

## About the College

The ANU College of Engineering and Computer Science is composed of the Research School of Information Sciences and Engineering (RSISE) and the Faculty of Engineering and Information Technology (FEIT).

It offers undergraduate degrees in engineering, information technology and computer science along with masters and doctoral postgraduate programs. The College undertakes pure and applied research in information and communications technologies, materials and manufacturing, formal methods and logic, machine learning and vision, robotics and energy systems.

The College comprises four academic departments (two each from FEIT and RSISE):

- Department of Computer Science (FEIT)
- Department of Engineering (FEIT)
- Computer Sciences Laboratory (RSISE)
- Department of Information Engineering (RSISE)

The Dean and Director of the College is Professor John Richards, BE PhD NSW FIEAust FIEEE FTSE

## A research-led education

In the College, research-led education means direct engagement with research and researchers. This is via a curriculum and method of delivery that results in the graduation of creative students, confident of their ability to propose solutions to the problems of the future. Some of these problems are not yet even thought of. The best students will be well prepared for doctoral study and a research career. Many of our graduates go on to doctoral study at the College. For several students our close association with NICTA enhances study.

The College offers world-class research facilities, postgraduate and research training, and undergraduate training across the disciplines in engineering and computer science. Our expert staff collaborate on research and teaching initiatives.

## Research Themes

The College focuses its research on:

### **Cooperative Systems**

Complex ICT systems with the capability to coordinate and cooperate in serving society's needs.

### **Energy and Environment**

Harnessing natural phenomena like solar and wind for sustainable energy production through a systems engineering approach.

### **Future Materials**

Developing materials for application to the human, biological and manufacturing systems of the future.

### **Thinking Systems**

Exploiting computational intelligence and building computer systems that have human-level intelligence.

### **Trust and Security**

Storing, processing and communicating sensitive information, and guaranteeing trust and security.

# Major Research Areas

Most of the College's major research areas fall within these broad research themes, and include:

Advanced Manufacturing and Production Systems	Materials
Algorithms and Data	Robotics
Computer Systems and Architectures	Photovoltaic Solar Energy
Computer Vision	Solar Thermal Energy
Diagnosis, Planning and Optimisation	Statistical Machine Learning
Software Engineering	Systems and Control
Human-centred Computing	Signal Processing and Telecommunications
Logic and Computation	

## Undergraduate teaching and research training

The College offers undergraduate and postgraduate coursework for accredited professional and research training in engineering, software engineering, computer science and information technology as well as postgraduate research and training in several research themes in engineering and computer science. Undergraduate and postgraduate coursework study leads to accredited professional and research training that is in big demand in industry.

## Undergraduate and coursework topics include:

- Advanced manufacturing and production systems
- Artificial intelligence, data mining and machine learning
- Computational science
- Computer graphics, new media, human computer interaction and virtual environments
- Database systems
- eBusiness, Web services, network security
- High-performance computing and parallel systems
- Materials
- Programming language and systems
- Robotics and control systems
- Semiconductor physics and devices
- Smart Internet technology
- Software engineering
- Solar energy
- Wireless telecommunications, networks and signal processing

## Statistics

Total academic staff (incl NICTA adjuncts)	82	Undergraduate students	960
Total general staff	62	Postgraduate students	310
Total staff	144	Total students	1270

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