# Washington Accord
# And
# International Engineering Alliance

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# Accreditation of Engineering Education in Western Countries

- Professional societies (council of engineers, institution of professional engineers, etc.) have been promoting their professional status and looking after engineering education through accreditation
- To ensure the independence of education from the government, the accreditation bodies are NGOs

# Washington Accord

- Established in 1989 by 6 accreditation bodies for engineering education in Australia, Canada, UK, Ireland, New Zealand and USA
- Accreditation bodies (of WA signatories) accredit educational programs with “similar” criteria
- Recognizes substantial equivalency of accredited programs under the Accord
- Continuous discussion for accreditation principle

# WA Signatories and Councils of Engineers/ Institutions of Professional Engineers

- Accreditation body within CE/IPE

  Australia, Canada, Hong Kong, Ireland, UK,
  Malaysia, New Zealand, South Africa, Singapore

- Accreditation body outside CE/IPE

  Chinese Taipei, Japan, RP Korea, Turkey, USA, Russia

# Steps to become a WA signatory

- Provisional Status
  - Request should be submitted with recommendation letters from 2 signatories, who well know the accreditation system of that jurisdiction
  - 2/3 of the signatories should agree
- Signatory
  - 3 signatories appointed by the WA undertake a review and submit the report to WA.
  - Unanimous agreement is needed

# Washington Accord membership

| Accreditation bodies | Provisional status | Signatory |
|---|---|---|
| 6 Founding Members | | 1989 |
| HKIE (HK) | No system at that time | 1995 |
| ECSA (South Africa) | 1994 | 1999 |
| JABEE (Japan) | 2001 | 2005 |
| IES (Singapore) | 2003 | 2006 |
| BEM (Malaysia) | 2003 | 2009 |
| ASIIN (Germany) | 2003 but was removed in 2013 | |
| ABEEK (RP Korea) | 2005 | 2007 |
| IEET (Chinese Taipei) | 2005 | 2007 |
| AEER (Russia) | 2007 | 2012 |
| AICTE (India) | 2007 | |
| IESL (Sri Lank) | 2007 | |
| MUDEK (Turkey) | 2010 | 2011 |
| PEC (Pakistan) | 2010 | |
| COE (Thailand) | Submitted in 2010 but was differed | |
| BAETE (Bangladesh) | 2011 | |
| CAST (PR China) | 2013 | |
| PTC (The Philippines) | 2013 | |
| Indonesia | Interest | |
| Peru | Interest | |

# International Engineering Alliance (IEA)

http://www.ieagreements.org/

## Educational Accord

| Washington Accord | Sydney Accord | Dublin Accord |
|---|---|---|
| *Professional Engineers* | *Engineering Technologist* | *Engineering Technicians* |

## Competence Recognition/ Mobility Agreements

| International Professional Engineers Agreement | APEC Engineer | International Engineering Technologist Agreement |
|---|---|---|
| *Professional Engineers* | *Professional Engineers (regional Agreement)* | *Engineering Technologist* |

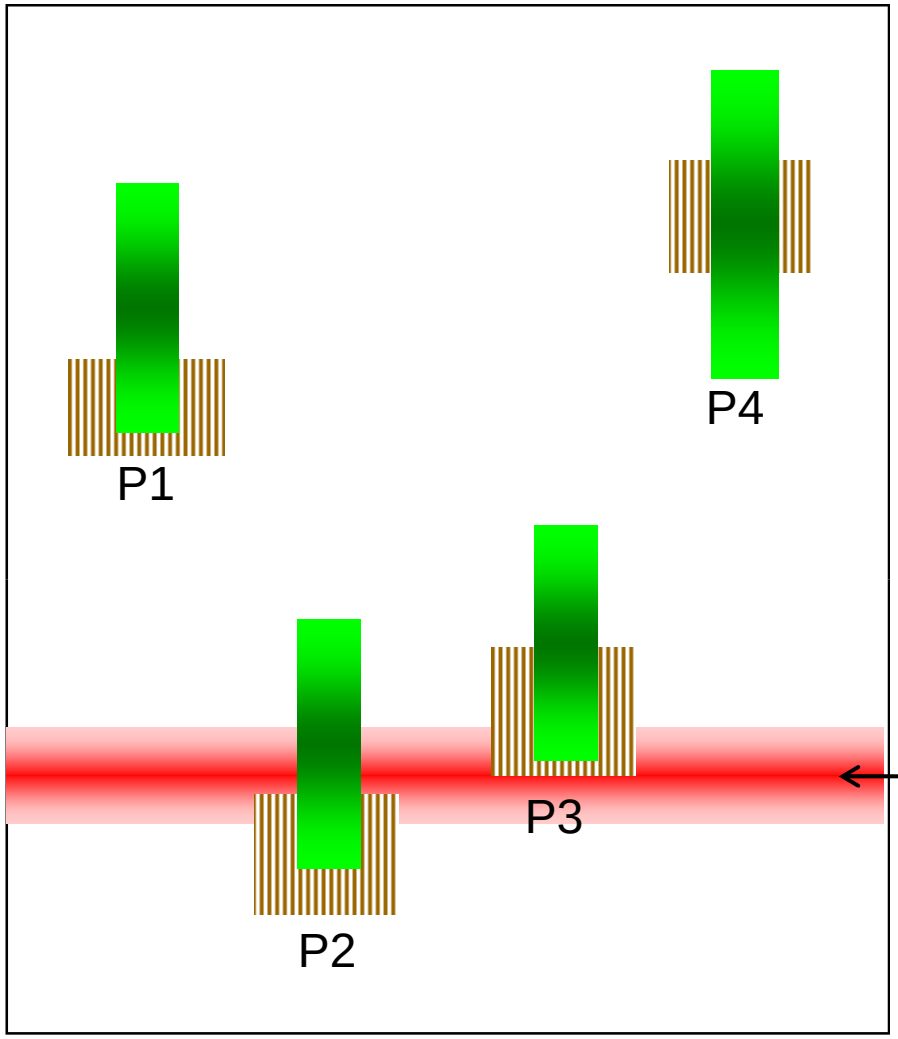
# IEA Graduate Attributes & Professional Competencies

http://www.washingtonaccoord.org/IEA-Grad-Attr-Prof-Competencies-v2.pdf

| | **Complex Problems** | **Broadly-defined Problems** | **Well-defined Problems** |
|---|---|---|---|
| | Professional Engineer | Engineering Technologist | Engineering Technician |
| Range of Problem Solving | | | |
| Range of Engineering Activities | | | |
| Knowledge Profiles | | | |
| Graduate Attributes Profiles | | | |
| Professional Competencies Profiles | | | |

# Graduate Attributes Profiles

| | |
|---|---|
| 1 | Engineering knowledge |
| 2 | Problem Analysis |
| 3 | Design / Development of Solutions |
| 4 | Investigation |
| 5 | Modern Tool Usage |
| 6 | The Engineer and Society |
| 7 | Environment and Sustainability |
| 8 | Ethics |
| 9 | Individual and Team Work |
| 10 | Communication |
| 11 | Project Management and Finance |
| 12 | Life Long Learning |




Learning outcomes to be achieved

Knowledge and abilities of the graduates

Required level by the society

# Engineering Design Education

Design abilities to develop solutions to societal needs by applying science, technology and information.

- Ability to identify a problem that is expected to be solved
- Ability to identify restricted conditions such as public welfare, environmental preservation, and cost which are expected to be considered
- Ability to logically identify, organize, and investigate the problem that is expected to be solved
- Ability to establish a plan to solve the problem considering the restrictions and by applying body of knowledge of mathematics, sciences and technology in each applicable field
- Ability to actually solve the problem in accordance with the plan that is established

# Why Washington Accord accreditation?

- Purpose is improvement of education
- International equivalency
- Review by the third party
- Accountability to the society

# Thank you for your attention

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