEC Engineer Registration

EMF International Register of Professional Engineers (IntPE)

**May 2007**

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# APEC Engineer Register

## AUSTRALIA

The pathway for the recognition of professional engineers in APEC member economies participating in the APEC Engineer Register

Australia  
Canada  
Hong Kong, China  
Indonesia  
Japan  
Korea  
Malaysia  
New Zealand  
Philippines  
Singapore  
Thailand  
The Chinese Taipei  
USA

The guidelines in this handbook provide assistance to professional engineers in Australia wishing to apply for APEC Engineer Registration or for registration on the EMF International Register of Professional Engineers.

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# 1 APEC Engineer Recognition

- 1.1. An APEC Engineer is defined as a person who is recognised as a professional engineer within an APEC economy, and has satisfied an authorised body in that economy, operating in accordance with the criteria and procedures approved by the APEC Engineer Co-ordinating Committee, that they have:
  - completed an accredited or recognised engineering program;
  - been assessed within their own economy as eligible for independent practice; and
  - gained a minimum of seven years practical experience since graduation; and
  - spent at least two years in responsible charge of significant engineering work; and
  - maintained their continuing professional development at a satisfactory level.
- 1.2. All practitioners seeking registration as APEC Engineers must also agree to be bound by the codes of professional conduct established and enforced by their home jurisdiction and by any other jurisdiction within which they are practising. Such codes normally include requirements that practitioners place the health, safety and welfare of the community above their responsibilities to clients and colleagues, practise only within their area of competence, and advise their clients when additional professional assistance becomes necessary in order to implement a program or project.
- 1.3. APEC Engineers must agree to be held individually accountable for their actions, both through requirements imposed by the licensing or registering body in the jurisdictions in which they work and through legal processes.
- 1.4. The guidelines for applicants are based on an [Assessment Statement](#) prepared by the Australian International Registers Monitoring Committee for the APEC Engineer Register. The Monitoring Committee is represented on the international APEC Engineer Coordinating Committee established within the APEC Human Resources Development framework. The Coordinating Committee carries ultimate responsibility for the criteria, standards and assessment mechanisms for APEC Engineers. The Australian Monitoring Committee is authorised to operate an APEC Engineer Register.

## 2. Guidelines for applicants

- 2.1. An applicant for registration shall possess a qualification that shall have satisfied the requirements of an accredited or recognised higher engineering education program:
  - 2.1.1. A person who is registered on the National Professional Engineers Register (NPER), which is administered by the Institution of Engineers, Australia (Engineers Australia) on behalf of the profession, will be deemed to possess a complying qualification.
  - 2.1.2. A Registered Professional Engineering of Queensland (RPEQ) will be deemed to possess a complying qualification.
  - 2.1.3. A Chartered Professional Engineer (CPEng) will be deemed to possess a complying qualification.
  - 2.1.4. An applicant that is not included in 2.1.1 to 2.1.3 above must provide evidence of a qualification in engineering, granted by a higher engineering education institution, which entitles the applicant to be admitted to Engineers Australia as a graduate

member. The applicant must provide a certified copy of the degree certificate as evidence of the qualification.

2.2. An applicant must provide evidence of at least seven years experience after graduation in a recognised engineering discipline.

2.2.1. A person who is registered on NPER must provide a verified supplementary report to demonstrate at least seven years work in an approved discipline of engineering.

2.2.2. An RPEQ must provide a verified supplementary report to demonstrate at least seven years work in an approved discipline of engineering.

2.2.3. A Chartered Professional Engineer (CPEng) must provide a verified supplementary report to demonstrate at least seven years work in an approved discipline of engineering.

2.2.4. An applicant not included in 2.2.1 to 2.2.3 must provide an Engineering Practice Report (EPR) written in accordance with instructions provided in the *Applicants Handbook for Chartered Professional Engineer (CPEng) etc.* The EPR must satisfy the required range of competencies and demonstrate at least seven years experience after graduation in an approved discipline of engineering.

2.2.5. The supplementary report or EPR shall be properly verified by a CPEng or Professional Engineer with equivalent experience and standing.

2.2.6. The following approved disciplines of engineering are recognised in the Australian APEC Engineer Register (see appendix A for details)

• Civil	• Structural
• Geotechnical	• Environmental
• Mechanical	• Electrical
• Industrial	• Mining
• Chemical	• Bio-engineering
• Information	• Aerospace
• Building Services	• Fire safety
• Petroleum	• Transportation

2.2.7. Applicants are expected to have practised under supervision and to have taken an increasing level of responsibility for work in a SINGLE approved discipline of engineering during the seven years stipulated. They must also demonstrate involvement in a comprehensive range of roles and activities appropriate to their field of engineering.

2.3. An applicant must provide evidence of two years experience in responsible charge of significant engineering work.

2.3.1. A person who is registered on NPER must provide a verified supplementary report to demonstrate two years experience in responsible charge of significant engineering work.

- 2.3.2. An RPEQ must provide a verified supplementary report to demonstrate two years experience in responsible charge of significant engineering work.
- 2.3.3. A Chartered Professional Engineer (CPEng) must provide a verified supplementary report to demonstrate two years experience in responsible charge of significant engineering work.
- 2.3.4. An applicant not included in 2.3.1 to 2.3.3 must provide an Engineering Practice Report (EPR) written in accordance with instructions provided in the *Applicants Handbook for Chartered Professional Engineer (CPEng) etc.* The EPR must satisfy the required range of competencies and demonstrate at least two years experience in responsible charge of significant engineering work.
- 2.3.5. The supplementary report or EPR shall be properly verified by a CPEng or Professional Engineer with equivalent experience and standing.
- 2.3.6. **Significant engineering work** shall have required the exercise of independent engineering judgment. The projects or programs concerned shall have been substantial in duration, cost, and complexity, and the applicant must have been personally accountable for their success or failure. Applicants must demonstrate competencies consistent with the Advanced Stage Engineer as provided in Appendix B.
- 2.3.7. In general, applicants will be considered to have been **in responsible charge of** significant engineering work when they have:
- planned, designed, coordinated, executed and commissioned a complete engineering project; or
  - undertaken a significant part of a large engineering project based on an understanding of the whole project; or
  - undertaken novel, complex and/or multidisciplinary work associated with a significant engineering project.
- 2.3.8. It is acceptable for the specified period of two years, in some instances, have been completed in the course of the seven years practical experience in an approved discipline of engineering since graduation.
- 2.3.9. Applicants may submit a single report addressing both criteria.
- 2.3.10. Fellows of Engineers Australia (FIEAust CPEng) who are registered on NPER in an area of practice that corresponds with an approved discipline of engineering are invited to complete the application form and provide an up-to-date curriculum vitae with their application.
- 2.4. Applicants must provide evidence that they have maintained their continuing professional development at a satisfactory level.
- 2.4.1. A person on the Register shall be required to invest in continuing professional development to satisfy Engineers Australia's requirements as described in the *Continuing Professional Development (CPD) Information and Record Sheet.* (see Appendix C)
- 2.4.2. All applicants must complete the record sheet and return it with their application.

2.5. Whether or not a member of Engineers Australia, applicants must show that they practise in a way that is consistent with Engineers Australia's *Code of Ethics*. The tenets of the Code of Ethics are provided at Appendix D.

2.5.1. All applicants must sign an undertaking to be bound by Engineers Australia's *Code of Ethics*.

2.5.2. Any complaint against a person on the Register received in writing by the Monitoring Committee, or any of its Members, shall be dealt with in accordance with Engineers Australia's Disciplinary Regulations. Applicants must sign an undertaking to be bound by Engineers Australia's Disciplinary Regulations. A summary of the Disciplinary Regulations is provided at Appendix E.

### 3. Assessment of Applications

3.1. The Monitoring Committee has authorised Engineers Australia to review applications for registration on the Australian Part of the APEC Engineer Register.

3.1.1. The supplementary report of a person who is registered on NPER will be assessed for evidence of seven years experience in a single approved discipline and two years in responsible charge of significant engineering work. Applicants may be required to attend an interview.

3.1.2. The supplementary report of an RPEQ will be assessed for evidence of seven years experience in a single approved discipline and two years in responsible charge of significant engineering work. Applicants may be required to attend an interview.

3.1.3. The supplementary report of a Chartered Professional Engineer (CPEng) will be assessed for evidence of seven years experience in a single discipline and two years in responsible charge of significant engineering work. Applicants may be required to attend an interview.

3.1.4. Fellows of Engineers Australia (FIEAust CPEng) who are registered on NPER in an area of practice that corresponds with an approved discipline of engineering will be deemed to have satisfied the requirement for seven years experience since graduation and two years in responsible charge of significant engineering work.

3.2. All other applicants will be required to attend a professional interview.

3.2.1. A professional interview is essentially a peer review of the competencies the applicant has claimed. Chartered Members of Engineers Australia in the chosen engineering discipline will conduct the interview. The Accredited Assessor who has assessed the applicant's EPR will also be present but mainly as an advisor to the interviewers.

3.2.2. The interview will last approximately one hour.

3.2.3. At the start of the interview the applicant will be asked to make an uninterrupted fifteen-minute presentation in support of the application. During the remainder of the interview applicants must be prepared to discuss the details of the functions, responsibilities and achievements that they have offered as evidence in support of their application.

3.2.4. Applicants should also be prepared to answer questions on Engineers Australia's Code of Ethics (refer to Appendix D) and contemporary engineering issues such as the environment and sustainability.

3.2.5. Australian APEC Engineers must be able to communicate effectively in the English language. Applicants' competencies in English will be assessed both during the interview and in the assessment of their written evidence.

## 4. Audit of APEC Engineer

4.1. The Monitoring Committee has authorised Engineers Australia to conduct audits of persons on the Register.

4.1.1. An audit of a person on the Register will be undertaken in accordance with the requirements described in Engineers Australia's document *CPD Compliance*, which provides for an annual declaration of compliance. The document is provided at Appendix F.

4.1.2. The Monitoring Committee understands the annual declaration has been made when annual fees are paid for registration. Applicants certify a declaration, when they first apply for registration, that they will continue their professional development each year in accordance with the above requirements.

4.1.3. Persons on the Register shall be subject to random audit of their current curriculum vitae and records of continuing professional development over the immediate past three-year period. An Engineers Australia accredited assessor shall review the submission for compliance.

## 5. EMF IRPE Supplement

5.1. The Monitoring Committee has resolved that:

5.1.1. A person registered in Australia as an APEC Engineer may also adopt and use the title of International Professional Engineer for the purposes of recognition under the EMF International Register for Engineers.

5.1.2. A person using the title International Professional Engineer may also use the post nominal "IntPE (Aus)".

5.1.3. Use of the title IntPE (Aus) may be restricted in some economies by law; therefore, International Professional Engineers must respect domestic law in economies in which they practise.

5.1.4. EMF Full Members include Ireland, South Africa and the United Kingdom, but do not include Indonesia, the Philippines, Thailand and the Chinese Taipei.

## 6. Fees for International Registration

6.1. The fee for registration as an APEC Engineer and an IntPE(PE) is \$0.00 and the application fee is \$0.00.

## 7. List of Appendices

- A Approved APEC Engineer Disciplines – typical coverage
- B Competencies for an Advanced Stage Engineer
- C Continuing Professional Development (CPD) Information and Record Sheet
- D Tenets of Engineers Australia's *Code of Ethics*
- E A summary of the Disciplinary Regulations
- F *CPD Compliance*

# APEC Engineer Disciplines

The International Registers Monitoring Committee has resolved to support the registration of engineers in approved disciplines that correspond to general areas of practice on the National Professional Engineers Register (NPER) which is administered by Engineers Australia.

The following descriptions provide an indication of the general areas of practice in which an engineer may be registered on the APEC Engineer Register in Australia.

## **Aerospace Engineering**

### **Indicative area of practice**

Aerospace Engineering is concerned with aerodynamics and performance, aircraft stores, airports and ground systems, airways systems, cabin environment, cockpit ergonomics, communications systems, computer systems and avionics, crashworthiness, electrical systems, electronic warfare, environmental effects, fire safety and control, flight management systems, flight simulators, flight navigation systems, noise and acoustic effects, propulsion system, radar systems, risk management, satellite systems, software, structures, test flight control, tracking systems, vehicle dynamics, and vehicle launch and recovery.

## **Bio-engineering**

### **Indicative area of practice**

The discipline of Bio-engineering, although having a broader definition in some other APEC economies, is confined to the area of practice of Biomedical Engineering for registration on the Australian APEC Engineer Register.

Biomedical Engineers are 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 in addition to their engineering qualification. This is typically 80 hours of formal education or equivalent, which may have been part of their undergraduate course or undertaken post graduation. Applicants must also hold, or have held, a position of responsibility in biomedical engineering.

## **Building Services Engineering**

### **Indicative area of practice**

Building Services Engineering is concerned with aspects of the built environment, involving air conditioning and mechanical ventilation, electrical light and power, fire services, Fire Safety Engineering, water and waste services, data and communications, security and access control, vertical transportation, acoustics in buildings and energy management.

## **Chemical Engineering**

### **Indicative area of practice**

Chemical Engineers are 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. Chemical Engineering is 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**

### **Indicative area of practice:**

Civil Engineers are 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**

### **Indicative area of practice**

Electrical Engineers are 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. Electrical Engineering is 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.

## **Environmental Engineering**

### **Indicative area of practice**

Environmental Engineers use their specialised training and experience to work closely with professional engineers from other disciplines to achieve environmentally sustainable outcomes. Collectively and holistically, they apply an integrated approach to technical, economic, social, legal and scientific considerations. Environmental Engineers work on new or existing projects that require some form of improvement, remediation or rehabilitation in the natural and built environment. Environmental Engineers work in many areas of environmental protection including water quality, waste water and storm water management, waste management, contaminated land remediation, natural resource management, air quality, noise management, greenhouse gas emission reduction, environmental management systems, environmental information systems, social impact analysis and environmental risk assessment. While all engineers have a duty of care to the community on environmental matters and effects, Environmental Engineers approach issues on a multidisciplinary and integrative basis and involve other professionals where necessary.

## **Fire (Safety) Engineering**

### **Indicative area of practice**

Fire safety engineering is multidisciplinary in nature, having substantial relationships with building services, mechanical, electrical, electronics, chemical, structural and civil engineering and embraces an understanding of human behaviour. Fire Safety Engineering is the application of engineering principles, rules and expert judgement based on a scientific appreciation of the fire phenomenon, of the effects of fire and of the reaction and behaviour of people in order to:

- save life, protect property and preserve the environment and heritage from destructive fire;
- quantify the hazards and risk of fire and its effects;
- mitigate fire damage by proper design, construction, arrangement and use of buildings, materials, structures, industrial processes and transportation systems;
- evaluate analytically the optimum protective and preventive measures, including design, installation and maintenance of active and passive fire and life safety systems, necessary to limit, within prescribed levels, the consequences of fire.

## **Mechanical Engineering**

### **Indicative area of practice**

Mechanical Engineers are concerned with research, design, development, evaluation, manufacture, installation, testing, operation, maintenance and management of machines, machine and thermodynamic processes, and manufacturing and materials handling plants and systems. Mechanical Engineering is applied to manufacturing, transport, electricity generation, and in works and services using machine systems, including the environment of building interiors. Applicants must have experience in the safety aspects of design and/or operation of machines, plant, systems or processes.

## **Structural Engineering**

### **Indicative area of practice**

Structural Engineers have expertise in 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, airplanes and cranes, composed of any structural material including composites and novel materials.

# Advanced Stage Engineer

## Note:

The advanced Stage Engineer Competencies are reproduced from the 1999 edition of the National Generic Competency Standards for the purpose of indicating the level of competency corresponding with “significant engineering work” as described in section 2.3 of the Handbook.

## CORE UNITS

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- LC1.1 Facilitates innovation
- LC1.2 Promotes the engineering profession
- LC1.3 Provides significant engineering contributions to the community
- LC1.4 Encourages and manages workplace change
- LC1.5 Motivates and mentors others

#### UNIT LC 2: Business Outcomes

- LC2.1 Establishes business direction
- LC2.2 Manages a multi-disciplined team
- LC2.3 Leads and manages the business

#### UNIT LC 3: Leadership of Engineering Practice

- LC3.1 Provides significant contributions to the science and practice of engineering
- LC3.2 Leads Engineering Teams

The Advanced Stage Engineer demonstrates engineering leadership through the development of processes to manage knowledge, acquiring, interpreting storing and deploying knowledge about engineering decisions across professional areas. The Advanced Stage Professional Engineer effectively manages risk and uncertainty aiming to identify and capitalize on opportunities for engineering excellence and ensuring that all stakeholders are aware of the possible impacts of engineering decisions.

The Advances Stage Engineer, working autonomously, leads teams carrying out normal engineering work in engineering practice. More complex work may be done under general direction, but normally full responsibility is accepted for critical and novel work.

It is expected that the Advances Stage Engineer is fully abreast of world’s best practice in his/her field of activity, applies the latest engineering principles and practices, and develops new engineering principles and practices as required.



## UNIT LC 1: Engineering Leadership

**Descriptor:** This Unit outlines the level of leadership excellence that engineers with extensive and diverse experience contribute to the profession and the community.

ELEMENT	PERFORMANCE CRITERIA
<p><b>LC 1.1 Facilities innovation</b></p>	<ul style="list-style-type: none"> <li>a. Identifies and implements best practice</li> <li>b. Reviews and supports proposals and opinions</li> <li>c. Seeks to advance sustainable practices and outcomes</li> <li>d. Negotiates finances to promote innovation</li> <li>e. Encourages others to seek and achieve innovation</li> <li>f. Promotes commercialization of innovation to advantage Australia</li> </ul>
<p><b>LC 1.2 Promotes the engineering profession</b></p>	<ul style="list-style-type: none"> <li>a. Communicates and promotes engineering outcomes</li> <li>b. Identifies technical/expertise requirements</li> <li>c. Demonstrates professional leadership</li> <li>d. Leads the development of alliances and partnership with other professionals to achieve integrated social and environmentally sensitive engineering solutions</li> <li>e. Advocates on behalf of Engineers Australia to influence the development of the profession</li> </ul>
<p><b>LC 1.3 Provides significant engineering contributions to the community</b></p>	<ul style="list-style-type: none"> <li>a. Identifies opportunities to effect decisions that have engineering implications</li> <li>b. Advocates to ensure government policies and directions support the achievement of engineering standards</li> <li>c. Advocates innovative engineering solutions</li> <li>d. Leads and informs the community on engineering options to gain their involvement in the development of engineering solutions to community problems</li> <li>e. Identifies hazards and takes disaster prevention/mitigation action to protect the community</li> </ul>
<p><b>LC 1.4 Encourages and manages workplace change</b></p>	<ul style="list-style-type: none"> <li>a. Encourages understanding of change</li> <li>b. Adopts/implements change</li> <li>c. Identifies opportunities for change</li> <li>d. Influences and encourages responsive, sustainable engineering practices</li> <li>e. Develops a culture conducive to achieving engineering outcomes in a changing environment</li> </ul>
<p><b>LC 1.5 Motivates and mentors others</b></p>	<ul style="list-style-type: none"> <li>a. Leads and promotes ethical decisions</li> <li>b. Guides and supports informed career decisions</li> <li>c. Manages diverse and multi disciplined teams</li> <li>d. Encourages professional development</li> </ul>

## UNIT LC 2: Business Outcomes

**Descriptor:** This Unit outlines the level of leadership excellence that engineers with extensive and diverse experience contribute to the profession and the community.

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
<b>LC 2.1 Establishes business direction</b>	<ul style="list-style-type: none"><li>a. Develops engineering strategies</li><li>b. Interprets strategic goals to integrate with business planning</li><li>c. Seizes wealth creation opportunities</li><li>d. Produces environmental scan</li><li>e. Identifies and assesses new technologies</li><li>f. Monitors and contributes to market plans</li></ul>
<b>LC 2.2 Manages a multi disciplined team</b>	<ul style="list-style-type: none"><li>a. Leads communication across professional groups</li><li>b. Develops and manages the performance of a diverse team</li><li>c. Ensures documentation of outcomes are integrated across professions</li><li>d. Provides leadership on ethical considerations across disciplines</li></ul>
<b>LC 2.3 Leads and manages the business</b>	<ul style="list-style-type: none"><li>a. Manages work processes</li><li>b. Develops and maintains stakeholder and client relationships</li><li>c. Seeks and establishes business opportunities</li><li>d. Guides market development and market penetration</li><li>e. Manages risks</li><li>f. Leads the integration of Research &amp; Development outcomes</li><li>g. Achieves agreed commercial outcomes</li></ul>

## UNIT LC 3: Leadership of Engineering Practice

**Descriptor:** This Unit outlines the level of leadership excellence that engineers with extensive and diverse experience contribute to the profession and the community.

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
<b>LC 3.1 Provides significant contributions to the science and practice of engineering</b>	<ul style="list-style-type: none"><li>a. Develops new engineering principles</li><li>b. Develops and applies new concepts</li><li>c. Develops new codes, standards and engineering practices</li><li>d. Contribute to developing and communicating the engineering body of knowledge</li></ul>
<b>LC 3.2 Leads engineering teams</b>	<ul style="list-style-type: none"><li>a. Leads multi-disciplinary engineering, technical, and scientific teams</li><li>b. Leads engineering design teams</li><li>c. Leads team investigating the sources and application of materials/components/systems</li><li>d. Leads engineering project teams</li><li>e. Leads teams carrying out investigations and reporting</li><li>f. Leads research, development, and commercialization</li></ul>

## CPD INFORMATION AND RECORD SHEET

## CPD – Types and Conditions

Type of CPD	Conditions	Notes
I. Formal post-graduate study or individual tertiary course units not undertaken for award purposes	There is <b>no limit</b> to the maximum number of hours that you can claim over a three-year period for these activities.	Study may be either on campus or by distance education. For distance education, estimate the equivalent number of hours of formal face-to-face education that would have been involved. Time claimed is the actual hours of lectures / tutorials / laboratory work, noting that there will almost always be further time spent both in preparation and follow-up. All such activities will involve some form of assessment
II. Short courses, workshops, seminars and discussion groups, conferences, technical inspections and technical meetings	There is <b>no limit</b> to the maximum number of hours that you can claim over a three-year period for these activities.	Technical meetings, including Engineers Australia presentations, seminars and workshops, will normally be delivered or facilitated by recognised practitioners in the field. Workshops, seminars and discussion groups will often be in-house for employees of major engineering concerns.
III. Learning activities in the workplace that extend competence in the area of practice	A <b>maximum of 75 hours</b> of your total CPD in any three-year period may be claimed for these activities.	Activities that are normal work activities applying current knowledge cannot be claimed as learning activities in the workplace. For any learning activity undertaken in the workplace you must be able to demonstrate how it has extended your knowledge.
IV. Private study which extends your knowledge and skills	Reading of the monthly Engineers Australia journal can contribute to <b>a maximum of 18 hours</b> of your total CPD in any three-year period.  <b>Note:</b> The <b>total claimable hours</b> for learning activities in the workplace (Type III) and private study (Type IV) combined <b>are 110 hours</b> over three years.	Study may be in your area of practice and or in the core areas of risk management, business and management skills.  Private study includes the reading of books, journals, transactions, manuals etc. Sufficient records must be kept of claimed personal reading (e.g. date, title, author and time invested) to address an auditor's inquiry.  This information should be recorded after you have read the article for audit purposes
V. Service to the engineering profession	<b>A maximum of 50 hours</b> of your total CPD in any three-year period may be claimed for these activities.	Service to the engineering profession may include: <ul style="list-style-type: none"> <li>o serving in a volunteer capacity on boards and committees of Engineers Australia;</li> <li>o being a panel member on tertiary course accreditation visits;</li> <li>o being an interviewer on chartered status assessment panels;</li> <li>o reviewing technical publications prior to publication;</li> <li>o assisting with CPD audits;</li> <li>o serving as a volunteer on other boards and committees which advance the engineering profession;</li> <li>o mentoring a colleague for work experience purposes;</li> <li>o preparation of written submissions / contributions to, and participation in technical standards related meetings of organisations, such as Standards Australia, on areas relevant to your professional work (whether representing Engineers Australia or another organisation).</li> </ul>
VI. The preparation and presentation of material for courses, conferences, seminars and symposia	<b>Up to 45 hours per paper</b> may be claimed for papers published in journals and conference proceedings and for the preparation of material for courses not part of your normal employment function eg. as a visiting lecturer from industry.  <b>Up to 75 hours per paper</b> may be claimed for papers subject to critical peer review prior to publication.	This represents work outside of your normal employment and can be claimed for CPD purposes if the material is prepared and presented by you and the activities contribute to the advancement of the profession.
VII. Practitioners employed in tertiary teaching or academic research	Chartered members employed in tertiary teaching and/or academic research must be able to demonstrate <b>a minimum of 40 hours</b> of industry involvement in any three-year period.	Chartered members employed in tertiary teaching and or research positions in universities and VET/TAFE must undertake CPD that demonstrates engagement with contemporary engineering industry practice. This engagement may take the form of provision of consultancy services to industry, participation in joint industry-university research collaboration, supervision and development of students' industry-based design projects and field trips, or other direct industry involvement, such as secondment.
VIII. Any other structured activities not covered by I to VI above that meet the objectives of the CPD policy.	Documentary evidence and a clear justification will be necessary.	

# Key CPD Requirements

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## 1. Objective

CPD activities are to extend or update a practitioner's knowledge, skill or judgment in their area or areas of practice and enable them to:

- maintain technical competence;
- retain and enhance their effectiveness in the workplace;
- be able to help, influence and lead others by example;
- successfully deal with changes in their career; and
- better serve the community.

## 2. Minimum Requirement

A practitioner's CPD records must document a minimum of 150 hours of structured CPD over a three-year period.

## 3. Specific Requirements

3.a. for all practitioners, of the 150 hours:

- at least 50 hours must relate to their area of practice;
- at least 10 hours must cover risk management;
- at least 15 hours must address business and management skills; and
- the remainder must cover a range of activities relevant to the practitioner's career.

3.b. engineering academics and teachers must demonstrate that at least 40 hours of the CPD satisfying the criteria of 3.a. have been obtained in an industry environment.

## 4. CPD activities

CPD records may include participation in the following activities, providing that they satisfy the **Objective in paragraph 1 and the Specific Requirements in paragraph 3 above**:

- a) formal post-graduate study leading to an award or individual tertiary course units not taken for award purposes;
- b) short courses, workshops, seminars and discussion groups, conferences, technical inspections and technical meetings;
- c) learning activities in the workplace that extend competence in the area of practice;
- d) private study which extends knowledge and skills;
- e) service to the engineering profession;
- f) the preparation and presentation of material for courses, conferences, seminars and symposia; and
- g) any other structured activities not covered by a) – f) above.

## 5. CPD Types and Conditions

Conditions and notes on the various types of CPD are detailed at Attachment 3.

## 6. CPD Record Sheet

A CPD Recording Sheet and summary are provided at Attachment 4. Online and spread-sheet based versions of the Recording Sheet are available from the Engineers Australia website.

## 7. Further Information

Further information, including Frequently Asked Questions, can be downloaded from the Engineers Australia website [www.engineersaustralia.org.au/yourcpdaudit](http://www.engineersaustralia.org.au/yourcpdaudit).



Ref	Date	Type I to VIII	CPD activity / topic / provider	How activity has extended knowledge	Risk Management	Business & Management	Related Area of Practice	Hours
					Hours if Applicable	Hours if Applicable	Hours if Applicable	
<b>Totals</b>								

TYPE	Conditions relevant to type of CPD over a 3 year period.	Transpose Time here
Type I	No limit.	
Type II	No limit	
Type III	MAXIMUM of 75 hrs may be recorded	
Type IV	Combined total of recorded types Type III and IV to be a MAXIMUM of 110 hrs, including reading Engineers Australia magazine not greater than 18 hrs.	
Type V	A MAXIMUM of 50 hours	
Type VI	Up to 45 hrs for published papers Up to MAXIMUM of 75 hrs for papers subject to critical review.	
Type VII	For Chartered Members employed in tertiary teaching or academic research) - A MINIMUM of 40 hours industry involvement.	
Type VIII	You will need to provide documentary justification for this type.	
<b>Total</b>	<b>Total CPD activities (Goal 150 hours/3 year period)</b>	

Name \_\_\_\_\_

Signature \_\_\_\_\_

Member (or NPER, NTER) No. \_\_\_\_\_

If you have recorded your CPD in another format, please submit that with your statement of experience. Your record must be comprehensive, and include, as a minimum, the details as shown on this pro forma.

# CODE OF ETHICS

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A complete copy of Engineers Australia's [Code of Ethics](http://www.engineersaustralia.org.au/about-us/discipline-complaints/code-of-ethics/code-of-ethics_home.cfm) is available through the Engineering Centre [http://www.engineersaustralia.org.au/about-us/discipline-complaints/code-of-ethics/code-of-ethics\\_home.cfm](http://www.engineersaustralia.org.au/about-us/discipline-complaints/code-of-ethics/code-of-ethics_home.cfm) .

APEC Engineers are committed to the Cardinal Principles of the Code:

- ◆ to respect the inherent dignity of the individual
- ◆ to act on the basis of a well informed conscience, and
- ◆ to act in the interest of the community

and to uphold its Tenets.

The Tenets of the Code of Ethics are that APEC Engineers:

1. shall place their responsibility for the welfare, health and safety of the community before their responsibility to sectional or private interests, or to other members;
2. shall act with honour, integrity and dignity in order to merit the trust of the community and the profession;
3. shall act only in areas of their competence and in a careful and diligent manner;
4. shall act with honesty, good faith and equity and without discrimination towards all in the community;
5. shall apply their skill and knowledge in the interest of their employer or client for whom they shall act with integrity without compromising any other obligation to these Tenets;
6. shall, where relevant, take reasonable steps to inform themselves, their clients and employers, of the social, environmental, economic and other possible consequences which may arise from their actions;
7. shall express opinions, make statements or give evidence with fairness and honesty and only on the basis of adequate knowledge;
8. shall continue to develop relevant knowledge, skill and expertise throughout their careers and shall actively assist and encourage those with whom they are associated, to do likewise; and
9. shall not assist in or induce a breach of these Tenets and shall support those who seek to uphold them if called upon or in a position to do so.

# Disciplinary Regulations

Engineers Australia's Disciplinary Regulations are binding on all members. They also apply to any non-members who have signed an undertaking to be bound by them.

## A Summary

In broad outline, following attempts to conciliate or mediate a complaint in appropriate cases, there are provisions for persons to be appointed commissioners to investigate complaints and report on their investigations. There are also provisions for the establishment of a Complaints Board which provides a pool of suitably qualified persons to act not only as commissioners but also as members of complaints and appeal panels to consider recommendations of commissioners, responses and appeals by referents as the case may be. Members of the Complaints Board, who have not been associated with a decision of a complaints panel that is being appealed, may be appointed to an appeal panel. A member of Council is appointed by the National President as the Convenor of the Complaints Board. The powers of the Convenor include the power to dismiss a complaint in certain circumstances, to appoint commissioners and members and chairs of complaints and appeals panels.

Sanctions that may be applied by complaints panels or appeals panels as the case may be are admonition, reprimand, fines, suspension of membership or expulsion from membership. Details of a decision of a complaints panel and reasons for it are sent to the person complained about who may lodge an appeal.

Where breaches are established, the decision will normally be published in the journal of Engineers Australia or by such other public notification as may be considered necessary. If a complaint is dismissed by an appeal panel it may, and at the request of the person complained about must, direct the Chief Executive to publish its determination in the journal of Engineers Australia.

NB Further details are provided in the Disciplinary Regulations Booklet, which can be perused at Division Offices. Electronic copies are available on Engineers Australia's web-site at <http://www.engineersaustralia.org.au/index.cfm?1F163B03-B570-3166-42F9-FCAC67E2DA67>

# CPD COMPLIANCE

## for APEC Engineers

### Why CPD?

In today's rapidly changing technological world it is no longer possible to rely on your basic engineering studies and on-the-job training to provide professional advice and services. You need regularly to update your knowledge, and develop and refine your skills. This means undertaking on-going or continuing professional development (CPD). Entitlement to use the prefix "Chartered" (or for example the post nominal "CPEng"), requires you to invest in CPD activities.

### Who Benefits?

#### FIRST AND FOREMOST - YOU

Continuing professional development:

- maintains or increases your level of technical competence;
- extends your range of engineering skills;
- develops new areas of expertise;
- promotes confidence and pride in your work;
- establishes links with fellow professionals; and
- increases your career options.

#### THE PUBLIC AND EMPLOYERS

Your Chartered status with its attendant CPD obligations, means that they can rely on:

- skilled and professional service;
- technical competence; and
- up-to-date knowledge of codes and engineering practice.

#### THE PROFESSION

As you develop your knowledge and skills, you contribute directly and indirectly to its advancement by:

- adding to the body of knowledge and expertise;
- raising professional standards;
- ensuring the profession remains dynamic; and
- enhancing the profession's public image.

### What does "Continuing Professional Development" mean?

Continuing Professional Development refers to activities which:

- have a clear set of objectives;
- have a formal, organised structure;
- require your active participation and - most importantly;
- extend your professional knowledge and skills.

To assist you, Engineers Australia provides guidelines on the types of activities that constitute continuing professional development.

#### Type A

- distance education;
- short courses;
- higher degree or post graduate diploma;

#### Type B

- books, journals, manuals, etc;
- on-the-job learning;
- private study;

#### Type C

- conferences, symposiums, technical inspections and meetings;

#### Type D

- preparation and presentation of courses, conferences, seminars and symposia;
- promoting awareness of engineering;

#### Type E

- providing professional development of others;

#### Type F

- industry involvement for those in academic positions.

## What Engineers Australia requires of you

Engineers Australia recognises that, as a professional, you must decide on the type of professional development activities you undertake.

However, Engineers Australia also needs to ensure that its obligations to the public are met by setting minimum requirements for regular CPD.

All members of Engineers Australia shall continue to develop relevant knowledge, skill and expertise throughout their careers. Members registered on NPER and NETR must keep records of CPD activities available for audit - 150 hours every 3 years.

Members registered in a specific area of practice, where engineering decisions have potentially hazardous outcomes (eg Fire Safety Engineering), may be audited every year. Members registered in a general area of practice are subjected to random audit. However, all Chartered members are encouraged to keep records of CPD which may be required for audit from time to time in special circumstances.

## Whose choice?

You decide which type of professional development you want to pursue and which areas of expertise you want to develop. You may choose activities which are relevant to your employment, but only indirectly related to technical aspects of engineering. You can search *ENtrain* to find suitable CPD including activities delivered by Engineers Australia. *ENtrain* is available at <[www.eeaust.com.au/entrain](http://www.eeaust.com.au/entrain)>.

Let's take a look at the kind of choices you might make.

For example you might be particularly interested in fire safety aspects of building design. You've practised as a civil/structural engineer in the building industry for some years so you want to be able to certify compliance under the Performance based Building Code of Australia. To enhance your skills you complete a Graduate Diploma in Fire Safety and join the Society of Fire Safety Australia. You may also become active in the Society's committee and attend meetings, making presentations on work you have done.

These activities reflect your personal interests and concerns and represent a reasonably broad mix of activities. You are also contributing in very concrete ways to the development of the profession.

At the end, you choose which of these activities you would like to count towards your formal CPD.

## Compliance

If you are registered on NPER or NETR, Engineers Australia ensures your compliance with its CPD requirements in two ways:

### DECLARATION OF COMPLIANCE

By paying your registration fee each year you indicate to Engineers Australia that you have recorded at least 150 weighted hours of CPD activities during the past 3 years and confirm that your circumstances have not placed you outside the minimum practice requirements of one full time year in three.

If you feel unable to make this declaration, you should contact your local office or Division to discuss the options available to you.

### AUDITING COMPLIANCE

Engineers Australia conducts random audits of registered practitioners each year. Those selected are asked to produce evidence of their CPD participation during the preceding three years.

This evidence can take the form of:

- a summary of diary records;
- course/seminar enrolment records;
- receipts;
- certificates;
- attendance lists;
- assessment reports;
- employer reports;
- statutory declarations.

Members are advised to retain all records for at least three years.

These regulations ensure that registered professionals are complying with their professional obligations, and provide each with an opportunity to renew their commitment to personal and professional development.

## Audit Process

Normally, you will not be audited during your first year on NPER or NETR. After that, if you are selected, you will receive notification from the Chair of your College or relevant competency panel. The letter calls for:

- a statement of recent experience; and
- records of CPD activities over the past three years.

You should reply promptly with the required information summarised in no more than 10 pages. It will be assessed by a College or area of practice representative. If you did not retain records before you registered on NPER or NETR you may submit records in proportion to the period of your registration if it is less than three years.



# APEC ENGINEER REGISTER, AUSTRALIA APPLICATION FOR REGISTRATION

## 1. PERSONAL DETAILS

Surname: ..... Sex:  M  F Title: .....  
 Given Names (in full): ..... Date of Birth: ...../...../.....

## 2. CONTACT DETAILS

Business Address: - the normal register address for publication Private Address:  ( only if preferred register address)  
 Employer: .....  
 Street: ..... Street: .....  
 City: ..... State: ..... PostCode: ..... City: ..... State: ..... PostCode: .....  
 Ph: (.....) ..... Fax: (.....) ..... Mob: ..... Ph: (.....) ..... Fax: (.....) ..... Mob: .....  
 Email: ..... Email: .....

## 3. EVIDENCE OF QUALIFICATION

NPER Number ..... OR RPEQ Number ..... OR CPEng Number ..... OR  
 Alternative Educational Information  
 University / College / Institute .....  
 Title(s) of qualification(s) awarded .....  
 Branch of engineering specialisation .....  
 Month / year when you became eligible for the award .....

## 4. SELECT A DISCIPLINE FOR APEC ENGINEER REGISTER (Please one box only)

- Civil       Structural      N/A Geotechnical       Environmental       Mechanical  
 Electrical      N/A Industrial      N/A Mining       Chemical       Bio-engineering  
 Aerospace      N/A Information       Building Services       Fire (safety)      N/A Petroleum  
 N/A Transportation

**Note:** You must demonstrate, by means of a report as stipulated in the Handbook, that you have worked seven years in this discipline, since graduating, and that you have accumulated two years in responsible charge of significant engineering work.

## 5. CAREER SUMMARY – minimum 7 years

(see Handbook paragraph 2.2)

Describe your involvement in your selected discipline of engineering in your report, and summarise the positions you have held in the following table

Ref	Start Finish	mm/yy mm/yy	Name of Organisations	Position Title	Verified (Initials)

**Note:** The person verifying the career summary must be an experienced professional engineer familiar with the work described in your report. The verifying engineer must complete details in section 7 on Page 2 of this form.  
 Applicants may submit supplementary sheets in the above format if necessary.

## 6. PAYMENT DETAILS - to record credit card or other payment details

(no payment required for provisional registration)

Visa     Bankcard     Mastercard     Diners     American Express    Expiry ...../..... Amount \$.....  Cheque attached  
 Card No ..... Signature ..... Date .....  
 Name on Card .....

## 7. SUMMARY OF SIGNIFICANT ENGINEERING WORK – minimum 2 years in responsible charge

Provide a brief summary of each project (typically using 50 words) for which you were personally accountable and state your position, the number of months you were in charge of the work and the advanced stage engineer competencies you claim it demonstrated and have it verified.

Ref.	Position of responsibility	Months	Nature of project, its significance, your functions, responsibilities, achievements, practical innovations, original applications of theory	Competencies Claimed / Verified
				Verifier's Initials
				Verifier's Initials
				Verifier's Initials
				Verifier's Initials
				Verifier's Initials
				Verifier's Initials
Total number of months				

**Note:** The person verifying your Summary and claims of competency must be an experienced professional engineer familiar with the work described in your report. Applicants may submit supplementary sheets in the above format if necessary.

### Verifying Engineers

PRINT Name of verifying engineer	IEAust Number or Contact Address	B/H phone number	Initials

## 8. APPLICANT'S DECLARATION

All applicants for registration as APEC Engineers must sign the following declaration:

1. All statements in my report and summarised in my application are true and correct and I have made claims of competency in good faith.
2. I will comply with the requirements for CPD record keeping and be subject to audit of my practice and CPD records.
3. I will be bound by Engineers Australia's Code of Ethics and subject to its Disciplinary Regulations and I will observe applicable codes of conduct established in jurisdictions where I practise.
4. I consent to my contact details as indicated above being published in any form associated with my registration as an APEC Engineer.

Signature .....

Date ...../...../ 20.....