

# Master of Engineering

The School of Information Technology and Electrical Engineering (ITEE) is a large, well-respected school at The University of Queensland, a university that has won national awards for its teaching and research. Each year, the School of ITEE enrolls more than 3,000 students in more than 250 courses and produces 600-plus graduates. A quarter of its students are international enrolments. The School of ITEE has 180 research higher degree candidates and 200 students enrolled in postgraduate coursework programs, like the Master of Engineering (ME).

The School has active research programs in the following areas of strength: Biomedical Engineering; Cognitive Systems Engineering; Complex and Intelligent Systems; Data and Knowledge Engineering; e-Research; Microwave and Optical Communications; Power and Energy Systems; Security and Surveillance; Systems & Software Engineering; and Ubiquitous Computing. The School of ITEE is associated with a number of national and international centres of research excellence at the forefront of technological innovation, in areas such as energy systems engineering, computational modelling, human cognition and genomics.

Details of the School and the research interests of its academic staff may be accessed on the School's website at [www.itee.uq.edu.au/](http://www.itee.uq.edu.au/)

**SCHOOL OF INFORMATION TECHNOLOGY  
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CRICOS Provider No 00025B

## 2008 Key Dates

### SEMESTER 1

Classes February 25 - March 20

Mid-semester break March 24 - March 29

Classes March 31 - May 31

Revision period June 1 - June 6

Examination period June 7- June 21

Semester ends June 21

### SEMESTER 2

Classes July 21 - September 27

Mid-semester break September 29 - October 4

Classes October 6 - October 25

Revision period October 26 - October 31

Examination period November 1 - November 15

Semester ends November 15

## Systems Engineering



### The Program

The Master of Engineering (ME) degree is a 2-semester program for students with an approved 4-year Bachelor of Engineering or Graduate Diploma of Engineering or a 3-semester program for others with a suitable background. Many of the courses in the program are available in "flexible" modes, suitable for part-time off-campus study.

### Admission requirements

Admission to the masters program requires:

- a relevant bachelors degree or Graduate Diploma of Engineering
- a strong academic record
- satisfaction of English language requirements.

### The courses

Details of the courses available in the ME (Systems Engineering) can be found at:

[www.itee.uq.edu.au/~syseng/](http://www.itee.uq.edu.au/~syseng/)

Students will have access to a wide range of state-of-the-art Computer Aided Systems Engineering (CASE) tools in a specially equipped laboratory established with the aid of Boeing funding.

### Where can I work?

Systems engineers work for a broad range of organisations, in roles such as:

- designing and testing new systems, or
- maintaining and upgrading existing systems, for large systems development and
- systems integration companies such as Boeing, BAE Systems, Westinghouse Rail and Mincom
- providing technical oversight of systems acquisitions in large government and private organisations such as Road Traffic Authorities, air traffic control, railways, Defence, banks and hospitals



## Have you ever wondered how highly complex systems get built?

The world is getting more and more interconnected, and the systems on which the world depends are becoming increasingly complex. Modern aircraft, for example, have computers throughout them, for everything from fly-by-wire flight control, to telemetry in the engines that continuously reports engine status to maintenance engineers on the ground. Modern ATM systems enable people to withdraw money from their home bank account even from the other side of the world. Such systems are complex, and are made up of and interact with many other systems.

Systems Engineering (SE) is the discipline of building highly sophisticated systems that work successfully. It is about the key creative processes that transform concepts into system designs, and the key technological and management processes that enable system development to proceed in an orderly, interdisciplinary fashion - maximising opportunities to meet customer needs while minimising risk.

The UQ SE program is modelled on the Boeing masters program conducted in the US and includes a wide choice of electives. Many of the courses are offered in flexible delivery modes aimed at professionals interested in upgrading or updating their qualifications. The University of Queensland systems engineering program has close links with the Boeing systems engineering teaching program in the US.