



ANNUAL REPORT 2018

About us

The Australian Council of Engineering Deans (ACED) has formally been in operation for more than 20 years, with the stated mission *“To create economic and social impact by advancing engineering education, research and scholarship on behalf of Australian universities.”*

ACED does this in the national and international interest, which for education and research includes assuring the public that engineering graduates will conduct their work in the public interest with due regard for human safety and the sustainability of the environment.

ACED is an incorporated association whose members are the Australian public universities that provide undergraduate and postgraduate degree programs and research in engineering.

The Council elects a President for a two year period. The President is supported by the Executive Committee, whose members are elected by the Council.

The Council meets in full twice a year (Spring and Autumn).

ACED has strong links with the Australasian Association of Engineering Education (AaeE) whose members are primarily engineering academics in Australian and New Zealand universities. ACED sponsors the annual AaeE award for Excellence in Teaching.

ACED invites a representative of the New Zealand Council of Engineering Deans to attend Council meetings. ACED supports and encourages members to become members of the Global Engineering Deans Council (GEDC)

ACED also has strong links with Engineers Australia (EA). Representatives of the EA Accreditation Centre attend all ACED meetings to inform and discuss with members developments in the national engineering program accreditation system, and matters of importance arising within the International Engineering Association (IEA) that has oversight of the international engineering education Accords of which EA is a member.

ACED Governance

Executive Committee (at Dec 2018)

President:	Professor Ian Burnett
Deputy President:	Professor Anton Middelberg
Past President:	Professor John Wilson
Members:	Professor Friso de Boer Professor Scott Smith Professor Elisa Martinez-Marroquin Ms Julia Lamborn (representing the ADTL Group) Professor Andrew Bradley (representing the ADR Group) Dr Mark Symes (representing the AaeE Society)
Executive Officer:	Em Professor Doug Hargreaves AM
Consultant:	Em Prof Robin King

ACED Objectives:

- **Promotion:** To provide a forum for Australian leaders of engineering education to discuss matters of mutual concern and national importance, thereby contributing to matters such as raising general community awareness on the need for and value of high-quality engineering education, research training in the higher education sector.
- **Engagement:** To further the interests of engineering education and research in the higher education through engagement and outreach with relevant national and international bodies, particularly EA, AaeE and NZCED
- **Policy:** To develop positions and make statements on relevant issues in response to government inquiries and concerns of professional and industry bodies, and to the media and the general community
- **Projects:** To initiate and conduct reviews and projects consistent with its mission. This would include monitoring the state of engineering education and scholarship, benchmarking programs and resources and the quality of outcomes
- **Leadership:** To support the development of leaders of engineering education and research within the faculties and schools.

ACED Activities**Guest speakers at Council Meetings**

- Dr Alan Finkel, Chief Scientist.
- Em Prof Peter Lee led a discussion on what knowledge, skills and attributes will be required of an engineering graduate in 2035.
- Dr Collette Burke, Chief Engineer of Victoria.
- Mr Steven Baxter, River City Labs.
- Prof Les Dawes – the Step-Up research program.
- Dr Charlie Day, Office of Innovation Science Australia (ISA)
- Em Prof Robin King, on scoping the Engineer of 2035 project.

ACED Projects

During 2018, ACED supported the following projects:

- Professional Engineering Practice in undergraduate education (Prof Bill McBride, University of Newcastle).
- Virtual Work Integrated Learning in undergraduate education (A/Prof Sally Male, University of Western Australia).

ACED compiled and published (see website) the *Australian Engineering Education Student and Staff Statistics*, from data purchased from the Australian Higher Education Statistics collection and other national sources. Recent enrolment and graduation numbers and trends are provided later in this report.

ACED initiated a major project on the Engineer of 2035. This project investigates what knowledge skills and attributes will be required by graduate engineers in the 2035. Interviews with several thought leaders have taken place.

ACED Representation on other bodies

ACED participates in the reference group for the *F-10 Design and Technology* school curriculum implementation, convened by the Australian Curriculum, Assessment and Reporting Authority (ACARA). Together with *Digital Technologies*, this curriculum is part of the compulsory school curriculum, and introduces and develops engineering concepts and practice.

Tripartite Committee.

Engineers Australia (EA), Academy of Technological Sciences and Engineering (ATSE) and ACED did not meet during 2018.

ACED Presentations at national and international conferences

Crossthwaite C Foley B, Goldfinch T, Symes M and Hargreaves DJ (2018): "Workshop discussion on the Engineer of 2035." AaeE Annual conference, Waikato University, Dec 2018.

Hargreaves DJ (2018): "What will a graduate engineer of 2035 look like?" CAFE036 conference, Singapore, November 2018.

Male S A, King R W, "Enhancing Learning Outcomes from Industry Engagement in Australian Engineering Education", *Journal of Teaching and Learning for Graduate Employability* (accepted)

ACED Submissions to national reviews

- ACED responds to requests to respond to the Australian government's consultation processes on matters that relate to engineering education and research. Responses are normally then published on the ACED website. In 2018, ACED made no responses.

ACED Publications

- Practice Guideline: Integrating employABILITY thinking into the existing engineering curriculum. (2018)
- Position Statement: Humanitarian Engineering April 2018.
- Australian Engineering Education - Student, Graduate and Staff Data Trends January 2018.
- Australian Engineering Education Factsheet - update October 2018

ACED Letters of support for national projects:

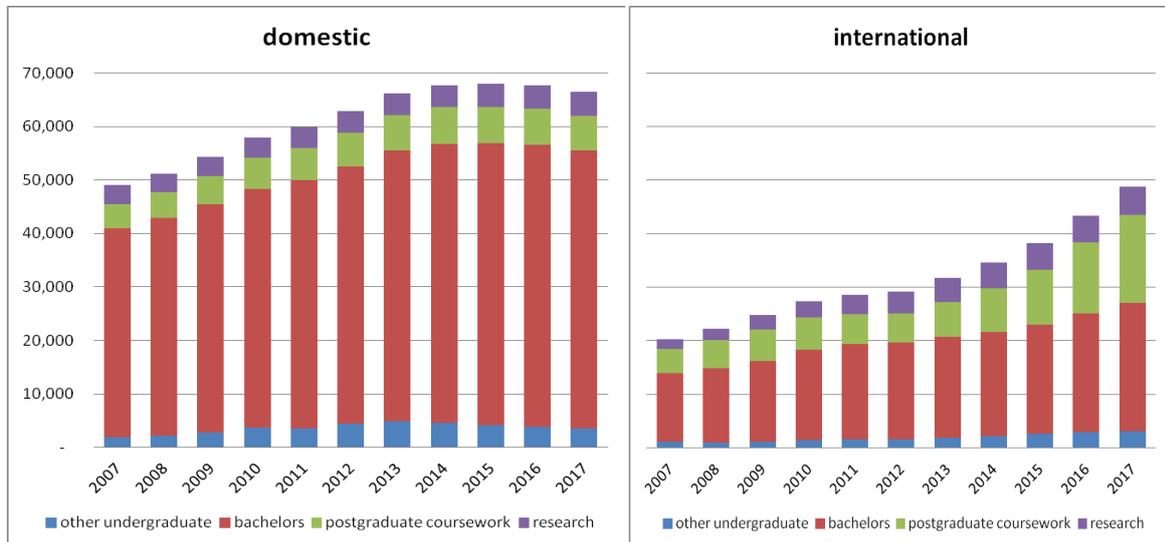
- Submission to the Women in STEM Decadal Plan consultation, October 2018
- Optimising STEM Industry-School Partnerships: Inspiring Australia's next generation

ACED Financial Report (from Auditor's report)

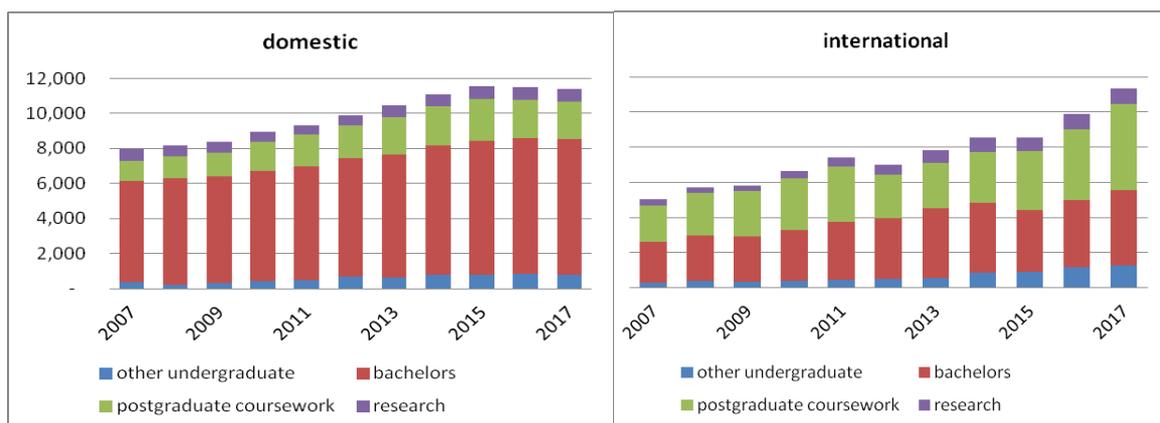
Opening Balance (1 Jan 2018)	\$ 161 978
Income (members' dues + interest)	\$ 142 595
Total Expenditure	\$ 117 442
Retained surplus (31 Dec 2018)	\$ 187 131
Total Current Assets (all 4 accounts)	\$ 203 866
Total Current Liabilities	\$ 16 735
Nett Assets	\$ 187 131

Student enrolments and graduations, 2007 – 2017

There were more than 115,000 students enrolled in higher education qualifications in engineering and related technologies in 2017. Total domestic enrolments have plateaued whilst international enrolments have increased significantly over the past few years as shown in the following charts.



Graduations in engineering exceeded 22,700 in 2017. International graduates constituted exactly half of the total graduating cohort, due to the strong growth in postgraduate coursework degrees. Women constituted 15.6% of the domestic graduates and 20.9% of the international graduates.



Contact us

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