The Department of Electrical and Computer Engineering offers a postgraduate Master by coursework in Communications Networks, focusing on network design, digital signal processing, and wired and wireless networks. The course provides specialist knowledge and expertise in areas of current and future importance to the telecommunications industry.

Information and communication technologies are increasingly reshaping global business and many facets of human endeavour. Over the past three decades, there has been significant growth in the communications industry, with a shift from traditional telecommunications to data and wireless communication networks where often thousands of electronic systems are interconnected. While the internet continues to attract much publicity, of greater significance has been the adoption of networks by numerous organisations to support their internal activities. These networks range in complexity, from simple PC networks supporting administration functions, to networks which support manufacturing, research and development, marketing, sale and service activities.

This course provides a fundamental understanding of how these systems work – how to get various locations communicating reliably, and from there how to design and maintain a network. Units range from the very theoretical, developing your complex problem solving skills, to the very practical, hands-on and industry focused. This degree is entirely coursework based, with no project or research component.

**CAREER OPPORTUNITIES**
The growth in the telecommunications sector is expected to continue as networks become more complex and more pervasive. While many organisations provide the components for their networks, there is still a strong need for engineering teams to select, configure and implement these components into an effective network which supports the organisation’s objectives. Equally, there is a need for well-qualified people who can manage, support and evolve existing networks to meet current and future requirements.
MORE ABOUT
COMMUNICATIONS
NETWORKS

CAREER OPPORTUNITIES CONTINUED
This degree adds to the skills gained in an appropriate undergraduate degree, enhancing your ability to further your career and employment opportunities with organisations involved in the design, installation, operation, and management of telecommunication and computer system networks. Graduates also find career opportunities with organisations that provide consultancy and research and development services to the telecommunications industry. It is expected that with the proposed roll-out of the National Broadband Network in Australia, there will be a surge in demand for engineers with a strong background in communications networks. Prospective employers include public carriers and most large organisations which support their own private networks such as resource companies, retailers, financial institutions and government departments.

ENTRY REQUIREMENTS
A Bachelor of Engineering degree in electrical, communications and/or electronics, computer engineering or a related discipline from a recognised university or equivalent. The degree must include topics on circuit theory, linear system theory, computer programming, probability theory and linear algebra.

DURATION
This fee-paying course is two years full-time (75 credits per semester) or equivalent part-time study. Two intakes are offered each year in February and July. The course is three units per semester for a total of four semesters.

LOCATION: Bentley

COURSE CRICOS CODE: 058863G

REAL WORLD PRACTICE
Graduates of this course are well prepared to apply for CCNA (Cisco Certified Network Associate) accreditation. This widely respected and recognised industry certification program validates the ability to install, configure, operate and troubleshoot medium-sized route and switched networks, including implementation and verification of connections to remote sites in a wide area network.

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GRADUATE PROFILE
CHRISTO DA SILVA
Consulting Engineer
IP PBX Based Company

After completing a Bachelor of Engineering degree in electronics and telecommunications, I decided I wanted to specialise in the communications field. I chose the Master in Communications Networks as I felt the two year course would enable me to spend more time understanding the core concepts, as well as gain a greater insight into the industry.

Studying the Master course was a great experience, and it has helped me secure a job in the field of network communications. I am now working for an IP/PBX company as a consulting engineer, providing high level support in areas such as network design and virtual architecture, and network redundancy.

COURSE STRUCTURE

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<tr>
<td>Digital Communications Engineering 601</td>
<td>Network Design 603</td>
<td>Digital Signal Processing for Wireless Communications 602</td>
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<td>Stochastic Processes for Telecommunications Systems 601</td>
<td>Digital Communications 603</td>
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<td>Network Design 603</td>
<td>Network Design 602</td>
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<th>Year 2 Semester 2</th>
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<td>Telecommunication and Network Management 602</td>
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- Optional units to select from in Year 2 Semester 2 - Choose 2
  - Mobile Radio Communications 602
  - Computer Aided Engineering of Digital Systems 601
  - Information Theory and Error Control Coding 402
  - Data Network Security 604
  - Microcomputer Systems 603

INTERNATIONAL STUDENTS
International students studying in Australia on a student visa can only study full-time and there are also specific entry requirements that must be met. Please refer to www.international.curtin.edu.au or phone +61 8 9266 7331 for further information, as some information contained in this publication may not be applicable to international students.

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Full details of the course and units are available by contacting the Future Students Centre or online at: handbook.curtin.edu.au

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