In May 2008, approximately 382,700 workers were employed in Information and Communications Technology (ICT) occupations, representing 3.6% of the total Australian workforce.

South Australia's electronics, digital technology, telecommunications and ICT industry represents $7.5 billion and has grown at over 15% per year since 1990. SA represents 40% of Australia's electronics industry.

Almost 250,000 Australians identify themselves as Engineers. Of these 156,000 have a Bachelors degree or above.

Between the 2001 and 2006 census, the number of Engineers with a degree increased by 11,359, (although the number with an AQF diploma fell by 17,996).

The average graduate starting salary (Bachelors degree) in Engineering was $57,500 in 2009 (average for Bachelors degree is $48,000).

Engineering graduates have the third highest starting salary after dentists and optometrists and ahead of earth scientists and doctors. Mathematics ranks 6th and Computing 9th of the 23 disciplines.

The average salary for private sector Level 6 Engineer was $252,340 in 2007 (up $33,891 in a year).

The January 2008 APESMA survey showed that 75% of businesses reported that they experienced professional engineering or ICT shortages. The 2009 survey describes the 'potentially catastrophic' impact of the ballooning shortage of engineers.

82% of businesses reported that there were moderate to severe consequences to the Australian economy as a result of the skills shortage in Engineering.

457 visas now account for a third of all Engineering migrants.

Australia is facing a widening gap between the demand for ICT skills and the supply of qualified ICT workers. The Federal Government's gradcareers website states that "so intense is the problem that top industry professionals predict a shortage of up to 20,000 engineers within six years".

Of total employment in ICT occupations, 208,600 workers were employed as ICT Professionals (Computing Professionals and IT Managers) and 46,300 were employed as Computing Support Technicians.

Strong long-term growth in employment of ICT Professionals is evident - 67,300 new jobs or growth of 47.6% in the ten years to May 2008.

This growth is reflected in the Computer Services industry - job growth of 59,500 or 63.9% to 152,600. Although this is the industry most reflective of the demand for ICT workers, employment of ICT workers is spread across all industries.

Further growth in employment in ICT occupations is expected in the next five years and this will increase the demand for ICT Professionals - at a time when the supply of qualified graduates is expected to be considerably lower than at present.

In the five years to June 2008, the ICT Vacancy Index (published by the Department of Education, Employment and Workplace Relations - DEEWR) rose by 237% (January 2002 = 100). The number of ICT vacancies has more than tripled in this period to a weekly average of around 23,200 in June 2008.

Skill shortage research undertaken by DEEWR shows that there are national shortages for several ICT skills.

Graduate outcomes have also improved with around 85% of ICT graduates in full-time employment in 2007 (83.0% for Computer Science and 86.9% for Electronic and Computing Engineering).

The strong ICT labour market has resulted in lower unemployment for ICT Professionals in recent years and ICT career prospects are good.

Information Sources – Engineers Australia, APESMA, AIIA, ACS, DEEWR, GradStats, TIA, 2001 and 2006 Australian Census.
Biomedical Engineering
Bachelor of Engineering (Biomedical) [SATAC Code 214771] †
Bachelor of Engineering (Biomedical) / Master of Engineering (Biomedical) [SATAC Code 214881]
Bachelor of Engineering (Mechanical) / Master of Engineering (Biomedical) [SATAC Code 224351]
Bachelor of Engineering (Biomedical) / Bachelor of Medical Science [SATAC Code 214772]
Bachelor of Engineering (Biomedical) / Bachelor of Science [SATAC Code 214772]
Master of Engineering [by research]
Master of Engineering (Biomedical)
Doctor of Philosophy

Civil Engineering
Bachelor of Engineering (Civil) [with CDU - SATAC Code 214961] ‡
Bachelor of Engineering (Civil) [with UniSA - SATAC Code 214901] ‡

Computer Science
Bachelor of Computer Science [SATAC Code 214821]
Bachelor of Science [Computer Science major and extended major]
Bachelor of Science (Honours) - High Achievers Program [Computer Science major and extended major]
Master of Information Technology
Master of Science (Computer Science)
Master of Science [by research]
Doctor of Philosophy

Computer Systems Engineering
Bachelor of Engineering (Computer Systems) [SATAC Code 214791] †
Bachelor of Engineering (Computer Systems) / Bachelor of Science [SATAC Code 214792]
Bachelor of Engineering (Computer Systems) / Bachelor of Computer Science [SATAC Code 214792]
Master of Engineering (Electronics)
Master of Engineering [by research]
Doctor of Philosophy

Digital Media
Bachelor of Science (Computing and Digital Media) [SATAC Code 214831]
Bachelor of Creative Arts [Digital Media major]
Master of Science [by research]
Doctor of Philosophy

Electronic Engineering
Bachelor of Engineering (Electronics) [SATAC Code 214801]
Bachelor of Engineering (Electronics) / Bachelor of Science [SATAC Code 214802]
Bachelor of Engineering (Electronics) / Bachelor of Computer Science [SATAC Code 214802]
Master of Engineering (Electronics)
Master of Engineering [by research]
Doctor of Philosophy

Engineering Science
Bachelor of Engineering Science [SATAC Code 214811]
Bachelor of Science [Engineering Science major]

Environmental Technologies (new for 2011)
Bachelor of Engineering (Environmental Technologies) [SATAC Code 224091]
Bachelor of Engineering (Environmental Technologies) / Bachelor of Science [SATAC Code 224092]
Bachelor of Engineering (Environmental Technologies) / Bachelor of Science (Environmental Science) [SATAC Code 224092]
Master of Engineering [by research]
Doctor of Philosophy

Information Systems
Bachelor of Science [Information Systems major and extended major]

Information Technology
Bachelor of Information Technology [SATAC Code 214201]
Bachelor of Information Technology / Bachelor of Commerce
Master of Information Technology
Master of Science [by research]
Doctor of Philosophy

Mathematics
Bachelor of Science - Mathematics major and extended major
Bachelor of Science (Honours) - High Achievers Program [Mathematics major and extended major]
Bachelor of Education/Bachelor of Science - Mathematics teaching major
Master of Science [by research]
Doctor of Philosophy

Maritime Electronics (new for 2011)
Bachelor of Engineering (Maritime Electronics) [SATAC Code 224101]
Master of Engineering [by research]
Doctor of Philosophy

Mechanical Engineering (new for 2011)
Bachelor of Engineering (Mechanical) [SATAC Code 224341]
Bachelor of Engineering (Mechanical) / Bachelor of Engineering (Biomedical) [SATAC Code 224351]
Doctor of Philosophy

Mechanical and Advanced Manufacturing (new for 2011)
Bachelor of Engineering (Mechanical and Advanced Manufacturing) [with UniSA - SATAC Code 214911] ‡

Naval Architecture (new for 2011)
Bachelor of Engineering (Naval Architecture) [with University of Tasmania - SATAC Code 224331] a

Robotics
Bachelor of Engineering (Robotics) [SATAC Code 214781] †
Bachelor of Engineering (Robotics) / Master of Engineering (Electronics) [SATAC Code 214891]
Bachelor of Engineering (Robotics) / Bachelor of Science [SATAC Code 214782]
Bachelor of Engineering (Robotics) / Bachelor of Computer Science [SATAC Code 214782]
Master of Engineering [by research]
Doctor of Philosophy

Software Engineering
Bachelor of Engineering (Software) [SATAC Code 214601]
Bachelor of Engineering (Software) / Bachelor of Computer Science [SATAC Code 214602]
Bachelor of Engineering (Software) / Bachelor of Science [SATAC Code 214602]
Master of Engineering [by research]
Doctor of Philosophy

For further information, please contact the School Office on (08) 8201 2297, enquiries@csem.flinders.edu.au.

† The first two years of biomedical engineering and robotics can also be taken at the University of South Australia, Mawson Lakes. The first two years of computer systems engineering and robotics can also be taken at Charles Darwin University, Casuarina, NT.
‡ For civil engineering, the first two years are taken at Flinders University, the last two years at either the University of South Australia, Mawson Lakes or Charles Darwin University, Casuarina, NT or externally through CDU.
§ For naval architecture, the first two years are taken at Flinders University, the last two years at the Australian Maritime College, University of Tasmania, Launceston.
ø For mechanical and advanced manufacturing, the first two years are taken at Flinders University, the last two years at the Australian Maritime College, University of Tasmania, Launceston.
π Details on how to apply for combined degrees can be found at www.flinders.edu.au/courses/combined-degrees.