



# An Overview

## Educational Quality & Mobility

*Within the engineering profession*













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# INTERNATIONAL ENGINEERING ALLIANCE

## **EDUCATIONAL QUALITY AND MOBILITY WITHIN THE ENGINEERING PROFESSION**

There are seven international agreements governing recognition of engineering educational qualifications and professional competence: three Educational Accords and four Competence Agreements.

A full spectrum of quality standards – exemplars for educational attributes of graduates, exemplars for competencies of professionals, plus rules and procedures for assessing organisations performing accreditation or registration – support these seven agreements towards achieving our goal.

The IEA Global Reach Initiative aims to share this information and interact with interested organisations and individuals, based on our experiences gained over the past 28 years.

# THE THREE ENGINEERING EDUCATIONAL ACCORDS

The signatories of all three Accords are organisations that are committed to the development and recognition of best practice in accreditation of engineering educational programmes.

The Accords acknowledge that accreditation of engineering academic programmes sets the key quality foundation for the practice of engineering at various levels.

The activities of the Accord signatories include:

- Benchmarking the standard for engineering education among signatories,

- Mutual recognition of the substantial equivalency of accreditation standards and processes among signatories,

- Mentoring and assessment of interested accreditation organisations worldwide, and

- Engaging with world-class forums on the quality standard of engineering education and its accreditation.

These activities are intended to assist growing globalisation of mutual recognition of engineering educational qualifications



## WASHINGTON ACCORD

### **THE WASHINGTON ACCORD IS AN INTERNATIONAL AGREEMENT AMONG BODIES RESPONSIBLE FOR ACCREDITING ENGINEERING EDUCATIONAL PROGRAMMES**

Originally signed in 1989, the Washington Accord is a multilateral agreement among bodies responsible for accreditation of tertiary-level engineering educational qualifications within their jurisdictions. The Washington Accord aims to mutually recognise accredited engineering educational programmes among signatory bodies.

The Washington Accord is specifically focused on academic programmes dealing with engineering at the professional level. The Accord acknowledges that accreditation of these academic programmes is a key foundation for the practice of engineering at the professional level in each of the countries or territories covered by the Accord.

The Accord has grown from initially six signatories to a well-structured and sought-after organisation.



## SIGNATORIES

There are eighteen signatories that make up the Washington Accord

### **Australia**

[Engineers Australia](#)

### **Canada**

[Engineers Canada](#)

### **China**

[China Association for  
Science and Technology](#)

### **Chinese Taipei**

[Institute of Engineering  
Education Taiwan](#)

### **Hong Kong China**

[The Hong Kong Institution  
of Engineers](#)

### **India**

[National Board of  
Accreditation](#)

### **Ireland**

[Engineers Ireland](#)

### **Japan**

[Japan Accreditation Board  
for Engineering Education](#)

### **Korea**

[Accreditation Board for  
Engineering Education of](#)

[Korea](#)

### **Malaysia**

[Board of Engineers](#)

[Malaysia](#)

### **New Zealand**

[Institution of Professional  
Engineers New Zealand](#)

### **Russia**

[Association for  
Engineering Education of  
Russia](#)

### **Singapore**

[Institution of Engineers  
Singapore](#)

### **South Africa**

[Engineering Council of  
South Africa](#)

### **Sri Lanka**

[Institution of Engineers Sri  
Lanka](#)

### **Turkey**

[MUDEK](#)

### **United Kingdom**

[Engineering Council](#)

[United Kingdom](#)

### **United States**

[ABET](#)

There are also six organisations which hold provisional signatory status.

### **Bangladesh**

[Board of Accreditation for  
Engineering and  
Technical Education](#)

### **Costa Rica**

[Association of Engineers  
and Architects of Costa  
Rica](#)

### **Mexico**

[Consejo de Acreditación  
de la Enseñanza de la  
Ingeniería](#)

### **Pakistan**

[Pakistan Engineering  
Council](#)

### **Peru**

[Instituto de Calidad Y  
Acreditacion de  
Programas de  
Computacion, Ingenieria Y  
Tecnologia \(ICACIT\)](#)

### **Philippines**

[Philippine Technological  
Council](#)

## **SYDNEY ACCORD**

**THE SYDNEY ACCORD IS AN INTERNATIONAL AGREEMENT AMONG BODIES RESPONSIBLE FOR ACCREDITING ENGINEERING TECHNOLOGY EDUCATIONAL PROGRAMMES.**

The Sydney Accord was signed in June 2001, by seven founding signatories representing Australia, Canada, Hong Kong, Ireland, New Zealand, United Kingdom and South Africa.

The signatories are committed to development and recognition of best practice in accreditation of engineering educational programmes. The Sydney Accord is specifically focused on academic programmes dealing with engineering technology.

The Accord acknowledges that accreditation of these academic programmes is a key foundation for the practice of engineering technology in each of the countries or territories covered by the Accord.

It recognises the importance of the roles engineering technologists have as part of a wider engineering team. Even though the term engineering technologist is used throughout, it is mindful these are often termed differently within the specific jurisdictions. It also includes roles such as certified or applied science technologists, which may also be called associate or incorporated engineers.

## SIGNATORIES

There are ten signatories that make up the Sydney Accord.

### **Australia**

Engineers Australia

### **Canada**

Canadian Council of Technicians and Technologists

### **Chinese Taipei**

Institute of Engineering Education

Taiwan

### **Hong Kong China**

The Hong Kong Institution of Engineers

### **Ireland**

Engineers Ireland

### **Korea**

Accreditation Board for Engineering Education of Korea

### **New Zealand**

Institution of Professional Engineers New Zealand

### **South Africa**

Engineering Council of South Africa

### **United Kingdom**

Engineering Council UK

### **United States**

ABET

There is also one organisation which holds provisional signatory status.

### **Peru**

Instituto de Calidad Y Acreditacion de Programas de Computacion, Ingenieria Y Tecnologia (ICACIT)





## DUBLIN ACCORD

**THE DUBLIN ACCORD IS AN INTERNATIONAL AGREEMENT AMONG BODIES RESPONSIBLE FOR ACCREDITING EDUCATIONAL PROGRAMMES FOR ENGINEERING TECHNICIANS.**

The Dublin Accord was signed in May 2002, by the founding signatories representing Canada, United Kingdom, Ireland and South Africa. The Dublin Accord is specifically focused on academic programmes dealing with preparation for engineering technicians.

As with the other Accords the signatories are committed to development and recognition of best practice in accreditation of engineering educational programmes. The Dublin Accord is specifically focused on the mutual recognition of academic programmes/qualifications that underpin the educational base for Engineering Technicians.

The Accord acknowledges that the educational base is a key foundation for practice as an engineering technician, in each of the countries or territories covered by the Accord.

It recognises the importance of the roles engineering technicians play as part of a wider engineering team. Even though the term engineering technicians is used throughout, it is mindful these roles are often termed differently within the specific jurisdictions. It also includes roles such as certified or professional technician, which may also be called engineering associates.

## SIGNATORIES

There are eight signatories that make up the Dublin Accord.

### **Australia**

Engineers Australia

### **Canada**

Canadian Council of Technicians and Technologists

### **Ireland**

Engineers Ireland

### **Korea**

Accreditation Board for Engineering Education of Korea

### **New Zealand**

Institution of Professional Engineers New Zealand

### **South Africa**

Engineering Council of South Africa

### **United Kingdom**

Engineering Council UK

### **United States**

ABET







# THE FOUR PROFESSIONAL COMPETENCE AGREEMENTS

The International Engineering Alliance has developed a series of Agreements reflecting an individual's professional competence. These are four multilateral agreements between groups of jurisdictional agencies responsible for the oversight or operation of national registration or licensure schemes.

The Members have chosen to work collectively to establish a common understanding of what constitutes competence in engineering at three levels: professional engineer, engineering technologist and engineering technician.

The Members are committed to development and recognition of good practice in assessing competence for independent practice in engineering. The collective activities of the Members are intended to assist growing globalisation of shared understandings of what it means to be competent for independent practice in engineering at different competence levels.



## IPEA AGREEMENT

### **THE INTERNATIONAL PROFESSIONAL ENGINEERS AGREEMENT RECOGNISES THE SUBSTANTIAL EQUIVALENCE OF COMPETENCE STANDARDS OF PROFESSIONAL ENGINEERS FOR INDEPENDENT PRACTICE**

Previously known as the Engineers Mobility Forum (EMF), the International Professional Engineers Agreement (IPEA) is a multinational agreement among engineering organisations in the member jurisdictions.

The IPEA creates the framework for the establishment of an international standard of competence for professional engineering. Each member organisation is empowered to establish and operate a section of the International Professional Engineers Register.

The standard of competence applied is the same as for the APEC Engineer agreement (see next section). Most of the APEC agreement members are also members of the IPEA agreement, but the latter is truly global so that countries such as the United Kingdom, Ireland and South Africa have become members of IPEA even though they cannot join the APEC agreement.

## MEMBERS

There are fifteen members that make up the IPEA.

### **Australia**

[Engineers Australia](#)

### **Canada**

[Engineers Canada](#)

### **Chinese Taipei**

[Chinese Institute of Engineers](#)

### **Hong Kong China**

[The Hong Kong Institution of Engineers](#)

### **India**

[Institution of Engineers India](#)

### **Ireland**

[Engineers Ireland](#)

### **Japan**

[Institution of Professional Engineers Japan](#)

### **Korea**

[Korean Professional Engineers Association](#)

### **Malaysia**

[The Institution of Engineers, Malaysia](#)

### **New Zealand**

[Institution of Professional Engineers New Zealand](#)

### **Singapore**

[Institution of Engineers Singapore](#)

### **South Africa**

[Engineering Council of South Africa](#)

### **Sri Lanka**

[Institution of Engineers Sri Lanka](#)

### **United Kingdom**

[Engineering Council United Kingdom](#)

### **United States**

[National Council of Examiners for Engineering and Surveying](#)

Provisional Members have been identified as having competence assessment systems developing towards equivalence to those of full Members. They do not currently operate national sections of the International Professional Engineer register.

### **Bangladesh**

[Bangladesh Professional Engineers, Registration Board](#)

### **Pakistan Pakistan**

[Engineering Council](#)

### **Russia**

[Association for Engineering Education of Russia](#)



## **APEC AGREEMENT**

### **THE APEC AGREEMENT RECOGNISES THE SUBSTANTIAL EQUIVALENCE OF COMPETENCE STANDARDS OF PROFESSIONAL ENGINEERS FOR INDEPENDENT PRACTICE WITHIN THE APEC COUNTRIES**

The APEC agreement is in place among a number of APEC countries for the purposes of recognising “substantial equivalence” of professional competence in engineering.

APEC countries can apply to become members of the agreement by demonstrating they have systems in place which allow the competence of engineers to be assessed. The standard of competence is benchmarked to the agreed international standard set by the APEC Engineer agreement.

Registration on the IPER register with APEC Engineer ensures that professional engineers have the opportunity to have their professional standing recognised within the APEC region. This contributes to the globalization of professional engineering services. This is of particular benefit to engineering firms that are providing services to other APEC economies but it also adds value to individuals who may wish, at some stage, to work in these economies.

Each member economy of the APEC agreement has given an undertaking that the extra assessment required to be registered on the local professional engineering register will be minimised for those registered under the APEC Engineer agreement.

## MEMBERS

There are fourteen members that make up the APEC Engineers Agreement

### **Australia**

[Engineers Australia](#)

### **Canada**

[Engineers Canada](#)

### **Chinese Taipei**

[Chinese Institute of Engineers](#)

### **Hong Kong China**

[The Hong Kong Institution of Engineers](#)

### **Indonesia**

[Persatuan Insinyur Indonesia \(Institution of Engineers\)](#)

### **Japan**

[Institution of Professional Engineers Japan](#)

### **Korea**

[Korean Professional Engineers Association](#)

### **Malaysia**

[The Institution of Engineers, Malaysia](#)

### **New Zealand**

[Institution of Professional Engineers New Zealand](#)

### **Philippines**

[Philippine Technological Council](#)

### **Russia**

[Association for Engineering Education of Russia](#)

### **Singapore**

[Institution of Engineers Singapore](#)

### **Thailand**

[Council of Engineers Thailand](#)

### **United States**

[National Council of Examiners for Engineering and Surveying](#)

There is one Provisional Member.

### **Peru**

[Peruvian Engineers Association \(Colegio de Ingenieros del Perú \[CIP\]\)](#)

## IETA AGREEMENT

### **THE INTERNATIONAL ENGINEERING TECHNOLOGISTS AGREEMENT RECOGNISES THE SUBSTANTIAL EQUIVALENCE OF COMPETENCE STANDARDS FOR PRACTICING ENGINEERING TECHNOLOGISTS**

Through the International Engineering Technologists Agreement (IETA), the members aim to facilitate cross-border practice by experienced practicing engineering technologists. They do so by establishing a framework for their recognition. These frameworks are based on the confidence in the integrity of national assessment systems, secured through continuing mutual inspection and evaluation of those systems.

The IETA provides a framework within which the appropriate responsible body in an economy may, to the extent it considers appropriate, recognise the substantial equivalence in professional competence and standing of experienced engineering technologists licensed, registered, certified or otherwise deemed eligible for independent practice in another economy within which the signatory organisations have standing.

The members note such registration will only be effective if the responsible bodies in the relevant economies accept the validity of the procedures and criteria through which substantial equivalence is established. It also relies on streamlining the procedures for granting rights of practice in their economies to registrants applying through this mechanism.

The members therefore use their best endeavours to ensure that responsible bodies in these economies use the International Register as a foundation upon which to streamline procedures to be adopted in dealing with applications by registrants based in the economies concerned.

## MEMBERS

There are six members that make up the IETA

### **Canada**

Canadian Council of Technicians and Technologists

### **New Zealand**

Institution of Professional Engineers New Zealand

### **Hong Kong China**

The Hong Kong Institution of Engineers

### **South Africa**

Engineering Council of South Africa

### **Ireland**

Engineers Ireland

### **United Kingdom**

Engineering Council United Kingdom

There is one Provisional Member.

### **Australia**

Engineers Australia





## AIET AGREEMENT

### THE AGREEMENT FOR INTERNATIONAL ENGINEERING TECHNICIANS RECOGNISES THE SUBSTANTIAL EQUIVALENCE OF COMPETENCE STANDARDS FOR PRACTICING AS FULLY QUALIFIED ENGINEERING TECHNICIANS

An agreement was signed at the IEAM 2015 for International Engineering Technicians. The AIET recognises that a practicing technician's skills have equivalence with other qualifications and provides a framework for the recognition of substantial equivalence of standards and quality assurance systems.

The agreement will facilitate the recognition of substantial equivalence at the practicing technician's level. That is, it is individual people, not qualifications that are seen to meet the benchmark standard. The concept of this agreement is that a person recognised in one jurisdiction as reaching the agreed international standard of competence should only be minimally assessed (primarily for local knowledge) prior to obtaining registration in another country that is party to the agreement.

## INAUGURAL MEMBERS

There are six inaugural Members of the AIET

### **Australia**

Engineers Australia

### **Canada**

Canadian Council of Technicians and Technologists

### **Ireland**

Engineers Ireland

### **New Zealand**

Institution of Professional Engineers  
New Zealand

### **South Africa**

Engineering Council of South Africa

### **United Kingdom**

Engineering Council United Kingdom





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