AUSTRALIAN ENGINEERING EDUCATION STUDENT AND STAFF STATISTICS FROM NATIONAL DATA COLLECTIONS – JANUARY 2017

1. INTRODUCTION

This compilation updates ACED's annual collection with data for the 2015 academic year. Much of the data are from the public websites: https://www.education.gov.au/higher-education-statistics (including the data cube), and http://www.graduatecareers.com.au/. These data have been supplemented by data purchased from the Department of Education and Training Higher Education Statistics Collection. Other data sources are referred to in the text. All the DET data are for ASCED Field of Education code 03 (Engineering and Related Technologies).

The DET collection is sourced from data supplied by the universities and other HE providers (VET private providers and TAFE institutes) after the semester census dates. These data are used by national agencies, such as the Office of the Chief Scientist, in their reports on relevant matters.

The data compiled and the commentary are intended to provide an accurate picture of national higher engineering education numbers and trends available. That said, there are known limitations in the data and their aggregation arising from the collection methods and classifications. These include:

- Data cells with less than 5 members are published in national data sets as '<5' so that individuals cannot be identified. These entries are replaced by subtraction where two separate source tables allows this to be done;
- Data on Masters coursework enrolments do not distinguish between qualifications (those that may be accredited by Engineers Australia for graduates entering practice) and those Masters degrees intended for qualified engineers to advance their knowledge and skills;
- ASCED FoE 03 (Engineering and Related Technologies) includes program areas that are not normally associated with engineering (eg civil aviation and spatial sciences), although the numbers of students and staff in these area are relatively small. Other areas, such as software engineering, are not specifically identified in the classification;
- Some universities do not report their graduations against the whole range of available four-digit ASCED codes, rendering it impossible to report accurately on the distribution of graduates amongst the branches of engineering (Section 2 and Table 2);
- Some composite faculties do not report the number of their engineering staff (Table 14).

Other than Table 14, the appended Tables record national aggregates, or are from summaries of national graduate destination and salary data (Tables 12 and 13) that include data from providers not members of ACED. However, TAFE Institutions and private providers contribute less than 2.5 per cent of all engineering education qualifications, mostly at levels below the Bachelor degree.

2. GRADUATIONS, ALL AWARD LEVELS (FIGURE 1, DETAILED DATA IN TABLE 1)

The growth of graduation numbers since 2002 in the four broad qualification levels: research, postgraduate coursework, bachelors and other undergraduate (Associate Degrees, Advanced Diplomas and Diplomas) are shown in Figure 1. The full data are in Table 1, appended.

Observations:

- *PhD graduations have almost doubled over the decade.* However, this growth is predominantly from international students, as the proportion of international PhD graduates has increased from 29% to 52% of the total.
- The *proportion of women* in the PhD graduating cohort has increased over the decade, with women making up approximately a quarter of graduates in recent years. In 2015, women were 31.5% and 41.3% of the graduates from Research Masters degrees.
- *Coursework Masters* graduate numbers (domestic and international) continued to increase; dominated by international students (67.5% in 2015). Part of this growth (domestic and

international) is in the increasing numbers of graduates from accredited 'entry to practice' Masters degrees.

- *Other postgraduate*' awards (Graduate Certificates and Diplomas) continue to be dominated by domestic students (81% in 2015).

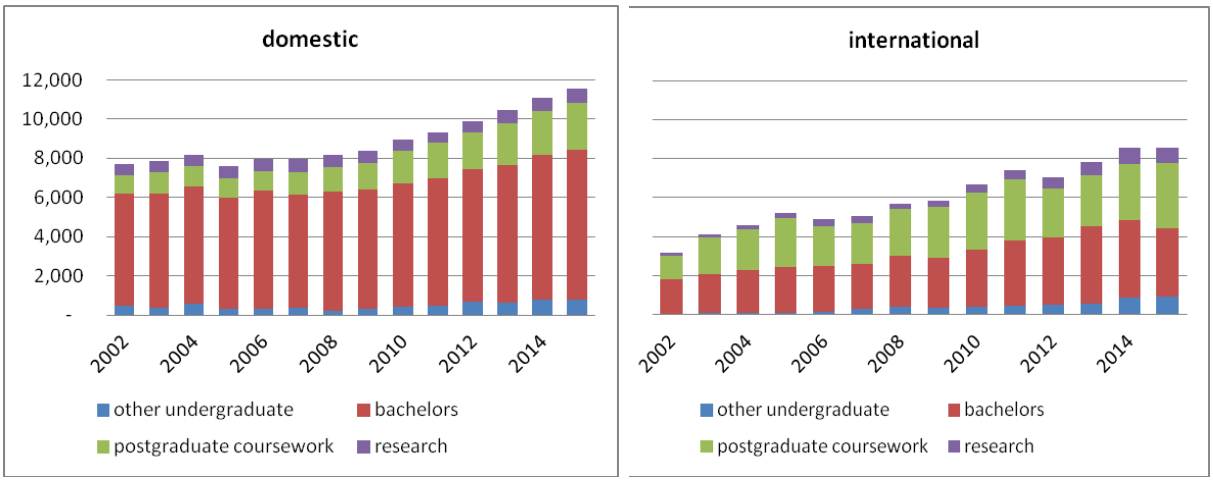


Figure 1 Domestic and international student graduations, 2002 – 2015

- *Bachelors degree graduations declined slightly* (to 11,117 in 2015) but with continued growth of domestic graduations (to 7,634). The total includes approximately 750 graduates from 3-year degrees (see Table 2). Taken together with known growth of 'entry to practice' Master Degree graduations, 2015 produced the largest ever number of domestic graduates qualified to enter professional engineering practice.
- *Associate Degrees and Advanced Diplomas* were awarded to more than 600 students for the fourth consecutive year, and these numbers are continuing to rise.
- '*Other undergraduate' awards have approximately doubled since 2011:* the total (1,029) includes an increasing number of international graduations; but this may still understate the true number of these, as not all universities assign these foundation diplomas to the engineering field of education. Many of these graduates will articulate to enrolments in Bachelor degrees as discussed in Section 5.

3. UNDERGRADUATE GRADUATIONS BY DEGREE TYPE AND BRANCH (FIGURE 2, DETAILED DATA IN TABLE 2)

Observations:

- *3-year Bachelor degree graduates* (that include BEngTech or equivalent degrees that may be accredited for entry to engineering technologist practice) make up less than 10% of all bachelors graduations. These total also small numbers in civil aviation, maritime technologies and geomatics.
- *4-year Bachelor degrees* are gained by the majority of bachelors degree graduates. Most of these are Bachelor (Honours) Degrees, at Level 8 of the Australian Qualifications Framework.
- *About 28% of domestic Bachelor degree graduates* gain awards of more than 4-years duration, presumably mostly dual degrees. For international graduates, the corresponding proportion has dropped to about 2%, which may be partially due to growth of 'entry to practice' Master Degree models.
- The *distribution of graduates across the branches of engineering* from Bachelor Degrees, Associate Degrees, Advanced Diplomas and Diplomas is impossible to report precisely, due to many universities reporting their graduates against the undifferentiated general codes (0300 and 0399). Figure 2 estimates the trends in relative proportions of the main branches of engineering. Key points include:

- for <u>domestic students</u>, civil engineering graduations continue to rise, as process and resource engineering decrease; the downward trend in electrical/electronic engineering graduations seems to have ceased;
- for <u>international students</u>, civil engineering graduations have dropped for the second successive year, mechanical engineering graduations turned down, and electrical/ electronics engineering graduations have picked up. This branch, and mechanical engineering, dominate the international graduations, many from overseas campuses of Australian providers.

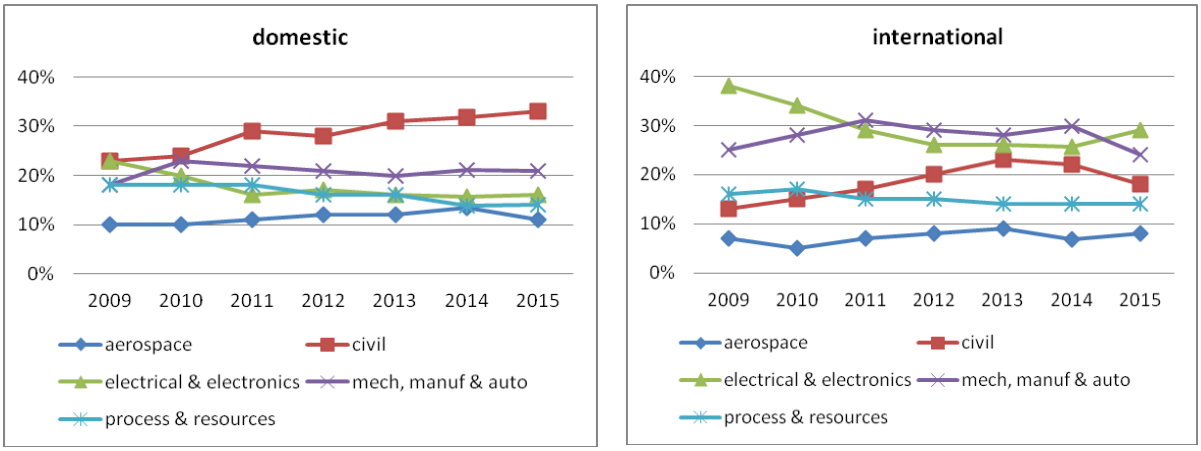


Figure 2 Distribution of undergraduate awards in branches of engineering, 2009 - 15

4. TOTAL ENROLMENTS (SUMMARY IN FIGURE 3, DETAILED DATA IN TABLE 3)

Observations:

- *<u>Total enrolments</u>* in 2015 grew principally from international enrolments (10% increase from 2014), and a 20% increase in enrolments in coursework Master degrees; total *<u>domestic enrolments</u>* appear to have plateaued in 2014.

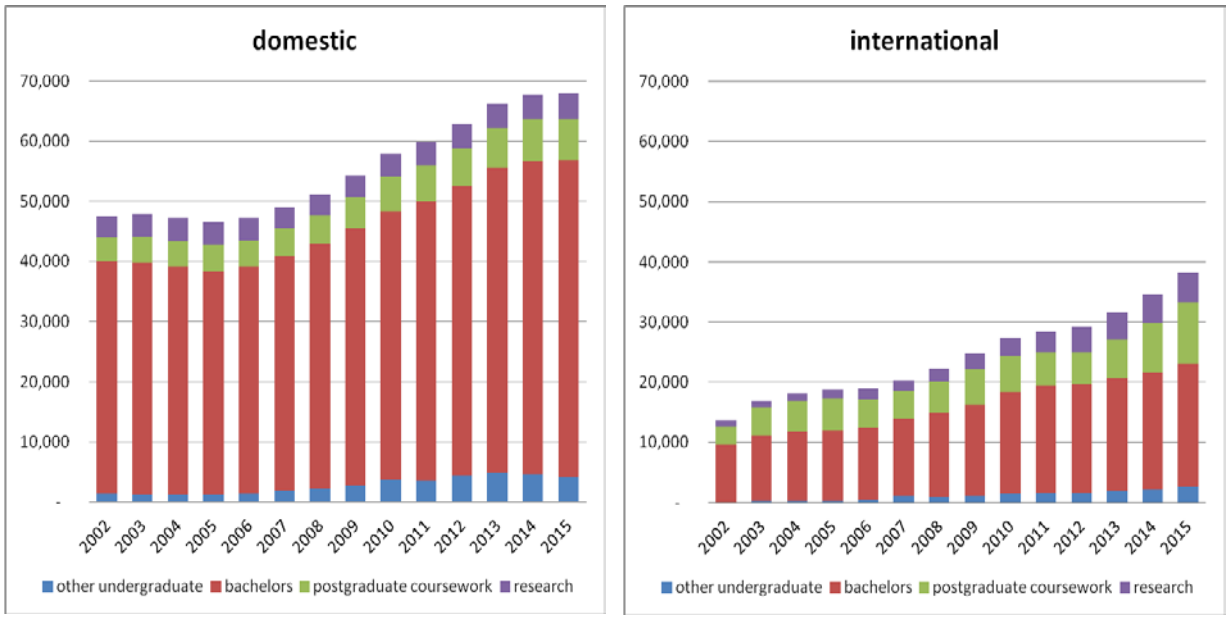


Figure 3 Domestic and international student enrolments, 2002 – 2015

5. COMMENCING ENROLMENTS (FIGURES 4 - 6, DETAILED DATA IN TABLES 4 – 6)

5.1 AGGREGATES, BY LEVEL OF QUALIFICATION

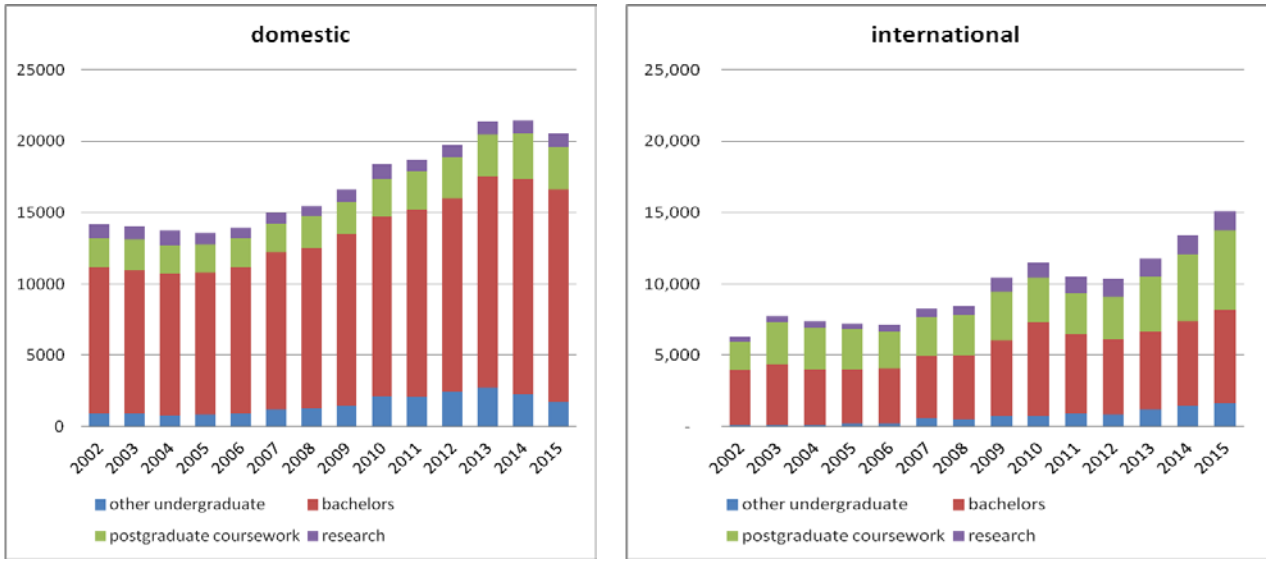


Figure 4 Domestic and international student commencing enrolments, 2002 – 2015

Observations:

- *Doctoral Degree* commencements in 2015 increased only in domestic enrolments; however the proportion of international enrolments remained above 60%, as it has since 2012.
- International commencements enrolments in *Research Masters* degrees in 2015 fell to 163 from 211 in 2014.
- *Total commencements into Coursework Masters* degrees increased by 15%; these data include formative masters degrees, which is likely to account in part to the small reduction in domestic Bachelor degree enrolments.
- *Bachelor degree* commencing enrolments increased in total to the highest number on record (21,406), with a 1.3% fall in domestic students, but a 9.2% increase in international commencing enrolments.
- *Women commenced in Masters and Bachelors degrees* in similar proportions to 2014, being 18.7% and 15.2% respectively for domestic students, and 18.7% and 21% respectively for international students.
- Overall, the proportion of *Australian women* commencing any award remained at 15.8%, equaling last years highest figure, while at 19.9% the proportion of women in the international commencing cohort was the highest on record (see Figure 5).

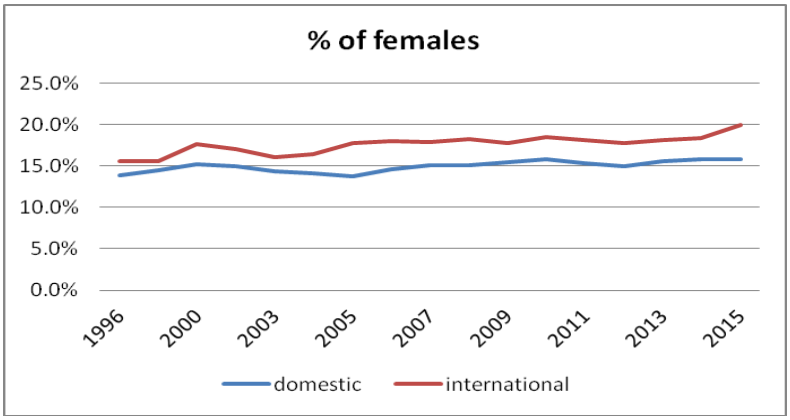


Figure 5 Proportions of women in the commencing cohorts of all award programs in engineering, 1996 - 2015

- Commencing enrolments in *Associate Degrees and Advanced Diplomas* by domestic students continues to decline from 1,890 in 2013 to 1,178 in 2015, alongside about 200 international commencements.

5.2 DOMESTIC COMMENCEMENTS IN ALL FIELDS OF EDUCATION (DATA IN TABLE 5)

Figure 6 records the numbers of Australian individuals commencing in Higher Education in several fields of education, for all award levels. The total (397,292) in 2015 was slightly less than that for 2014. In 2015, the proportion of commencing domestic enrolments in engineering dropped to 5.2% of the total. This is the lowest proportion on record, and continues a decline evident last year. Domestic commencements into FoE1 (Natural and Physical Science) also declined from its 2014 figure, while those into FoE2 (Information Technology) increased slightly.

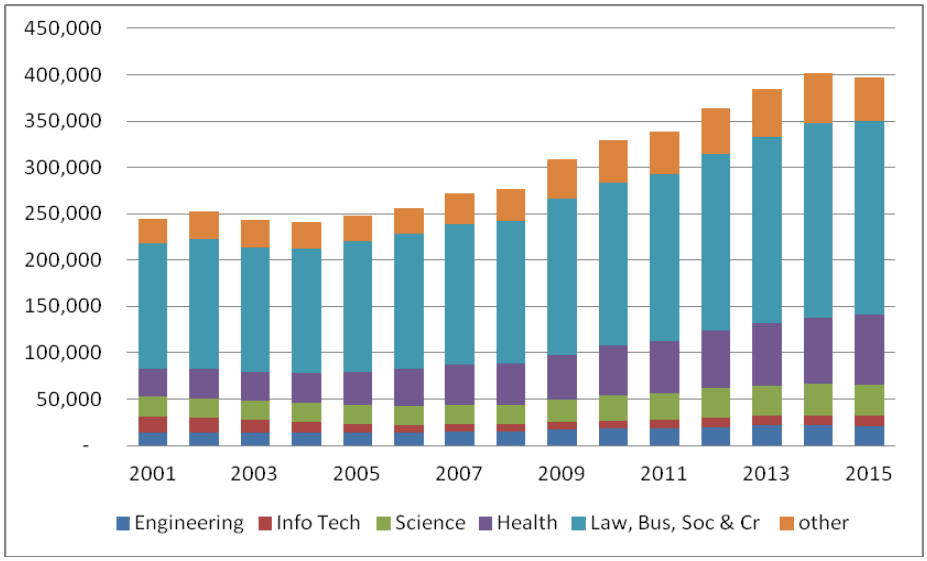


Figure 6 Domestic commencing enrolments (all awards) by selected fields, 2001 – 15

5.3 BASIS OF ADMISSION INTO BACHELOR DEGREES IN ENGINEERING AND RELATED TECHNOLOGIES (DATA in TABLE 6)

The data in Table 6 shows that non-school-leaver entry has become more common for both domestic and international student categories.

- For *domestic students*, since 2002, the proportion commencing Bachelor degrees in Engineering & Related Technologies on the basis of a completed or partially completed higher education award has increased from 12% to more than 20%, indicating the increased use of articulation pathways within higher education. Admission on the basis of TAFE or VET has been fairly steady around 7% since 2004. Admission from secondary school has decreased from more that 70% to less than 60%. Note, however that the overall numbers have increased by nearly 50% since 2002.
- For *international students*, the basis of admission patterns into Bachelors degrees have been much steadier (although numbers have increased by 70%), with about 30% coming from secondary school, 30% entering engineering from a completed or partially completed higher education award, and a small and declining proportion coming from TAFE or VET.

6. BACHELOR DEGREE SUCCESS, RETENTION RATES AND GRADUATION RATES (DETAILED DATA IN TABLES 7 – 9)

6.1 ANNUAL SUCCESS RATES

The success rate is defined as the aggregated proportion of courses (units of study) passed by a cohort of enrolled students in a given year. The summary table (from Table 7) shows the aggregated success rates in 2015 in comparison with immediate previous years, and a baseline of 2001. Data are provided for commencing students (these include students with advanced standing but not in the first program year) and for all students, including those in their commencing year.

Aggregated student success rates do not change much from year to year, but an increasing trend is evident over time for all of the categories shown. In addition:

- part-time students' success rates are consistently lower than those of full-time students;
- women perform consistently better than their male peers;
- international students have higher success rates than domestic students;
- the 'all student' rates are a few per cent higher than those of commencing students, demonstrating that once students are firmly in their program, they will tend to succeed.

Success rates	Domestic				International			
	male		female		male		female	
	full-time	part-time	full-time	part-time	full-time	part-time	full-time	part-time
For *commencing students*								
2001	82.1	63.7	86.6	65.4	83.6	70.4	88.5	77.2*
2013	83.6	69.6	87.8	70.7	83.7	79.0	86.3	no data*
2014	83.3	72.0	87.5	73.0	83.1	78.7	89.6	71.3
2015	83.9	69.9	87.8	76.7	83.4	75.2	89.4	81.7
For *all students* (eg over 4-years of study)								
2001	85.5	72.0	89.5	77.8	85.7	76.6	89.1	80.6
2013	86.6	74.7	90.2	80.3	86.7	77.1	91.6	81.2
2014	86.7	74.3	89.8	79.3	85.9	78.7	91.4	83.6
2015	87.2	75.1	90.4	78.7	86.2	76.9	91.2	82.9

6.2 ANNUAL RETENTION RATES

Retention rates record successful progression to a subsequent year of study, or graduation. The most recent validated data is the retention from 2014 into a confirmed enrolment in 2015, or graduation. Two sets of aggregated retention data are provided here. Retention in the institution allows for students to change program; retention in the institution and engineering indicates progression within the degree or change to another engineering program.

Retention in the institution:

Retention in the institution	Domestic				International			
	male		female		male		female	
	full-time	part-time	full-time	part-time	full-time	part-time	full-time	part-time
For commencing students								
2001	87.7	65.8	89.6	65.4	91.3	71.8	93.5	80.9*
2012	88.7	66.4	90.2	62.8	92.2	82.7	94.5	67.6*
2013	87.6	65.7	89.1	66.5	91.8	84.0	94.5	76.7*
2014	87.8	68.0	90.7	66.7	91.9	87.3	98.4	87.0
For *all students*								
2001	89.0	70.1	91.3	72.7	90.3	71.3	94.2	76.6*
2012	89.1	69.3	91.5	68.0	91.5	74.4	94.4	65.1*
2013	88.6	70.3	90.2	70.1	89.9	71.7	93.8	71.5
2014	89.0	68.2	92.1	68.6	90.3	72.5	93.9	71.1

* small numbers

Similar comments to those for the success rates apply. Indeed, there is a causal relationship between retention and success: a student who does not succeed in passing courses (at least to some extent) will not progress, although may enroll in another program.

Retention in the institution and in engineering:

Retention in institution and engineering	Domestic				International			
	male		female		male		female	
	full-time	part-time	full-time	part-time	full-time	part-time	full-time	part-time
For commencing students:								
2001	82.0	61.7	81.9	59.7	88.1	69.8	91.4	78.8*
2012	84.5	63.9	84.8	58.3	90.7	82.2	93.1	67.6*
2013	83.2	62.1	83.5	62.2	90.6	84.0	92.6	76.7*
2014	83.5	65.9	85.3	65.1	90.9	86.7	92.9	85.2
For *all students*:								
2001	85.3	67.2	86.8	68.3	88.0	69.9	91.4	74.8*
2012	86.4	67.2	88.1	64.6	90.4	73.8	93.3	64.3*
2013	85.7	68.1	86.3	66.8	88.8	71.0	92.4	70.0*
2014	86.2	65.9	88.2	64.0	89.5	71.6	92.8	69.8

* small numbers

The differences between corresponding data in the above tables (full data are in Tables 8 and 9) provide insight into the loss from engineering into other discipline areas (in the same institution). These mean differences over the whole period 2001-14 are:

	Domestic				International			
	male		female		male		female	
	full-time	part-time	full-time	part-time	full-time	part-time	full-time	part-time
commencing	4.6	4.3	6.8	8.7	1.8	0.0	2.2	0.7
all students	3.0	2.7	4.3	4.7	1.6	0.4	1.9	0.8

Observations:

- Commencing students leave the discipline at higher rates than 'all students'.
- International students appear more committed to their chosen program.
- Women leave engineering at a higher rate than their male peers. Given the high investment into recruiting women into engineering, this should be addressed.

6.3 GRADUATION RATES – NATIONAL COHORT STUDIES

Note that the retention rates reported above are *not* based on cohort studies, but use aggregated overall enrolments. They do not explicitly record whether students have moved from one institution to another, for example. Nevertheless, the national retention data (and their known limitations) can inform discussion on the performance of the national engineering education system. ACED members should also be familiar with their institutions' individual retention.

To understand the actual progression of engineering students in Bachelors degrees more clearly, during 2009-11 ACED conducted a study that examined in detail several ACED members' cohort retention data and pathways (see http://www.olt.gov.au/project-curriculum-specification-support-uts-2008). This study estimated that, on average, around 65% of those who commence a Bachelor degree in Engineering will complete it, including an estimated 8% transferring to another institution. The study also demonstrated the limitations of the aggregated retention data. The '*basis of admission'* and '*study type'* (full-time or part-time) play a large part in predicting the likelihood of graduation in engineering.

National studies and analysis have been reported in *Completion Rates of Domestic Bachelor Students - A Cohort Analysis, 2005-2013, and Completion Rates of Domestic Bachelor Students - Cohort Analysis, 2005-2014,* published by DET. Both reports can be accessed at https://docs.education.gov.au/search/site/Cohort%20Analysis. They cover the outcomes of students for up to nine years from commencing their degrees. Bivariate linear regression analysis shows that nationally, the most significant factors are the '*study-type'*, followed by '*age at commencement'*, and the '*ATAR band vs. other basis of admission'*. These three factors separately explain 6.31%, 3.87% and 3.86% of the differences in graduation rates, respectively. However, the full regression model with 10 student characteristics (including these three) explains only 12.16% of the variation.

For domestic students commencing Bachelors degrees in Engineering & Related Technologies, the 9-year outcomes (over 2005-13 and 2006-14) are reported as follows:

Year first enrolled	Graduated	Still enrolled at the end of 9 years cohort period	Re-enrolled but dropped out	Never came back after first year
2005	74.7%	5.4%	14.2%	5.7%
2006	75.6%	5.3%	14.1%	5.0%

The earlier report provides more detail for 8-year outcomes, with figures on the movement between institutions, as summarised here:

Year first enrolled	Graduated		Still enrolled at the end of 8 years cohort period		Re-enrolled but dropped out		Never came back after first year
	same HEP	diff HEP	same HEP	diff HEP	same HEP	diff HEP	
2005	66.5%	6.3%	4.1%	3%	11.4%	2.8%	5.7%
2006	66.8%	6.9%	4.4%	3%	11.3%	2.8%	5.0%

These graduation rates cannot be interpreted as the 'likelihood of completion' of a Bachelor Degree in Engineering & Related Technologies, because the reported graduation may be in another field of education. However, the results are not inconsistent with the ACED study reported above. Further work needs to be undertaken to understand more fully the paths that students take on their way towards graduating in engineering.

The second DET report also provides data on four- year outcomes. For domestic students commencing a Bachelor Degree in Engineering & Related Technologies the outcomes are:

Year first enrolled	Graduated	Still enrolled at the end of 4 years cohort period	Re-enrolled but dropped out	Never came back after first year
2005	26.2%	55.3%	10.8%	7.7%
2006	25.5%	58.8%	9.4%	6.3%
2007	24.9%	59.8%	9.3%	6.0%
2008	25.7%	58.6%	10.2%	5.5%
2009	25.8%	59.2%	9.5%	5.4%
2010	25.0%	59.6%	9.8%	5.6%
2011	26.5%	58.5%	10.0%	5.0%

This rate of graduation is lower than that for other Bachelor degrees, consistent with the four or more years minimum duration of most engineering Bachelor degrees, taking into account the dominance of the four-year Bachelor (Honours) Degree, its dual degree combinations, and program models with extended engineering practice.

The national graduation rate outcomes do not vary substantially from year to year, despite steady increases in commencing enrolments (Table 4). DET intends to track and publish four-year outcomes in future, partly to understand more clearly any impact of the introduction the demand driven system.

7. STAFF DATA (FIGURES 7-8, DETAILED DATA IN TABLE 10)

The Higher Education Statistics reported total academic staff (Full Time Equivalent) in non-casual positions in 2015 increased from the previous year, with significant increases in the numbers of research-only positions. These data *underestimate total staffing*, however, as some of the universities with smaller engineering schools reported zero engineering staff, despite having many students (see Table 14).

Between 2014 and 2015, for the Engineering & Related Technologies field of education, the combined number of Teaching & Research and Teaching-only positions reported increased from 2,196 to 2,351, including increases in the number in the latter category from 84 to 102.

While the number of women in academic positions increased, the proportion of women (FTE) declined slightly from earlier peaks. However, the proportion of women in above-Level C and Level C positions increased very slightly from the 2014 figures.

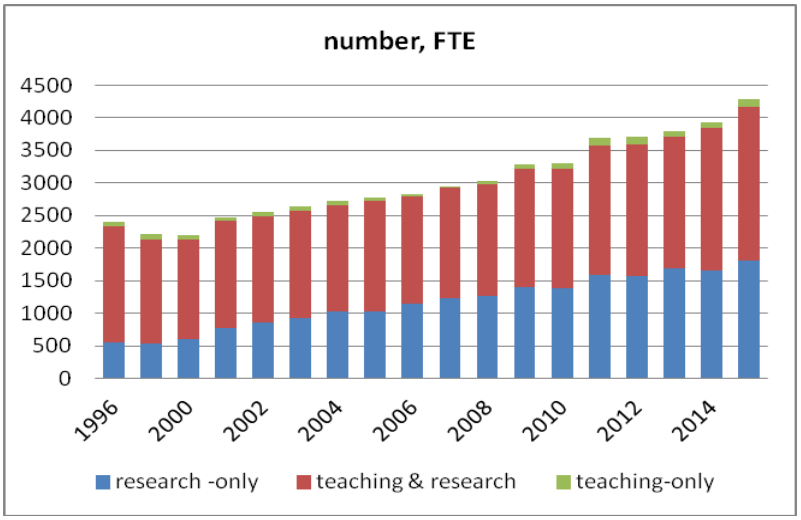
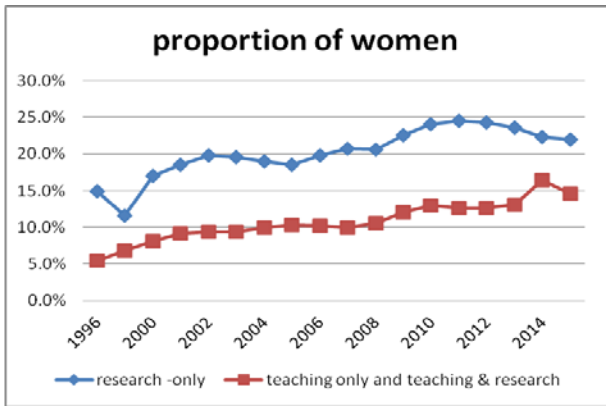


Figure 7 Academic staffing (FTE) in Engineering & Related Technologies, 1996–2015)



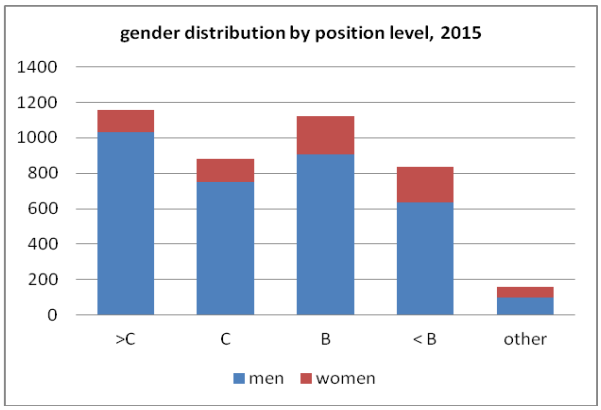


Figure 8 Proportion of women academic staff (FTE) in Engineering & Related Technologies by roles 1996–2015, and gender distribution by position level, 2015

8. ACTUAL STUDENT LOAD (DETAILS BY 4-DIGIT ASCED CODE IN TABLE 11)

The following table summarises effective student load for Engineering and Related Technologies for the past four years, as reported in the Higher Education Load Tables. Overall load increased by 4.8% last year. The largest growth component is in Masters degrees (21.1%) for reasons that have been outlined elsewhere.

	doctorate	masters	other p/g	bachelors	other u/g	enabling	non-award	total
domestic 2012	2,304	2,080	766	31,962	1,563	65	33	38,890
domestic 2013	2,225	2,399	756	33,571	1,608	62	49	40,856
domestic 2014	2,378	2,730	746	34,681	1,609	55	69	42,267
domestic 2015	**2,588**	**3,114**	**629**	**35,134**	**1,521**	**46**	**58**	**43,087**
% change v 2014	8.8%	14.1%	-15.7%	1.3%	-5.5%	-16.4%	-15.9%	1.9%
total 2012	5,215	5,913	1,033	44,935	2,275	65	141	59,802
total 2013	5,640	7,192	914	47,220	2,408	62	395	63,999
total 2014	5,904	5,650	876	48,503	2,511	55	1,058	67,931
total 2015	**6,207**	**10,931**	**749**	**49,765**	**2,529**	**46**	**975**	**71,201**
% change v 2014	5.1%	21.1%	-14.5%	2.6%	0.7%	-16.4%	-7.8%	4.8%

These data provide a basis for estimating effective student-staff ratios. Assuming zero engineering teaching into other disciplines, the 71,201 EFTS of 2015 actual load in engineering is generated by 106,210 enrolled students. Thus, on average, each student represents approximately 0.67 EFT.

The *raw student-staff ratio* is approximately (71,201/2,351) = 30.2, slightly less than last year's figure. This figure is an overestimate because of the under-reporting of staffing numbers. In addition, it may be *reduced* by the contributions of casual staff and research staff to teaching, but may also *be increased* where staff in Teaching & Research positions are allocated to full-time research or management positions, or are on sabbatical leave.

Comparable student-staff ratios can be calculated for the member faculties using the data in Table 14. Their interpretation is likely to be institution dependent.

9. GRADUATE DESTINATION and STARTING SALARY DATA (TABLES 12 and 13)

The latest available graduate destination data (Table 12) from Graduate Careers Australia is for Bachelors Degree graduates completing in 2015. These are sample survey data undertaken in the early months of this year. They show that engineering graduates:

- are employed full-time at higher rates than 'all graduates';
- take up postgraduate study at lower rates than all graduates;
- in all branches of engineering (except mechanical engineering) the full-time graduate employment rates have improved slightly from last year's lows;
- nearly one in six graduates (15.7%) is working in a job secured during their studies.

The graduate starting salary data (Table 13) show that:

- starting salaries of engineering bachelors graduates continue to ranked highly compared with those of other fields, but that most starting salaries have declined;
- women bachelors graduates in engineering continue to earn more than men;
- the positive relative value of engineering coursework postgraduate awards (including graduate certificates and diplomas), compared with research graduates;
- large volume business masters programs, presumably MBAs, provide salary rewards similar to those from postgraduate (non-formative) engineering coursework programs.

10. DISTRIBUTION OF ENROLMENTS, ETC. FOR ACED MEMBERS (TABLE 14)

Table 14 provides summary data on the commencing and total enrolments and graduation and staffing from all the ACED members. These and other summary data are available on the Higher Education Statistics data cube (http://highereducationstatistics.education.gov.au/).

From these data it is clear that one institution, the University of New South Wales (including its campus at Canberra) has the most enrolments and graduations by some margin.

The sixteen Australian universities in the eleven member Group of Eight Engineering Deans and Associates (including Newcastle, Wollongong and Auckland), plus the six 'technology' universities (the ATN group plus Swinburne) have more than 85% of total engineering enrolments.

11. CONCLUDING COMMENTS

As in previous years, Tables 2 and 14 raise questions about the veracity and completeness of the data ACED member universities are providing to the Higher Education Statistics Unit.

I can provide ACED members with their own items if they are interested, although it would be very time consuming to extract a set for each member. In addition, members should interrogate their own university statistics units to gain insight into any data that appear anomalous.

Robin W King (for ACED)
30 January 2017

TABLE 1 ENGINEERING GRADUATIONS 2005 – 2015

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
DOCTORATES	**637**	**695**	**772**	**697**	**705**	**792**	**782**	**953**	**1,113**	**1,268**	**1,259**
domestic total	452	487	519	513	479	474	399	496	536	572	603
% domestic female	21.2%	20.1%	21.4%	24.2%	21.1%	22.0%	23.3%	23.2%	24.8%	27.3%	23.2%
international total	185	208	253	184	226	318	383	457	577	696	656
% international female	16.8%	16.8%	18.2%	17.4%	19.9%	19.9%	23.0%	25.2%	27.0%	24.3%	26.7%
% international	29.0%	29.9%	32.8%	26.4%	32.1%	40.2%	49.0%	48.0%	51.8%	54.9%	52.1%
RESEARCH MASTERS	**208**	**264**	**230**	**228**	**185**	**196**	**235**	**212**	**245**	**218**	**229**
domestic total	133	139	135	127	99	99	115	100	132	103	108
% domestic female	23.3%	24.5%	25.9%	19.7%	18.2%	23.2%	26.1%	15.0%	22.0%	22.3%	31.5%
international total	75	125	95	101	86	97	120	112	113	115	121
% international female	21.3%	17.6%	21.1%	24.8%	25.6%	33.0%	22.5%	**31.3%**	26.5%	24.3%	41.3%
% international	36.1%	47.3%	41.3%	44.3%	46.5%	49.5%	51.1%	52.8%	46.1%	52.8%	52.8%
COURSEWORK MASTERS	**2,934**	**2,406**	**2,586**	**2,878**	**3,134**	**3,684**	**3,829**	**3,404**	**3,758**	**4,138**	**4,748**
domestic total	635	576	686	690	788	1,024	1,045	1,145	1,335	1,426	1,543
% domestic female	18.0%	15.5%	20.1%	18.3%	17.6%	18.6%	16.1%	15.4%	17.9%	18.8%	19.4%
international total	2,299	1,830	1,900	2,188	2,346	2,660	2,784	2,259	2,403	2,712	3,205
% international female	17.0%	15.9%	15.4%	18.4%	18.8%	18.7%	18.9%	19.3%	19.5%	19.1%	19.5%
% international	78.4%	76.1%	73.5%	76.0%	74.9%	72.2%	72.7%	66.4%	64.3%	65.5%	67.5%
OTHER POSTGRADUATE	**558**	**655**	**659**	**763**	829	**951**	**1,098**	**921**	**945**	**958**	**1,008**
domestic total	363	417	447	522	588	672	746	704	763	794	848
% domestic female	17.9%	16.1%	22.4%	20.9%	19.0%	22.2%	17.8%	19.5%	17.6%	21.8%	18.4%
international total	195	238	212	241	241	279	352	217	219	164	160
% international female	19.0%	13.0%	14.6%	19.5%	17.0%	15.1%	13.6%	11.1%	16.0%	18.9%	21.3%
% international	34.9%	36.3%	32.2%	31.6%	29.1%	29.3%	32.1%	23.6%	22.3%	20.7%	18.9%
BACHELORS	**8,076**	**8,369**	**8,076**	**8,661**	**8,652**	**9,149**	**9,849**	**10,261**	**11,018**	**11,373**	**11,117**
domestic total	5,680	6,026	5,786	6,077	6,063	6,237	6,534	6,795	7,044	7,392	7,634
% domestic female	16.7%	16.0%	14.8%	14.7%	14.9%	14.7%	14.6%	14.9%	14.6%	15.3%	14.3%
international total	2,396	2,343	2,290	2,584	2,589	2,912	3,315	3,466	3,974	3,981	3,483
% international female	18.3%	18.7%	19.8%	21.2%	18.3%	18.4%	18.2%	18.1%	18.2%	19.9%	19.4%
% international	29.7%	28.0%	28.4%	29.8%	29.9%	31.8%	33.7%	33.8%	36.1%	35.0%	31.3%
ASSOC DEG & ADV DIPL	**190**	**97**	**159**	**564**	**369**	**417**	**384**	**663**	**617**	**620**	**699**
domestic total	141	87	133	175	278	320	327	518	479	523	570
% domestic female	5.0%	4.6%	9.0%	11.4%	8.6%	10.9%	~ 8%	~ 7%	8.1%	9.6%	9.5%
international total	49	10	26	389	91	97	57	145	138	97	129
% international female	14.3%	0.0%	7.7%	20.8%	4.4%	5.2%	~11%	~6%	8.0%	12.4%	12.4%
% international	25.8%	10.3%	16.4%	69.0%	24.7%	8.0%	14.8%	21.9%	22.4%	15.6%	18.5%
OTHER UNDERGRAD	**191**	**376**	**510**	**76**	**314**	**404**	**534**	**501**	**551**	**1,035**	**1,029**
domestic total	173	258	233	60	60	109	130	141	152	264	239
% domestic female	2.9%	1.9%	6.4%	15.0%	8.3%	4.6%	~ 8%	~ 7%	13.2%	7.6%	7.5%
international total	18	118	277	16	254	295	404	360	399	771	790
% international female	27.8%	40.7%	29.2%	31.3%	13.8%	10.8%	~ 11%	~10%	8.0%	10.0%	14.1%
% international	9.4%	31.4%	54.3%	21.1%	80.9%	73.0%	75.7%	71.9%	72.4%	74.5%	76.8%
ALL GRADUATES	**12,794**	**12,862**	**12,992**	**13,867**	**14,188**	**15,590**	**16,484**	**16,912**	**18,286**	**19,550**	**20,089**
domestic total	7,577	7,990	7,939	8,164	8,355	8,935	9,257	9,896	10,461	11,074	11,545
% domestic female	16.7%	15.8%	15.9%	16.0%	15.6%	15.9%	15.2%	15.2%	15.5%	16.5%	15.5%
international total	5,217	4,872	5,053	5,703	5,833	6,655	7,227	7,016	7,825	8,476	8,544
% international female	17.7%	17.8%	18.3%	20.0%	18.2%	18.3%	18.0%	18.3%	18.6%	19.2%	19.7%
% international	40.8%	37.9%	38.9%	41.1%	41.1%	42.7%%	43.8%	41.5%	42.8%	43.4%	42.5%

TABLE 2 UNDERGRADUATE GRADUATIONS 2015, BY AWARD, DURATION AND 4-DIGIT FOE CODE

YEAR/SOURCE/LEVEL	TOTAL	0300	0301	0303	0305	0307	0309	0311	0313	0315	0317	0399
Domestic												
Assoc Degree, Adv Dip	572	69	<5	<5	0	39	115	<5	27	19	<5	293
up to 3-year Bach	524	13	<5	37	5	0	<5	26	14	219	28	178
4-year Bach	5192	857	26	417	17	673	1117	121	558	197	55	1154
> 4-year Bach	2027	803	10	167	<5	158	252	<5	135	57	31	409
TOTAL DOMESTIC	8315	1742	40	6238	24	870	1486	153	734	492	117	2034
% female	14.1%	14.6%	10.0%	24.9%	8.3%	9.0%	15.1%	7.2%	8.0%	13.8%	7.7%	15.0%
~ % of total		21.0%	0.5%	7.5%	0.3%	10.5%	17.9%	1.8%	8.8%	5.9%	1.4%	24.5%
~ % of total (ex 300/399)			0.9%	13.7%	0.5%	19.2%	32.7%	3.4%	16.2%	10.8%	2.6%	
International												
Assoc Degree, Adv Dip	131	9	0	0	0	10	32	0	11	<5	<5	64
up to 3-year Bach	251	2	28	9	0	8	<5	<5	40	79	11	4
4-year Bach	3125	605	<5	281	9	449	442	6	565	71	20	675
> 4-year Bach	114	26	<5	9	0	5	6	0	14	11	17	23
TOTAL INTERNATIONAL	3621	664	33	299	9	472	482	8	630	163	51	810
% female		23.0%	54.5%	29.8%	11.1%	10.2%	17.6%	0.0%	14.1%	20.2%	19.6%	20.7%
~ % of total		18.3%	0.9%	8.3%	0.2%	13.0%	13.3%	0.2%	17.4%	4.5%	1.4%	22.4%
~ % of total (ex 300/399)			1.5%	13.9%	0.4%	22.0%	22.4%	0.4%	29.3%	7.6%	2.4%	
% international	**30.3%**	**27.6%**	**45.2%**	**32.4%**	**27.3%**	**35.2%**	**24.5%**	**5.0%**	**46.2%**	**24.9%**	**30.4%**	**28.5%**

ASCED 4-digit codes
0300 Engineering & Related Technologies
0301 Manufacturing Eng. & Tech.
0303 Process & Resources Engineering
0305 Automotive Eng. & Tech.
0307 Mechanical & Industrial Eng & Tech.
0309 Civil Engineering
0311 Geomatic Eng. & Tech
0313 Electrical & Electronic Eng. & Tech,
0315 Aerospace Eng. & Tech.
0317 Maritime Eng. & Tech
0399 Other Engineering & Related Tech's

Notes:
ANU, CQUni, Deakin, JCU, Melbourne, UWA, UTS, WSU use code 0300 for most BEng graduates
CDU, Griffith, Monash, QUT and USQ and use code 0399 for most BEng graduates

"Software engineering" does not appear specifically in the ASCED codes for either engineering or Information Technology (ASCED FOE code 02), so may be classified in the universities' returns in different ways.

The 0301 manufacturing engineering sub-code includes "printing", "textile/garment/furniture making", that are likely to be more relevant to sub degree-level VET qualifications.

The full set of ASCED codes is at:
http://www.abs.gov.au/Ausstats/abs@.nsf/0/E7779A9FD5C8D846CA256AAF001FCA5C?opendocument

TABLE 3 TOTAL ENROLMENTS (STUDENTS) 2005 – 2015

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
DOCTORATES	**4,110**	**4,199**	**4,340**	**4,559**	**5,054**	**5,567**	**6,258**	**7,059**	**7,427**	**7,668**	**8,035**
domestic total	2,999	2,935	2,917	2,852	2,866	2,982	3,183	3,404	3,389	3,372	3,617
% domestic female	21.2%	21.2%	21.6%	22.4%	22.9%	23.8%	23.9%	23.7%	24.9%	25.5%	25.5%
international total	1,111	1,264	1,423	1,707	2,188	2,585	3,075	3,655	4,038	4,296	4,418
% international female	18.9%	20.8%	21.8%	24.8%	26.0%	26.4%	27.1%	26.6%	25.7%	25.9%	25.9%
% international	27.0%	30.1%	32.8%	37.4%	43.3%	46.4%	49.1%	51.8%	54.4%	56.0%	55.0%
RESEARCH MASTER'S	**1,253**	**1,214**	**1,178**	**1,018**	**1,120**	**1,245**	**1,191**	**1,194**	**1,148**	**1,191**	**1,182**
domestic total	852	786	732	598	697	769	704	689	662	684	712
% domestic female	21.6%	20.6%	19.4%	20.9%	19.5%	20.0%	19.9%	20.6%	22.4%	21.8%	21.5%
international total	401	428	446	420	423	476	487	505	486	507	470
% international female	20.2%	21.0%	25.1%	26.4%	29.8%	28.6%	27.9%	29.9%	29.8%	27.6%	26.6%
% international	32.0%	35.3%	37.9%	41.3%	37.8%	38.2%	40.9%	42.3%	42.3%	42.6%	39.8%
COURSEWORK MASTERS	**7,178**	**6,656**	**6,699**	**7,706**	**8,630**	**9,266**	**8,999**	**9,078**	**10,566**	**12,776**	**15,237**
domestic total	2,266	2,312	2,536	2,764	3,164	3,630	3,856	4,061	4,434	4,822	5,159
% domestic female	17.1%	18.6%	18.1%	18.3%	17.0%	17.3%	16.9%	16.9%	17.7%	18.6%	18.8%
international total	4,912	4,344	4,163	4,942	5,466	5,636	5,143	5,017	6,132	7,954	10,078
% international female	16.3%	15.7%	16.6%	17.5%	17.1%	18.1%	18.4%	18.5%	17.6%	17.7%	18.9%
% international	68.4%	65.3%	62.1%	64.1%	63.3%	60.8%	57.2%	55.3%	58.0%	62.3%	66.1%
OTHER POSTGRADUATE	**2,456**	**2,546**	**2,398**	**2,486**	**2,556**	**2,611**	**2,555**	**2,554**	**2,525**	**2,286**	**1,924**
domestic total	2,072	2,122	2,007	2,085	2,085	2,151	2,122	2,206	2,177	2,051	1,698
% domestic female	17.5%	19.1%	18.6%	19.1%	19.0%	19.6%	20.0%	18.8%	19.4%	17.8%	17.4%
international total	384	424	391	401	471	460	433	348	348	235	226
% international female	12.8%	15.3%	15.1%	15.7%	13.8%	16.1%	17.1%	17.2%	19.5%	20.0%	21.2%
% international	15.6%	16.7%	16.3%	16.1%	18.4%	17.6%	16.9%	13.6%	13.8%	10.3%	11.7%
BACHELORS	**48,851**	**49,676**	**51,848**	**54,556**	**57,842**	**61,518**	**64,236**	**66,207**	**69,342**	**71,560**	**73,138**
domestic total	37,111	37,622	39,058	40,693	42,726	44,656	46,385	48,083	50,547	52,135	52,755
% domestic female	13.8%	13.5%	13.6%	13.7%	13.7%	14.0%	13.8%	13.4%	13.7%	14.1%	14.4%
international total	11,740	12,054	12,790	13,863	15,116	16,862	17,851	18,124	18,795	19,425	20,383
% international female	17.5%	17.6%	17.9%	17.7%	17.5%	17.6%	17.5%	17.4%	17.7%	18.1%	19.0%
% international	24.0%	24.3%	24.7%	25.4%	26.1%	27.4%	27.8%	27.4%	27.1%	27.1%	27.9%
ASSOC DEG & AQF DIPL	**963**	**1,238**	**1,559**	**1,911**	**2,419**	**3,050**	**3,408**	**4,318**	**4,199**	**3,746**	**3,654**
domestic total	774	957	1,199	1,681	2,095	2,740	2,980	3,818	3,752	3,401	3,240
% domestic female	7.0%	8.9%	11.0%	10.7%	9.5%	10.3%	n/a	9.0%	9.5%	9.1%	9.5%
international total	189	281	360	230	324	310	428	500	447	345	414
% international female	27.5%	40.6%	50.0%	3.0%	4.0%	3.2%	n/a	24.6%	11.9%	9.0%	6.8%
% international	19.6%	22.7%	23.1%	12.0%	13.4%	10.2%	12.6%	11.6%	10.6%	9.2%	11.3%
OTHER UNDERGRADUATE	**546**	**636**	**1,405**	**1,214**	**1,470**	**2,082**	**1,540**	**1,649**	**2,609**	**3,077**	**3,040**
domestic total	486	552	658	509	671	971	576	596	1,175	1,206	847
% domestic female	14.8%	18.5%	19.9%	27.7%	26.8%	28.1%	n/a	40.4%	24.0%	18.3%	14.5%
international total	60	84	747	705	799	1,111	1,101	1,053	1,434	1,871	2,193
% international female	20.0%	14.3%	25.0%	17.6%	12.6%	11.9%	n/a	n/a	8.5%	9.2%	10.2%
% international	11.0%	13.2%	53.2%	58.1%	54.4%	53.4%	71.5%	63.9%	55.0%	60.8%	72.1%
ALL ENROLMENTS	**65,357**	**66,165**	**69,427**	**73,450**	**79,091**	**85,339**	**88,777**	**92,059**	**97,816**	**102,304**	**106,210**
domestic total	46,560	47,286	49,107	51,182	54,304	57,899	60,251	62,857	66,136	67,671	68,028
% domestic female	14.6%	14.5%	14.6%	14.8%	14.7%	15.0%	14.8%	14.5%	14.8%	15.0%	14.9%
international total	18,797	18,879	20,320	22,268	24,787	27,440	28,526	29,202	31,680	34,633	38,182
% international female	17.4%	17.7%	18.8%	18.1%	18.0%	18.3%	18.7%	18.4%	18.4%	18.6%	16.9%
% international	28.8%	28.5%	29.3%	30.3%	31.3%	32.2%	32.1%	31.7%	32.4%	33.9%	35.9%

TABLE 4 ENGINEERING COMMENCEMENTS (STUDENTS) 2005 – 2015

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
DOCTORATES	**822**	**847**	**950**	**1,039**	**1,390**	**1,476**	**1,528**	**1,629**	**1,789**	**1,834**	**1,870**
domestic number	550	486	519	498	586	678	621	601	662	673	718
% domestic female	20.5%	22.2%	19.5%	23.7%	24.4%	24.2%	22.7%	27.6%	25.1%	27.2%	25.2%
international number	272	361	431	541	804	798	907	1028	1127	1161	1152
% international female	18.4%	24.7%	22.0%	27.5%	28.0%	24.8%	27.9%	24.8%	26.4%	28.3%	24.7%
% international	33.1%	42.6%	45.4%	52.1%	57.8%	54.1%	59.4%	63.1%	63.0%	63.3%	61.6%
RESEARCH MASTER'S	**429**	**392**	**369**	**320**	**506**	**521**	**451**	**456**	**433**	**469**	**416**
domestic number	292	257	234	187	298	303	219	231	234	258	253
% domestic female	20.5%	17.9%	23.5%	23.5%	17.1%	19.5%	21.9%	24.7%	23.5%	19.4%	19.4%
international number	137	135	135	133	208	218	232	225	199	211	163
% international female	22.6%	24.2%	27.3%	27.2%	30.8%	24.8%	28.9%	28.9%	27.6%	26.1%	26.4%
% international	31.9%	34.4%	36.6%	41.6%	41.1%	41.8%	51.4%	49.3%	46.0%	45.0%	39.2%
COURSEWORK MASTER'S	**3,455**	**3,238**	**3,560**	**3,680**	**4,549**	**4,311**	**3,997**	**4,448**	**5,372**	**6,560**	**7,564**
domestic number	876	943	1,032	1,128	1,449	1,541	1,562	1,690	1,780	2,043	2,091
% domestic female	17.0%	19.5%	17.2%	18.8%	16.4%	16.7%	17.6%	15.8%	18.7%	19.2%	18.7%
international number	2,579	2,295	2,528	2,552	3,100	2,770	2,435	2,758	3,592	4,517	5,473
% international female	16.9%	15.5%	16.9%	18.3%	16.8%	20.0%	19.4%	18.7%	17.4%	18.6%	20.3%
% international	74.6%	70.9%	71.0%	69.3%	68.1%	64.3%	60.9%	62.0%	66.9%	68.9%	72.4%
OTHER POSTGRADUATE	**1,363**	**1,322**	**1,203**	**1,331**	**1,103**	**1,447**	**1,511**	**1,448**	**1,416**	**1,247**	**1,021**
domestic number	1,103	1,053	952	1,080	787	1,132	1,101	1,186	1,167	1,118	844
% domestic female	17.3%	18.8%	17.0%	20.0%	17.7%	19.8%	21.4%	18.7%	19.6%	16.5%	18.4%
international number	260	269	251	251	316	315	410	262	249	129	177
% international female	11.9%	16.5%	16.6%	17.7%	13.4%	19.4%	13.2%	16.4%	19.3%	16.3%	21.5%
% international	19.1%	20.3%	20.9%	18.9%	28.6%	21.8%	27.1%	18.1%	17.6%	10.3%	17.3%
BACHELORS	**13,698**	**14,142**	**15,340**	**15,760**	**17,363**	**19,167**	**18,741**	**18,818**	**20,234**	**21,048**	**21,406**
domestic number	9,916	10,288	11,051	11,295	12,052	12,541	13,152	13,595	14,817	15,085	14,896
% domestic female	12.7%	13.4%	14.4%	14.1%	14.5%	14.4%	13.9%	13.7%	14.4%	15.1%	15.2%
international number	3,782	3,854	4,289	4,465	5,311	6,626	5,589	5,186	5,417	5,963	6,510
% international female	17.7%	17.4%	17.9%	17.6%	17.4%	15.1%	11.9%	17.1%	18.3%	18.4%	21.0%
% international	27.6%	27.3%	28.0%	28.3%	30.6%	34.6%	29.8%	27.8%	26.8%	28.3%	30.4%
ASSOC DEG & ADV DIP	**568**	**602**	**686**	**975**	**1,111**	**1,514**	**1,532**	**1,959**	**2,094**	**1,562**	**1,374**
domestic number	419	438	524	842	930	1,357	1,257	1,659	1,890	1,370	1,178
% domestic female	10.0%	10.0%	12.4%	9.9%	8.7%	10.0%	8.2%	7.8%	9.3%	8.3%	10.8%
international number	149	164	162	133	181	157	275	300	204	192	196
% international female	30.2%	42.1%	1.9%	3.0%	5.2%	na	7.2%	8.3%	18.6%	4.7%	6.1%
% international	26.2%	27.2%	23.6%	13.6%	16.3%	10.4%	18.0%	15.3%	54.6%	12.3%	14.3%
ENABLING & OTHER	**481**	**553**	**1,172**	**786**	**1,056**	**859**	**1,434**	**1,307**	**1,841**	**2,144**	**1,988**
domestic number	430	480	688	410	521	798	811	748	836	909	564
% domestic female	14.9%	17.9%	16.3%	26.8%	28.6%	24.4%	45.3%	32.8%	28.1%	19.4%	14.5%
international number	51	73	484	376	535	61	623	559	1,005	1,235	1,424
% international female	11.6%	7.6%	21.7%	13.8%	14.0%	12.7%	1.8%	8.8%	8.2%	9.7%	10.5%
% international	10.6%	13.2%	41.3%	47.8%	50.7%	37.6%	43.4%	42.8%	0.0%	57.6%	71.6%
ALL COMMENCEMENTS	**20,816**	**21,096**	**22,704**	**23,591**	**27,508**	**28,975**	**29,199**	**30,065**	**33,179**	**34,864**	**35,639**
domestic number	13,586	13,945	14,312	15,030	16,994	18,352	18,813	19,710	21,386	21,456	20,544
% domestic female	13.8%	14.6%	15.0%	15.1%	15.5%	15.8%	15.3%	15.0%	15.6%	15.8%	15.8%
international number	7,230	7,151	8,392	8,561	10,514	10,623	10,386	10,355	11,793	13,408	15,095
% international female	17.7%	18.0%	17.9%	18.3%	17.8%	18.5%	18.1%	17.8%	18.1%	18.4%	19.9%
% international	34.7%	33.9%	37.0%	36.3%	38.2%	36.7%	35.6%	34.4%	35.5%	38.5%	42.4%

TABLE 5 PROPORTION OF ALL DOMESTIC COMMENCMENTS (TO ALL AWARD LEVELS), ENGINEERING & RELATED TECHNOLOGIES AND OTHER AREAS 1996 - 2015

year	Engineering & Surveying Engineering & Related Technologies	% of total	Health	Science/ Natural & Physical Science	Information Technology (from 2001)	Law, Business, Society, Creative Arts (composite FoE's)	total commencing award programs
1996	13,493	6.1%	26,730	32,785		115,062	219,817
1997	13,960	6.0%	26,775	35,774		123,373	231,402
1998	13,520	6.0%	26,892	34,961		120,667	226,238
1999	13,482	5.9%	27,314	36,707		123,357	230,359
2000	13,026	5.6%	27,687	37,278		125,246	234,399
2001	14,031	5.7%	29,969	20,999	17,436	135,454	244,491
2002	14,171	5.6%	31,834	20,610	16,085	139,678	252,932
2003	14,033	5.7%	31,256	20,717	13,553	137,184	246,726
2004	13,742	5.7%	32,057	21,355	11,122	134,158	241,208
2005	13,579	5.5%	35,492	20,715	9,277	141,544	248,356
2006	13,931	5.4%	39,283	20,943	8,198	145,742	256,382
2007	15,000	5.5%	43,099	21,076	7,839	151,508	271,743
2008	15,440	5.6%	44,812	20,811	7,470	153,908	276,200
2009	16,994	5.5%	49,217	23,633	8,328	167,817	308,821
2010	18,172	5.5%	54,097	26,619	8,704	175,649	329,248
2011	18,813	5.6%	56,628	28,169	9,263	179,222	338,188
2012	19,710	5.4%	61,864	31,847	10,060	190,917	364,197
2013	21,433	5.6%	66,827	33,163	10,292	201,234	384,251
2014	21,456	5.3%	71,419	34,064	11,187	209,246	401,356
2015	20,544	5.2%	75,170	33,639	11,488	209,164	397,296

TABLE 6 BASIS OF ADMISSION INTO BACHELORS DEGREES IN ENGINEERING & RELATED TECHNOLOGIES, 2002 – 2015

	DOMESTIC STUDENTS					INTERNATIONAL STUDENTS				
	Total	Higher Ed complete/in-complete Aus or O/S	TAFE/VET award complete or incomplete	Completion of final year of secondary at school or TAFE (Aus or O/S)	Other	Total	Higher Ed complete/in-complete Aus or O/S	TAFE/VET award complete or incomplete	Completion of final year of secondary at school or TAFE (Aus or O/S)	Other
2002	10,278	1,229	526	7,381	1,142	3,859	1,121	421	1,274	1,043
2003	10,089	1,347	750	7,096	896	4,280	1,038	507	1,355	1,380
2004	9,910	1,430	671	7,042	767	3,936	1,078	391	1,249	1,218
2005	9,920	1,609	700	6,517	1,094	3,778	1,020	450	1,143	1,165
2006	10,288	1,376	638	6,603	1,671	3,854	1,023	439	1,314	1,088
2007	11,051	1,588	704	7,420	1,339	4,289	1,220	389	1,452	1,228
2008	11,295	1,723	691	7,313	1,568	4,465	1,495	251	1,393	1,326
2009	12,052	1,851	727	8,125	1,349	5,311	1,461	389	1,706	1,755
2010	**no data collected**									
2011	13,154	2,435	978	8,542	1,181	5,589	1,556	359	1,597	2,077
2012	13,595	2,604	904	8,835	1,252	5,223	1,392	388	1,366	2,077
2013	14,817	2,989	1,184	9,119	1,525	5,417	1,310	438	1,694	1,975
2014	15,085	3,665	1,013	8,791	1,534	5,963	2,005	312	1,666	1,980
2015	14,896	3,357	964	8,686	1,889	6,510	2,085	361	1,894	2,170
	AS PERCENTAGES					**AS PERCENTAGES**				
2002	10,278	12.0%	5.1%	71.8%	11.1%	3,859	29.0%	10.9%	33.0%	27.0%
2003	10,089	13.4%	7.4%	70.3%	8.9%	4,280	24.3%	11.8%	31.7%	32.2%
2004	9,910	14.4%	6.8%	71.1%	7.7%	3,936	27.4%	9.9%	31.7%	30.9%
2005	9,920	16.2%	7.1%	65.7%	11.0%	3,778	27.0%	11.9%	30.3%	30.8%
2006	10,288	13.4%	6.2%	64.2%	16.2%	3,854	26.5%	11.4%	34.1%	28.2%
2007	11,051	14.4%	6.4%	67.1%	12.1%	4,289	28.4%	9.1%	33.9%	28.6%
2008	11,295	15.3%	6.1%	64.7%	13.9%	4,465	33.5%	5.6%	31.2%	29.7%
2009	12,052	15.4%	6.0%	67.4%	11.2%	5,311	27.5%	7.3%	32.1%	33.0%
2010	**no data collected**									
2011	13,154	18.5%	7.4%	64.9%	9.0%	5,589	27.8%	6.4%	28.6%	37.2%
2012	13,595	19.2%	6.6%	65.0%	9.2%	5,223	26.7%	7.4%	26.2%	39.8%
2013	14,817	20.2%	8.0%	61.5%	10.3%	5,417	24.2%	8.1%	31.3%	36.5%
2014	15,085	24.3%	6.7%	58.3%	10.2%	5,963	33.6%	5.2%	27.9%	33.2%
2015	14,896	22.5%	6.5%	58.3%	12.7%	6,510	32.0%	5.5%	29.1%	33.3%

'Other' covers: admission on the basis of 'mature age special provisions', 'professional qualifications', and 'other'

TABLE 7 ANNUAL SUCCESS RATES FOR BACHELORS DEGREE STUDENTS IN ENGINEERING & RELATED TECHNOLOGIES, 2002 – 2015

		Domestic Students								Overseas Students							
		Males				Females				Males				Females			
		Full-time		Part-time		Full-time		Part-time		Full-time		Part-time		Full-time		Part-time	
		Number	Success, %	Number	Success, %	Number	Success, %	Number	Success, %	Number	Success, %	Number	Success, %	Number	Success, %	Number	Success, %
2002	Commencing	7,854	81.7	1,066	67.5	1,419	86.0	102	63.6	2,847	84.5	401	58.1	617	89.1	41	51.4
2002	Overall	26,569	85.8	6,497	73.6	5,078	89.8	816	78.1	6,661	85.9	1,194	72.0	1,537	90.5	150	79.3
2003	Commencing	7,773	81.5	1,020	68.8	1,348	86.2	109	70.6	3,075	85.9	533	68.8	648	89.8	76	70.6
2003	Overall	26,745	85.7	6,255	72.9	4,960	90.0	781	78.3	7,606	86.7	1,475	76.1	1,722	90.7	210	79.7
2004	Commencing	7,758	83.1	986	68.4	1,268	87.0	103	64.3	2,843	85.3	480	75.0	621	88.6	42	82.0
2004	Overall	26,470	85.8	6,153	73.3	4,703	90.2	762	75.4	8,202	86.6	1,434	76.9	1,840	91.0	193	85.7
2005	Commencing	7,825	82.4	1,000	69.6	1,182	86.6	118	71.7	2,749	84.7	424	79.0	620	88.7	78	89.2
2005	Overall	26,274	85.8	5,791	74.2	4,415	90.0	735	78.1	8,293	86.1	1,429	79.6	1,872	90.4	216	80.3
2006	Commencing	8,163	83.2	923	69.4	1,315	86.4	101	70.4	2,802	83.0	442	77.2	618	89.4	60	76.5
2006	Overall	26,952	86.6	5,870	74.8	4,418	90.5	717	78.9	8,463	85.6	1,547	80.7	1,906	91.0	231	79.6
2007	Commencing	8,639	83.6	1,008	68.5	1,538	87.9	103	68.1	3,055	83.6	503	74.6	709	90.0	68	80.0
2007	Overall	28,158	87.0	5,924	74.2	4,676	90.4	702	76.2	8,887	85.8	1,680	79.0	2,054	90.7	246	80.5
2008	Commencing	8,900	84.1	991	69.8	1,503	87.3	138	65.8	3,137	85.6	588	82.6	719	91.6	79	83.2
2008	Overall	29,559	88.0	5,846	75.0	4,912	91.0	733	76.0	9,672	87.0	1,824	82.0	2,186	92.0	281	81.0
2009	Commencing	9,481	84.6	994	71.1	1,682	88.1	114	69.0	3,952	86.5	489	84.8	864	89.8	70	84.0
2009	Overall	31,167	87.5	6,046	75.2	5,625	90.8	682	76.2	10,962	87.6	1,637	83.5	2,424	90.1	247	86.3
2010	Commencing	nd	84.0	nd	68.0	nd	88.0	nd	75.0	nd	85.0	nd	82.0	nd	92.0	nd	71.0
2010	Overall	nd	87.0	nd	75.0	nd	90.0	nd	78.0	nd	88.0	nd	82.0	nd	92.0	nd	83.0
2011	Commencing	10,276	83.8	1,021	71.0	1,662	87.5	139	72.6	4,125	83.4	517	78.1	943	89.8	33	69.3
2011	Overall	33,421	86.9	6,530	74.6	5,605	90.6	793	77.7	13,102	87.0	1,665	81.0	2,961	91.4	176	82.7
2012	Commencing	10,720	83.9	1,185	67.2	1,740	86.5	161	69.9	3,953	83.5	427	77.4	860	89.1	37	71.0
2012	Overall	34,698	87.0	7,062	74.6	5,708	90.2	816	77.5	11,328	86.9	1,693.0	79.5	2,958	91.1	212	80.1
2013	Commencing	nd	83.6	nd	69.6	nd	87.8	nd	70.7	nd	83.7	nd	79.0	nd	86.3	nd	nd
2013	Overall	nd	86.6	nd	74.7	nd	90.2	nd	80.3	nd	86.7	nd	77.1	nd	91.6	nd	81.2
2014	Commencing	nd	83.3	nd	72.0	nd	87.5	nd	73.0	nd	83.1	nd	78.7	nd	89.6	nd	71.3
2014	Overall	nd	86.7	nd	74.3	nd	89.8	nd	79.3	nd	85.9	nd	78.7	nd	91.4	nd	83.6
2015	Commencing	nd	83.9	nd	69.9	nd	87.8	nd	76.7	nd	83.4	nd	75.2	nd	89.4	nd	81.7
2015	Overall	nd	87.2	nd	75.1	nd	90.4	nd	78.7	nd	86.2	nd	76.9	nd	91.2	nd	82.9

TABLE 8 ANNUAL RETENTION RATES IN INSTITUTION FOR BACHELORS DEGREE STUDENTS IN ENGINEERING & RELATED TECHNOLOGIES, 2001 – 2014

		Domestic Students								Overseas Students							
		Males				Females				Males				Females			
		Full-time		Part-time		Full-time		Part-time		Full-time		Part-time		Full-time		Part-time	
		Number	Retention %	Number	Retention %	Number	Retention %	Number	Retention %	Number	Retention %	Number	Retention %	Number	Retention %	Number	Retention %
2001	Commencing	8,313	87.7	1,117	65.8	1,593	89.6	123	66.7	2,357	91.3	507	71.8	494	93.5	68	80.9
2001	Overall	23,150	89.0	5,399	70.1	4,388	91.3	597	72.7	4,474	90.3	874	71.3	1,003	94.2	111	76.6
2002	Commencing	8,058	87.3	1,082	68.5	1,452	89.5	106	65.1	2,788	92.0	397	63.7	609	91.6	39	61.5
2002	Overall	23,400	88.3	5,391	68.3	4,333	90.8	631	68.9	5,489	90.0	946	64.7	1,256	92.3	108	65.7
2003	Commencing	7,973	86.9	1,036	66.4	1,402	89.4	109	67.9	3,054	91.7	536	73.9	634	92.0	77	72.7
2003	Overall	23,576	88.3	5,098	65.8	4,215	90.5	587	66.6	6,295	90.7	1,203	60.1	1,389	92.0	165	60.6
2004	Commencing	8,023	83.5	989	66.8	1,326	84.5	103	60.2	2,898	87.7	476	71.9	635	89.3	45	82.2
2004	Overall	23,249	88.3	4,934	68.3	3,983	91.0	565	64.3	6,844	89.9	1,110	62.3	1,485	92.1	126	63.5
2005	Commencing	8,058	88.0	1,007	67.4	1,195	89.8	120	70.0	2,816	90.5	390	73.3	650	91.4	54	83.3
2005	Overall	23,337	88.7	4,692	69.1	3,731	91.5	557	71.5	6,969	89.6	988	68.0	1,539	90.9	128	71.9
2006	Commencing	8,356	87.3	918	69.8	1,347	88.3	102	73.5	2,822	90.4	433	78.1	620	92.6	59	81.4
2006	Overall	23,676	87.9	4,658	69.4	3,701	89.7	521	70.3	7,068	89.2	1,115	67.1	1,563	91.7	158	69.0
2007	Commencing	8,855	86.6	1,013	69.6	1,588	90.2	105	67.6	3,097	90.4	503	68.0	702	92.3	71	67.6
2007	Overall	25,715	88.1	4,853	70.1	4,239	91.6	524	72.9	7,781	88.6	1,283	70.0	1,744	90.7	186	66.7
2008	Commencing	8,714	89.3	945	69.4	1,450	89.5	129	64.3	3,064	91.7	582	81.1	686	94.2	79	78.5
2008	Overall	26,101	90.4	4,626	72.2	4,240	91.8	555	69.4	8,214	89.2	1,335	72.9	1,752	93.2	193	74.1
2009	Commencing	nd	88.6	nd	64.3	nd	89.5	nd	66.1	nd	93.7	nd	83.2	nd	94.4	nd	69.1
2009	Overall	nd	89.6	nd	69.1	nd	91.4	nd	70.5	nd	91.2	nd	72.6	nd	93.4	nd	70.6
2010	Commencing	9,678	88.1	973	69.2	1,657	90.6	115	80.0	4,069	92.9	487	83.6	899	94.7	73	79.5
2010	Overall	29,085	89.1	4,882	69.5	4,840	91.5	527	72.1	10,633	89.7	1,154	71.3	2,285	92.6	178	66.9
2011	Commencing	10,226	88.9	1,011	69.6	1,650	90.8	132	68.2	4,032	91.3	514	77.6	916	92.8	33	60.6
2011	Overall	29,967	89.4	5,270	70.7	4,872	91.3	599	69.9	11,170	89.9	1,166	69.5	2,475	91.8	96	58.3
2012	Commencing	nd	88.7	nd	66.4	nd	90.2	nd	62.8	nd	92.2	nd	82.7	nd	94.5	nd	67.6
2012	Overall	nd	89.1	nd	69.3	nd	91.5	nd	68.0	nd	91.5	nd	74.4	nd	94.4	nd	65.1
2013	Commencing	nd	87.6	nd	65.7	nd	89.1	nd	66.5	nd	91.8	nd	84.0	nd	94.5	nd	76.7
2013	Overall	nd	88.6	nd	70.3	nd	90.2	nd	70.1	nd	89.9	nd	71.7	nd	93.8	nd	71.5
2014	Commencing	nd	87.8	nd	68.0	nd	90.7	nd	66.7	nd	91.9	nd	87.3	nd	94.8	nd	87.0
2014	Overall	nd	89.0	nd	68.2	nd	92.1	nd	68.6	nd	90.3	nd	72.5	nd	93.9	nd	71.1

Note: 2014 data is for students who graduated in 2014, or returned to the same university in 2015

TABLE 9 ANNUAL RETENTION RATES IN INSTITUTION & ENGINEERING FOR BACHELORS DEGREE STUDENTS IN ENGINEERING & RELATED TECHNOLOGIES, 2001 – 2014

		Domestic Students								Overseas Students							
		Males				Females				Males				Females			
		Full-time		Part-time		Full-time		Part-time		Full-time		Part-time		Full-time		Part-time	
		Number	Retention %	Number	Retention %	Number	Retention %	Number	Retention %	Number	Retention %	Number	Retention %	Number	Retention %	Number	Retention %
2001	Commencing	7,977	82.0	1,095	61.7	1,503	81.9	119	59.7	2,245	88.1	500	69.8	474	91.4	66	78.8
2001	Overall	23,145	85.3	5,397	67.2	4,387	86.8	597	68.3	4,470	88.0	873	69.9	1,003	91.4	111	74.8
2002	Commencing	7,716	81.6	1,040	62.3	1,382	82.7	98	46.9	2,686	89.2	387	62.5	584	88.7	39	61.5
2002	Overall	23,392	84.8	5,391	65.4	4,332	86.4	631	63.1	5,486	87.6	946	63.9	1,256	89.0	108	64.8
2003	Commencing	7,624	81.4	989	60.5	1,308	80.7	103	58.3	2,927	88.9	528	73.1	613	89.1	77	70.1
2003	Overall	23,562	84.6	5,097	62.9	4,214	85.5	587	62.2	6,294	88.2	1,203	59.7	1,388	89.9	165	58.8
2004	Commencing	7,667	82.3	950	62.6	1,246	82.3	96	53.1	2,783	87.5	473	74.0	605	88.6	44	75.0
2004	Overall	23,405	85.0	4,956	65.7	4,014	86.7	566	60.4	6,907	87.8	1,117	62.0	1,507	89.8	128	60.9
2005	Commencing	7,648	82.8	960	62.4	1,129	81.6	113	58.4	2,684	88.2	385	72.7	603	88.7	53	83.0
2005	Overall	23,332	85.8	4,692	66.2	3,730	87.0	557	65.9	6,968	87.5	988	67.2	1,539	89.2	128	71.9
2006	Commencing	7,988	84.2	882	65.0	1,270	83.0	95	63.2	2,733	87.8	427	77.1	603	89.9	57	79.0
2006	Overall	23,668	86.7	4,658	66.9	3,701	87.7	521	66.8	7,067	87.6	1,115	66.9	1,561	89.9	158	67.7
2007	Commencing	8,451	83.6	969	64.2	1,481	84.1	93	54.8	2,999	89.7	501	74.1	682	90.5	68	80.9
2007	Overall	24,841	86.3	4,717	66.7	4,034	87.8	502	68.1	7,600	88.1	1,274	72.4	1,704	89.0	183	72.1
2008	Commencing	8,714	84.7	945	66.8	1,450	82.1	129	60.5	3,064	89.9	582	80.9	686	91.0	79	78.5
2008	Overall	26,101	87.2	4,626	69.9	4,240	87.2	555	64.5	8,214	87.5	1,335	72.5	1,752	90.9	193	73.1
2009	Commencing	nd	85.0	nd	60.3	nd	83.8	nd	57.8	nd	92.7	nd	82.5	nd	92.1	nd	67.7
2009	Overall	nd	87.2	nd	67.0	nd	87.7	nd	65.6	nd	90.5	nd	72.4	nd	92.2	nd	70.0
2010	Commencing	9,678	83.9	973	66.7	1,657	84.6	115	72.2	4,069	92.0	487	83.6	899	93.3	73	78.1
2010	Overall	29,085	86.7	4,882	67.9	4,840	87.5	527	67.0	10,633	88.8	1,154	70.8	2,285	91.6	178	66.3
2011	Commencing	10,226	83.5	1,011	66.1	1,650	82.5	132	62.1	4,032	89.9	514	77.2	916	92.0	33	57.6
2011	Overall	29,967	86.4	5,270	68.5	4,872	87.0	599	66.9	11,170	88.9	1,166	69.0	2,475	90.9	96	57.3
2012	Commencing	nd	84.5	nd	63.9	nd	84.8	nd	58.3	nd	90.7	nd	82.2	nd	93.1	nd	67.6
2012	Overall	nd	86.4	nd	67.2	nd	88.1	nd	64.6	nd	90.4	nd	73.8	nd	93.3	nd	64.3
2013	Commencing	nd	83.2	nd	62.1	nd	83.5	nd	62.2	nd	90.6	nd	84.0	nd	92.6	nd	76.7
2013	Overall	nd	85.7	nd	68.1	nd	86.3	nd	66.8	nd	88.8	nd	71.0	nd	92.4	nd	70.0
2014	Commencing	nd	83.5	nd	65.9	nd	85.3	nd	65.1	nd	90.9	nd	86.7	nd	92.9	nd	85.2
2014	Overall	nd	86.2	nd	65.9	nd	88.2	nd	64.0	nd	89.5	nd	71.6	nd	92.8	nd	69.8

Note: 2014 data is for students who graduated in 2014, or returned to the same university and enrolled in engineering in 2015

TABLE 10 STAFF (FTE) IN ENGINEERING & RELATED TECHNOLOGIES, 1996 – 2015 (not including casual staffing)

staff groups	1996	1998	2000	2002	2004	2006	2008	2010	2011	2012	2013	2014	2015
academics, male													
teaching-only	62	71	63	60	66	41	38	69	100	98	76	67	88
research –only	474	479	503	686	834	915	1,010	1,051	1,194	1,194	1,295	1,279	1,417
teaching & research	1,687	1,485	1,399	1,477	1,464	1,478	1,529	1,062	1,747	1,759	1,779	1,824	1,919
sub-total, male	**2,223**	**2,035**	**1,965**	**2,223**	**2,364**	**2,434**	**2,577**	**2,722**	**3,040**	**3,052**	**3,126**	**3,170**	**3,424**
academics, female													
teaching-only	2	3	4	3	12	1	3	13	16	20	18	17	24
research –only	83	63	103	169	195	225	262	333	387	383	399	371	399
teaching & research	99	111	125	156	157	171	181	236	252	248	262	288	320
sub-total, female	**184**	**177**	**232**	**328**	**364**	**397**	**446**	**621**	**656**	**652**	**675**	**676**	**743**
total academics	**2,407**	**2,212**	**2,197**	**2,551**	**2,728**	**2,831**	**3,023**	**3,343**	**3,696**	**3,704**	**3,830**	**3,864**	**4,167**
% research-only	23.1	24.5	27.6	33.5	37.7	40.3	42.1	41.4	42.8	42.6	44.6	42.9	43.6%
% female	7.6	8	10.6	12.9	13.3	14	14.8	18.6	17.7	17.6	17.8	17.6	17.8%
total teaching	**1,850**	**1,670**	**1,591**	**1,696**	**1,699**	**1,691**	**1,751**	**1,920**	**2,115**	**2,125**	**2,135**	**2,196**	**2,351**

FTE by academic position	>C	C	B	< B	other
Men, 2013	907	692	796	553	178
Women, 2013	104	104	204	169	95
Men, 2014	951	675	826	537	184
Women, 2014	115	111	201	156	85
Men, 2015	1031	751	908	636	99
Women, 2015	127	132	212	201	61

Note: Seven ACED member universities did not provide staffing data for 2015 – see Table 14

TABLE 11 ACTUAL STUDENT LOAD (EFT) IN ENGINEERING AND RELATED TECHNOLOGIES, 2015

DOMESTIC STUDENTS (2014)	Doctor-ates	Masters	other post grad	Bachelor	other u-grad	Enab	Non award	TOTAL
Manufacturing Engineering & Technology	56	74	4	789	59	0	1	**981**
Process and Resources Engineering	442	402	149	3,568	122	0	9	**4,691**
Automotive Engineering & Technology	0	5	0	25	0	0	0	**30**
Mechanical/Industrial Engineering & Technology	418	384	59	6,404	218	0	8	**7,492**
Civil Engineering	488	769	70	8,072	280	1	6	**9,686**
Geomatic Engineering	58	120	58	1,183	154	1	1	**1,574**
Electrical/Electronic Engineering & Technology	623	559	25	7,131	255	0	9	**8,602**
Aerospace Engineering & Technology	62	79	149	997	98	0	2	**1,388**
Maritime Engineering & Technology	20	13	7	340	4	0	1	**384**
Other Engineering & Related Technologies	421	709	108	6,625	331	44	21	**8,259**
DOMESTIC TOTAL 2015	**2,588**	**3,114**	**629**	**35,134**	**1,521**	**46**	**58**	**43,087**
DOMESTIC TOTAL 2014	2,378	2,730	746	34,681	1,609	55	69	42,267
DOMESTIC TOTAL 2013	2,225	2,399	756	33,571	1,608	62	49	40,856
DOMESTIC TOTAL 2012	2,304	2,080	766	31,962	1,563	65	33	38,890
DOMESTIC TOTAL 2011	2,273	1,918	673	30,118	1376	62	25	36,630
ALL STUDENTS (2014)								
Manufacturing Engineering & Technology	143	608	5	1,084	82	0	42	**1,963**
Process and Resources Engineering	1,279	1,172	184	5,576	218	0	206	**8,636**
Automotive Engineering & Technology	0	44	0	33	0	0	2	**79**
Mechanical/Industrial Engineering & Technology	922	1,263	68	9,405	413	0	150	**12,222**
Civil Engineering	1,198	2,043	88	11,152	391	1	168	**15,040**
Geomatic Engineering	125	271	64	1,318	161	1	20	**1,959**
Electrical/Electronic Engineering & Technology	1,433	2,753	38	10,538	439	0	165	**15,367**
Aerospace Engineering & Technology	80	148	153	1,359	110	0	23	**1,872**
Maritime Engineering & Technology	45	26	8	529	40	0	5	**652**
Other Engineering & Related Technologies	982	2,603	141	8,771	675	44	194	**13,411**
TOTAL (ALL STUDENTS) 2015	**6,207**	**10,931**	**749**	**49,765**	**2,529**	**46**	**975**	**71,201**
TOTAL (ALL STUDENTS) 2014	5,904	9,025	876	48,503	2,511	55	1,058	67,931
TOTAL (ALL STUDENTS) 2013	5,640	7,192	914	47,220	2,408	62	395	63,999
TOTAL (ALL STUDENTS) 2012	4,789	5,650	982	42,911	2,089	62	130	56,816
TOTAL (ALL STUDENTS) 2011	4,789	5,650	982	42,911	2,089	62	130	56,816

TABLE 12 GRADUATE DESTINATIONS 2015 AND RECENT HISTORY

Source: Graduate Careers Australia

2015 Graduates, sample survey in early 2016

Australian Citizens and permanent residents only, 2016 survey (2015 graduates)	sample size	% in full-time study	% available for FT work	% in PT or casual work, not seeking emlpoyment	% not working, seeking PT or casual work	% not available for FT study or FT work
Aeronautical Eng	312	12.8	73.1	8.0	0.3	5.8
Chemical Eng	217	13.8	74.2	5.1	0.5	6.5
Civil Eng	1,131	7.7	85.6	2.2	0.3	4.2
Electrical Eng	434	7.4	87.3	3.0	0.2	2.1
Electron/Comp Eng	174	7.5	85.6	3.4	0.0	3.4
Mechanical Eng	748	8.7	83.3	2.9	0.4	4.7
Mining Eng	113	7.1	85.8	2.7	0.0	4.4
Other Eng	791	24.8	68.6	2.5	0.4	3.7
ENGINEERING TOTAL/AVERAGE	**3,920**	**12.0**	**80.3**	**3.2**	**0.3**	**4.2**
ALL FIELDS	68,360	19.7	61.6	12.7	0.9	5.1

of those available for full time employment

	sample size	% available … and in FT work	% seeking FT work, not employed	% seeking FT, employed casual	% had job in final year, and still in it
Aeronautical Eng	228	60.1	19.3	20.6	21.9
Chemical Eng	161	63.4	15.5	21.1	4.9
Civil Eng	968	77.7	12.3	10.0	15.4
Electrical Eng	379	78.1	15.0	6.9	19.6
Electron/Comp Eng	149	78.5	12.8	8.7	29.1
Mechanical Eng	623	72.2	16.1	11.7	13.8
Mining Eng	97	76.3	15.5	8.2	12.2
Other Eng	543	70.9	15.8	13.3	13.2
ENGINEERING TOTALS	**3,148**	**73.5**	**14.8**	**11.8**	**15.7**
TOTAL (ALL FIELDS)	29,004	68.8	11.3	19.9	16.5

% available for employment and in Full Time Work

	2002	2004	2006	2008	2010	2011	2012	2013	2014	2015
Aeronautical Eng	82.9	76.3	88.4	89.5	73.9	74.7	81.4	69.9	58.2	60.1
Chemical Eng	89.2	84.2	83.2	90.6	67.7	71.7	77.5	73.6	61.6	63.4
Civil Eng	91.1	96.5	95.4	97.3	92.5	89.9	90.5	85.4	74.9	77.7
Electrical Eng	83.3	80.7	92.0	91.9	76.9	85.9	88.0	86.0	78.0	78.1
Electron/Comp Eng	74.7	77.7	86.4	89.9	76.9	82.2	79.5	80.9	74.9	78.5
Mechanical Eng	81.5	85.4	89.9	93.9	80.5	87.1	88.4	82.4	82.8	72.2
Mining Eng	90.9	96.6	99.9	99.9	90.5	97.3	93.9	96.0	70.5	76.3
Other Eng	83.5	85.8	92.5	92.4	84.9	82.3	85.4	81.9	70.5	70.9

TABLE 13 STARTING SALARIES BY AREA OF EMPLOYMENT FOR 2015 GRADUATES

Bachelors Degree Graduate Salaries, 2014 and 2015 graduations (medians)

	Aust Gov.	State Gov	Prof Prac	Industry	Education	Total	Men	Women
2014								
Engineering (medians)	$ 65,000	$ 61,500	$ 59,300	$ 63,000	$ 58,000	**$ 62,000**	$ 60,000	$ 65,000
number of responses	38	16	250	692	10	1048		
all fields	$ 60,000	$ 55,000	$ 52,000	$ 50,000	$ 58,000	$ 52,500	$ 55,000	$ 52,000
2015								
Engineering (medians)	$ 64,100	$ 60,400	$ 60,000	$ 61,500	$ 60,000	**$ 62,000**	$ 60,000	$ 63,000
number of responses	48	13	279	553	13	1,142	978	164
all fields	$ 59,600	$ 57,500	$ 53,000	$ 50,000	$ 60,000	$ 54,000	$ 55,000	$ 53,000

in first full time employment, age less than 25

Comparisons, by Discipline, Bachelors Graduates 2012-15

	2012	2013	2014	2015
Dentistry	$ 80,000	$ 80,000	$ 75,000	**$ 80,000**
Optometry	$ 79,000	$ 70,000	$ 70,000	**$ 80,000**
Medicine	$ 60,000	$ 60,000	$ 60,000	**$ 65,000**
Engineering	$ 63,000	$ 64,000	$ 62,000	**$ 62,000**
Earth Sciences	$ 73,000	$ 60,000	$ 60,000	**$ 60,000**
Mathematics	$ 55,000	$ 57,000	$ 60,000	**$ 60,000**
Computer Science	$ 53,000	$ 52,500	$ 55,000	**$ 54,000**
Physical Science	$ 55,000	$ 55,000	$ 55,000	**$ 50,000**

Commencing Salaries (medians), Postgraduates completing in 2015

	PG Cert/Dip	Masters Courswork	Masters Research	PhD	
Engineering (median)	$ 99,800	$ 100,000	$ 90,000	$ 80,000	
number of responses	169	522	26	169	
Physical Sciences	$ 88,300	$ 86,000	$ 80,000	$ 77,000	
Computer Science	$ 88,000	$86,000		$ 85,000	
Biological Sciences	$ 76,300	$ 75,000	$ 63,000	$ 76,000	
Mathematics	$ 80,000	$ 81,100		$ 83,000	
Agricultural Science	$ 74,000	$ 80,000		$ 78,500	
Earth Sciences	$ 84,000	$ 74,500		$ 76,000	
Commerce/Economics	$ 96,500	$ 100,000		$ 90,000	big groups
male	$ 85,000	$ 90,000	$ 76,000	$ 84,000	
female	$ 70,000	$ 75,000	$ 80,000	$ 81,000	includes all disciplines
total	$ 75,000	$ 80,000	$ 80,000	$ 83,000	
respondents	8,069	10,968	220	1,529	

TABLE 14 Student and staff summary data for ACED Members, 2015

University	commencing students			completions			total enrolled students			Load	Staff (FTE - non-casual)			
	dom	intern'l	total	dom	intern'l	total	dom	intern'l	total	EFTSL	T-only	R-only	T & R	Total
Charles Sturt	6	1	7	< 5	<5	< 5	15	3	18	30	nd	nd	nd	nd
Macquarie	326	79	405	25	16	41	544	119	663	497	0	7	18	25
Southern Cross	31	-	31	-	-	-	71	1	72	71	nd	nd	nd	nd
UNSW Australia	2,455	1,915	4,370	1,324	1,016	2,340	7,862	4,456	12,318	7,473	4	207	369	580
Newcastle	544	162	706	301	110	411	2,060	690	2,750	1,756	0	105	66	171
Wollongong	552	488	1,040	311	265	576	1,882	1,215	3,097	2,145	0	129	86	215
Sydney	971	1,011	1,982	579	451	1,030	3,430	2,276	5,706	4,059	3	85	81	169
U of Tech Sydney	851	812	,663	461	393	854	3,480	1,629	5,109	3,936	4	73	113	190
Western Sydney	694	145	839	185	57	242	1,698	313	2,011	1,647	<5	<5	100	107
Deakin	380	360	740	139	217	356	1,281	892	2,173	1,435	<5	11	34	44
Federation	238	58	296	140	51	191	526	126	652	330	nd	nd	nd	nd
La Trobe	146	150	296	54	116	170	358	392	750	380	0	0	17	17
Monash	819	981	1,800	551	527	1,078	3,694	3,148	6,842	4,689	0	77	114	191
RMIT	1,601	1,290	2,891	1,039	763	1,802	5,275	3,265	8,540	5,755	0	77	146	223
Swinburne	856	984	1,840	541	618	1,159	3,011	2,857	5,868	4,100	4	58	93	155
Melbourne	429	819	1,248	409	475	884	1,279	1,797	3,076	3,148	5	138	85	228
Victoria	416	164	580	81	24	105	863	360	1,223	894	10	6	44	60
Central Queensland	406	10	416	205	8	213	1,143	22	1,165	615	nd	nd	nd	nd
Griffith	623	296	919	322	206	528	1,921	829	2,750	1,690	0	15	53	68
James Cook	195	10	205	99	9	108	637	50	687	492	nd	nd	nd	nd
Q'land U of Tech	1,084	273	1,357	564	150	714	3,756	781	4,537	3,096	2	83	105	190
Queensland	1,098	479	1,577	765	314	1,079	4,419	1,439	5,858	4,234	11	416	146	573
Southern Q'land	1,171	175	1,34	525	77	602	3,861	450	4,311	1,833	<5	<5	65	70
Sunshine Coast	125	7	132	39	1	40	381	12	393	179	nd	nd	nd	nd
Curtin	911	1,050	1,961	628	644	1,272	3,622	3,179	6,801	4,744	17	67	79	163
Edith Cowan	228	379	607	114	131	245	796	865	1,661	939	1	10	28	39
Murdoch	118	70	188	62	22	84	nd -	nd -	nd -	329	3	0	16	19
Western Australia	453	228	681	453	173	626	1,331	563	1,894	1,980	1	67	58	126
Flinders	238	78	316	59	24	83	611	148	759	511	2	15	44	61
Adelaide	755	513	1,268	515	342	857	2,866	1,404	4,270	2,978	0	66	95	161
South Australia	438	224	662	373	333	706	1,437	1,141	2,578	1,656	14	26	69	110
Tasmania (inc. AMC)	468	182	650	258	87	345	1,170	566	1,736	1,174	24	5	44	74
Charles Darwin	141	89	230	34	19	53	379	176	555	275	< 5	< 5	20	22
Australian National	184	196	380	126	125	251	717	540	1,257	806	0	67	49	115
Canberra	31	1	32	-	-	-	61	9	70	60	nd	nd	nd	nd
TOTAL 2015	**19,976**	**13,678**	**33,654**	**11,281**	**7,764**	**19,045**	**66,437**	**35,713**	**102,150**	**69,906**	**113**	**1,816**	**2,238**	**4,167**
TOTAL 2014	20,790	12,136	32,926	10,789	7,743	18,532	66,229	32,985	98,895	66,819	84	1,650	2,196	3,846
TOTAL 2013	20,616	10,720	31,336	10,231	7,414	17,645	64,797	30,167	94,964	63,171	94	1,694	2,031	3,830
TOTAL 2012	18,396	9,730	28,126	9,271	6,846	16,117	59,385	27,354	86,739	55,523	118	1,577	2,007	3,702
% change 2014 to 2015	-3.92	12.71	2.21	4.56	0.27	2.77	0.31	8.27	3.29	4.62	34.52	10.06	1.91	8.35

Notes

1. Student data for FoE3 from the Higher Education Statistics Collection website
2. FoE3 includes surveying and civil aviation, and may exclude software engineering, if the university classifies the latter in IT.
3. Staff data is from Higher Education Statistics, purchased by ACED, underestimates totals due to no data (nd) being recorded for seven providers.
4. Data entries in range 1 to 4 are calculated by subtraction