

Global Recognition and Value of the Washington Accord

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Chair, Sydney Accord

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Overview of International Accords of Accrediting Agencies

	Washington Accord	Sydney Accord	Dublin Accord	Seoul Accord	Canberra Accord	ENAAEE
Year Established	1989	2001	2002	2008	2008	2006
Discipline	Engineering	Engineering Technology	Engineering Technology	Computing and IT-related	Architectural	Engineering
Degree Qualification for Title	Professional Engineer	Engineering Technologist	Engineering Technician	Professional Engineer or other related	Architect	Professional Engineer
Year of Education	K12+ 4 normally	K12+ at least 3	K12+ at least 2	K12+ 4 normally	K12+ 5 normally	K12+ at least 3
Number of Signatory (as of Dec '24)	25	11	9	13	9	22
IEET Membership	Yes	Yes	No	Yes	Yes	Yes

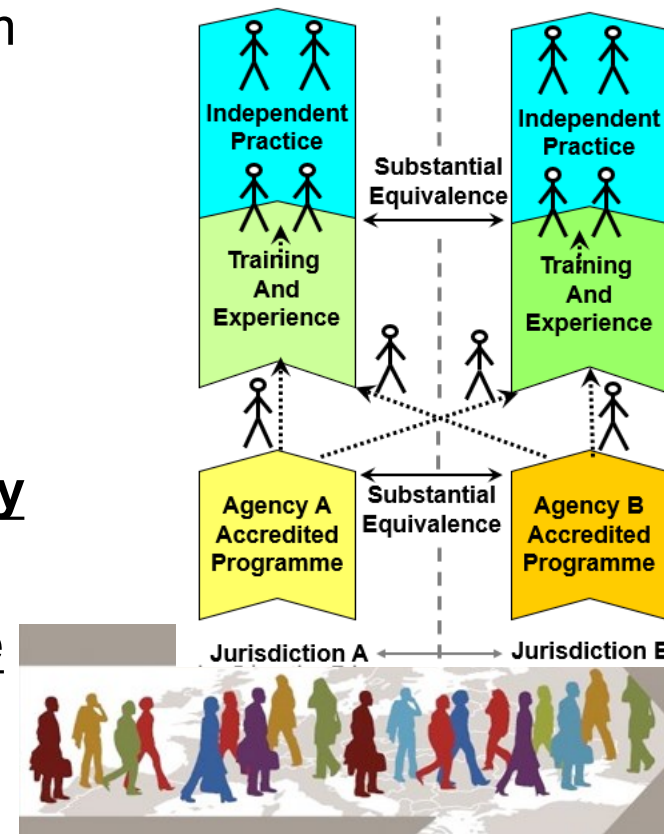


What is Accreditation & Why International Accords Matter

1. Quality Assurance of Education via Accreditation

- A voluntary process involving a program to encourage high standards of education
- Accreditation indicates that the IEET judges that
 - ✓ the program, in a manner consistent with the agency's standards,
 - ✓ offers its students on a satisfactory level of the educational opportunities implied in its objectives and is likely to continue to do so.

2. International Mobility of Professionals



Graduates from **substantially equivalent** programmes A and B are able to proceed to further professional development toward **substantially equivalent** professional competency levels

Signatories of International Accords on the basis of **substantial equivalency** recognize graduates of programs accredited by the other signatories

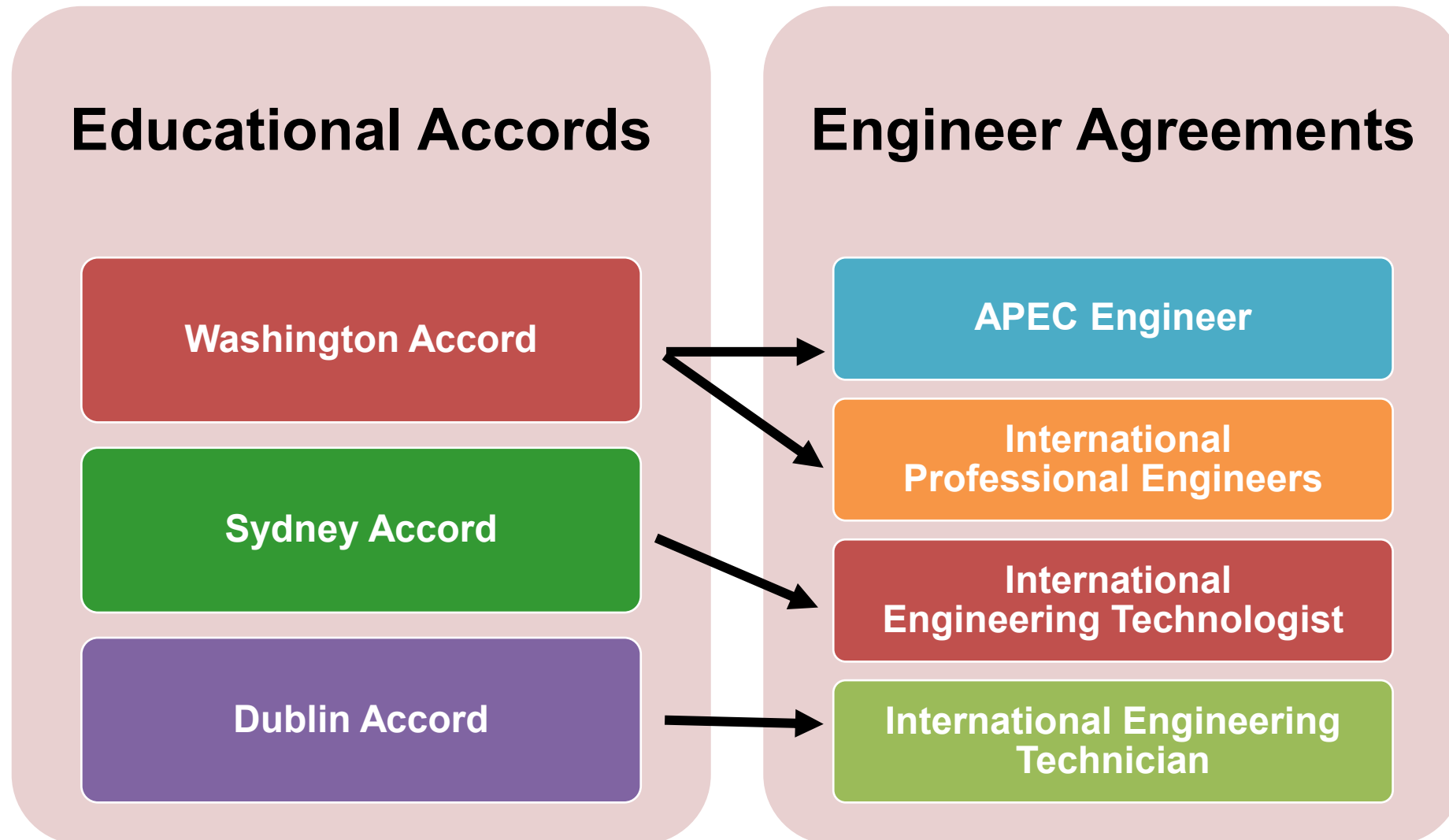


Substantial equivalence at the educational level:
Achieving outcomes that whilst not individually identical to those of the standard ... taken cumulatively achieve the same overall outcome

- Criteria, policies and procedures are verified comparable
- Accreditation decisions acceptable to other signatories
- Graduate attributes are substantial equivalent

International Mobility of Engineers

International Engineering Alliance (IEA) as an Example



Washington Accord

- The Washington Accord (WA) is an agreement among signatory accrediting agencies that:
 - criteria, policies and procedures for **accrediting engineering academic programs** are verified to be comparable
 - for **academic programs providing the educational foundation for the practice of engineering at the professional level**
- Students are expected to be able to solve **complex engineering problems** by graduation



Washington Accord Membership

(in the order of admission year)

Full signatory

1. New Zealand - Represented by Engineering New Zealand (EngNZ) (1989)
2. Australia - Represented by Engineers Australia (EA) (1989)
3. Canada - Represented by Engineers Canada (EC) (1989)
4. Ireland - Represented by Engineers Ireland (EI) (1989)
5. United Kingdom - Represented by Engineering Council United Kingdom (ECUK) (1989)
6. United States - Represented by ABET (1989)
7. Hong Kong China - Represented by The Hong Kong Institution of Engineers (HKIE) (1995)
8. South Africa - Represented by Engineering Council South Africa (ECSA) (1999)
9. Japan - Represented by JABEE (2005)
10. Singapore - Represented by Institution of Engineers Singapore (IES) (2006)
11. Chinese Taipei - Represented by Institute of Engineering Education Taiwan (IEET) (2007)
12. Korea - Represented by Accreditation Board for Engineering Education of Korea (ABEEK) (2007)
13. Malaysia - Represented by Board of Engineers Malaysia (BEM) (2009)
14. Turkey - Represented by Association for Evaluation and Accreditation of Engineering Programs (MÜDEK) (2011)
15. Russia - Represented by Association for Engineering Education of Russia (AEER) (2012)
16. India - Represented by National Board of Accreditation (NBA) (2014)
17. Sri Lanka - Represented by Institution of Engineers Sri Lanka (IESL) (2014)
18. China - Represented by China Association for Science and Technology (CAST) (2016)
19. Pakistan - Represented by Pakistan Engineering Council (PEC) (2017)
20. Peru - Represented by Instituto de Calidad y Acreditacion de Programas de Computacion, Ingenieria y Tecnologia (ICACIT) (2018)

Founding Signatories

21. Costa Rica - Represented by Colegio Federado de Ingenieros y de Arquitectos de Costa Rica (CFIA) (2020)
22. Mexico - Represented by Consejo de Acreditación de la Enseñanza de la Ingeniería (CACEI) (2022)
23. Indonesia - Represented by Indonesian Accreditation Board for Engineering Education (IABEE) (2022)
24. Bangladesh - Represented by The Institution of Engineers Bangladesh (IEB) (2023)
25. Philippines - Represented by Philippine Technological Council (PTC) (2023)

Provisional

1. Chile - Represented by Agencia Acreditadora Colegio De Ingenieros De Chile S A (ACREDITA CI) (2018)
2. Thailand - Represented by Council of Engineers Thailand (COET) (2019)
3. Myanmar - Represented by Myanmar Engineering Council (MEngC) (2019)
4. Saudi Arabia - Represented by Education and Training Evaluation Commission (ETEC) (2022)
5. Nigeria - Represented by Council for the Regulation of Engineering in Nigeria (COREN) (2023)
6. Mauritius - Represented by Institution of Engineers Mauritius (IEM)



As of June 2024, WA recognizes over 8,000 programs in total

Sydney Accord

- As with the other Accords the signatories are committed to development and recognition of good practice in engineering education. **The Sydney Accord is specifically focused on academic programmes dealing with engineering technology.**
- Students are expected to be able to solve **broadly-defined engineering problems** by graduation



Sydney Accord Membership (in the order of admission year)

#	JURISDICTION	ORGANIZATION	ADMISSION
1	Australia	Engineers Australia (EA)	Founding Signatories
2	Canada	Technology Professionals Canada (TPC) (2023) Canadian Council of Technicians and Technologists (CCTT) (2001-2022)	
3	Hong Kong China	The Hong Kong Institution of Engineers (HKIE)	
4	Ireland	Engineers Ireland (EI)	
5	South Africa	Engineering Council South Africa (ECSA)	
6	United Kingdom	Engineering Council United Kingdom (ECUK)	
7	New Zealand	Engineering New Zealand (EngNZ)	2001
8	United States	Accreditation Board for Engineering and Technology (ABET)	2009
9	Korea	Accreditation Board for Engineering Education of Korea (ABEEK)	2013
10	Chinese Taipei	Institute of Engineering Education Taiwan (IEET)	2014
11	Malaysia	Board of Engineers Malaysia (BEM)	2018
(P) 1	Peru	Instituto de Calidad y Acreditacion de Programas de Computacion, Ingenieria y Tecnologia (ICACIT)	
(P) 2	Sri Lanka	Institution of Engineers Sri Lanka (IESL)	



As of June 2024, SA recognizes about 850 programs in total

Range of Problems Solved

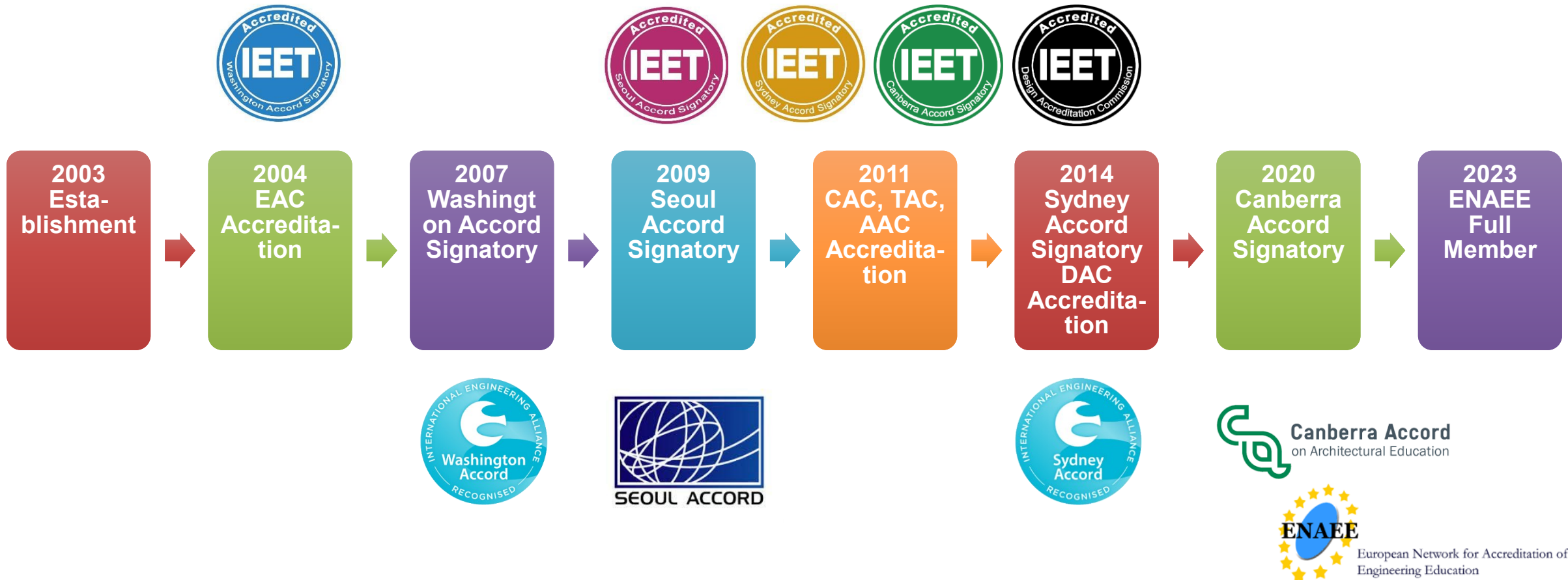
Washington Accord vs Sydney Accord

Accord	Washington Accord	Sydney Accord
Attributes	Complex Problems	Broadley-defined Problems
Depth of Knowledge Required	Cannot be resolved without in-depth engineering knowledge at the level of one or more of WK3, WK4, WK5, WK6 or WK8 which allows a fundamentals-based, first principles analytical approach	Cannot be resolved without engineering knowledge at the level of one or more of SK 4, SK5, and SK6 supported by SK3 with a strong emphasis on the application of developed technology
Range of conflicting requirements	Involve wide-ranging and/or conflicting technical, non-technical issues (such as ethical, sustainability, legal, political, economic, societal) and consideration of future requirements	Involve a variety of conflicting technical and non-technical issues (such as ethical, sustainability, legal, political, economic, societal) and consideration of future requirements
Depth of analysis required	Have no obvious solution and require abstract thinking, creativity and originality in analysis to formulate suitable models	Can be solved by application of well- proven analysis techniques and models
Familiarity of issues	Involve infrequently encountered issues or novel problems	Belong to families of familiar problems which are solved in well- accepted ways
Extent of applicable codes	Address problems not encompassed by standards and codes of practice for professional engineering	Address problems that may be partially outside those encompassed by standards or codes of practice
Extent of stakeholder involvement and conflicting requirements	Involve collaboration across engineering disciplines, other fields, and/or diverse groups of stakeholders with widely varying needs	Involve different engineering disciplines and other fields with several groups of stakeholders with differing and occasionally conflicting needs
Interdependence	Address high level problems with many components or sub-problems	Address components of systems within complex engineering problems

Knowledge Profile for the Range of Problem Solved

Washington Accord	Sydney Accord
WK1: A systematic, theory-based understanding of the natural sciences applicable to the discipline	SK1: A systematic, theory-based understanding of the natural sciences applicable to the sub-discipline
WK2: Conceptually-based mathematics, numerical analysis, statistics and formal aspects of computer and information science to support analysis and modelling applicable to the discipline	SK2: Conceptually-based mathematics, numerical analysis, statistics and aspects of computer and information science to support analysis and use of models applicable to the sub-discipline
WK3: A systematic, theory-based formulation of engineering fundamentals required in the engineering discipline	SK3: A systematic, theory-based formulation of engineering fundamentals required in an accepted sub-discipline
WK4: Engineering specialist knowledge that provides theoretical frameworks and bodies of knowledge for the accepted practice areas in the engineering discipline; much is at the forefront of the discipline.	SK4: Engineering specialist knowledge that provides theoretical frameworks and bodies of knowledge for an accepted sub-discipline
WK5: Knowledge that supports engineering design in a practice area	SK5: Knowledge that supports engineering design using the technologies of a practice area
WK6: Knowledge of engineering practice (technology) in the practice areas in the engineering discipline	SK6: Knowledge of engineering technologies applicable in the sub-discipline
WK7: Comprehension of the role of engineering in society and identified issues in engineering practice in the discipline: ethics and the professional responsibility of an engineer to public safety; the impacts of engineering activity: economic, social, cultural, environmental and sustainability	SK7: Comprehension of the role of technology in society and identified issues in applying engineering technology: ethics and impacts: economic, social, environmental and sustainability
WK8: Engagement with selected knowledge in the research literature of the discipline	SK8: Engagement with the technological literature of the discipline

IEET's Path Toward International Recognition



International Recognition Cases

From...	Case
Parents	A parent of a foreign student called IEET to double-check the accreditation status of an EE program that her son was to enroll in. Unfortunately, the program was no longer accredited.
Graduates	A graduate called IEET to confirm whether his degree could be recognized because he was going abroad for a job offer.
Foreign Intl Engr Org	A foreign engineering board called IEET to verify a program's accreditation status about an applicant for licensure.
Exchange/ double degree	An IEET-accredited program was seeking international collaboration (exchange of students/double degree) with sister universities. The negotiation process was not very smooth until the foreign universities realized the IEET-accredited status of the program.
Company	A foreign company was to recruit engineers from Taiwan and sought confirmation from IEET about the accreditation status of programs.

A Recent Case

July 2023/Email to IEET:

I am a student from Malaysia and interested to study electrical engineering in Taiwan. I noticed the accreditation status for the National ○○○○ University only valid until Dec 2018 under the Washington Accord. Does it mean the Electrical engineering program offered by the National ○○○○ University no longer valid with its accredited status and thus not recognised by other signatories of the Washington Accord?

Looking forward for your reply.

Logos Awarded to IEET Accredited Programs



EAC



CAC



TAC



AAC



DAC



Accredited Logos Placed on Certificate and Diploma



Accreditation Council

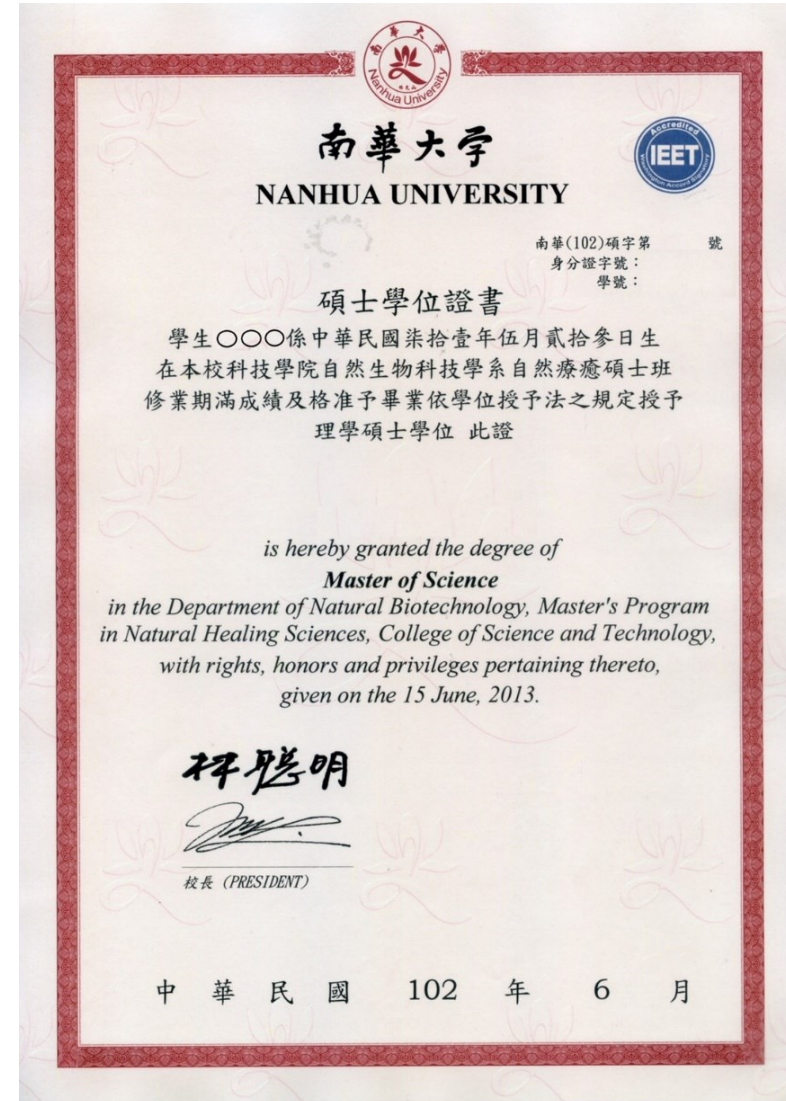
Accreditation Certificate
No. 2018Y051

Hereby it is certified that upon decision of the Accreditation Council and based on the Engineering Accreditation Criteria 2016

National Chung Cheng University
Department of Communications Engineering

Bachelor of Science
Master of Science/Doctor of Philosophy
First Accredited Academic Year: 2007
Current Accreditation Cycle: from August 1, 2018 to July 31, 2024
Accredited Status
from August 1, 2018 to July 31, 2024

Chairman  May 2019



IEET Accredited Program Promotes its Accredited Status on website



Department of Chemical Engineering

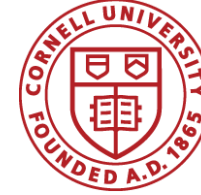


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Engineering Education Accreditation (IEET)

Our department has obtained IEET international accreditation, and the graduates' academic qualifications are internationally recognized.

Program at Cornell Broadcasted its Accreditation Status to Alumni



In educational news, a key milestone for the Sibley School this year was our passing of the ABET accreditation. Every six years, our department prepares a lengthy report on our undergraduate program, and hosts a two-day visit of external reviewers.

Our review occurred in the Fall of 2016, and the Sibley School passed with flying colors, with only strengths and no weaknesses. In fact, our excellent organization, multiple approaches to continual feedback and improvement, and the flexibility of our senior design options were noted by the reviewers as “highlights” of the college. A special thanks to the key leaders of our ABET team, Professor Matt Miller, our ABET “czar,” Betta Fisher, associate director for undergraduate studies, and Emily Ivory, who organizes our “continual” ABET efforts for feedback and improvement, which provided the building blocks for the report, visit, and success of the review.

... a key milestone for the Sibley School this year was our passing of the ABET accreditation...

...our excellent organization, multiple approaches to continual feedback and improvement, and the flexibility of our senior design options were noted by the reviewers...

MAE Magazine

(Alumni Newsletter Winter 2017)

Message from Mark Campbell
Director of the Cornell University

Sibley School of Mechanical and Aerospace Engineering

International Monitoring System of the Accreditation Agency

Yr/A cd	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Washington	Sig.					PR						PR							PR
Seoul			Sig.									PR							PR
Sydney								Sig.				PR							PR
Canberra														Sig.					PR
ENAAEE																	FM	Re- view	



ENGINEERS IRELAND

INTERNATIONAL ENGINEERING ALLIANCE

RECONNECTING GLOBAL ENGINEERING

KILLARNEY | 2 - 7 OCTOBER 2022

FÁILTE
WELCOME



**Dr. Sarithdej Pathanasethpong
Dr. Sutha Khaodhiar
and IEET
at IEA Workshop in Killarney, Ireland
October 2022**



IEET

中華工程教育學會

**Associate Professor
Dr. Quanchai Leepowpanth
2nd Vice President
Visited IEET HQ
11/22/2023**



NBA
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ENGINEERING
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June 9 to 14, 2024

IEAM 2024

INTERNATIONAL ENGINEERING
ALLIANCE MEETINGS

The Leela Ambience, Gurugram, Delhi, India

June 9 to 14, 2024
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ALLIANCE MEETINGS 2024
The Leela Ambience, Gurugram, Delhi NCR, India

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**Dr. Sutha Khaodhiar
and IEET
President JY Yen
CEO LJ Leu
at IEAM2024,
New Delhi, India
June 2024**

In Conclusion Global Recognition of the Engineering Degree aims at...

Quality

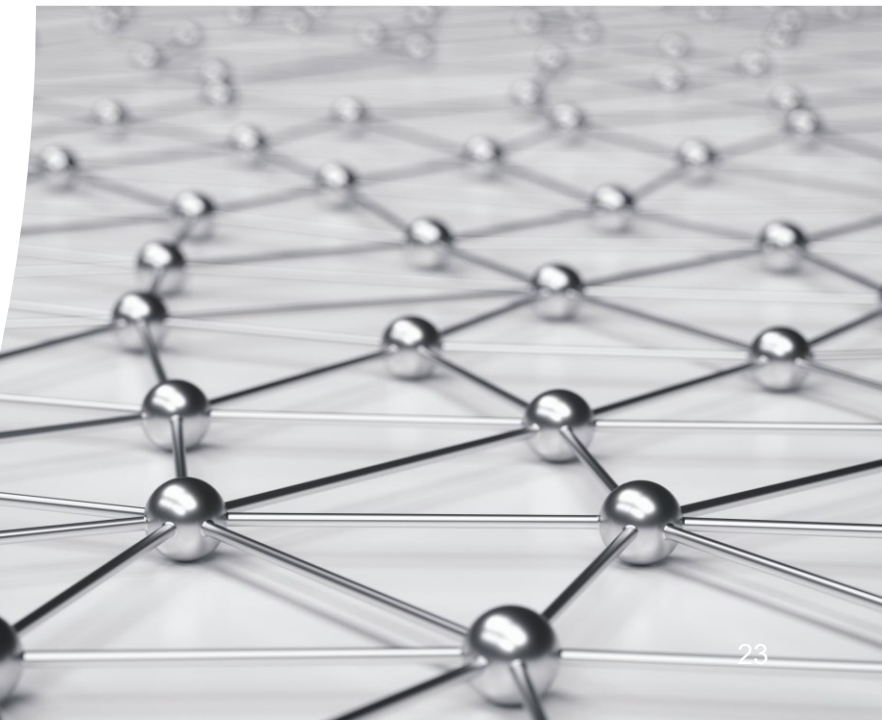
Mobility

Safety

Sustainability



SUSTAINABLE DEVELOPMENT GOALS





IEAM2023, Taichung, Taiwan: June 11-15, 2023

Thank You

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