Diploma of Network Engineering

COURSE OUTLINE
Charles Darwin University's Diploma of Network Engineering prepares students to become job-ready professionals. Graduates will have the skills and knowledge to design, commission and maintain data networks.

Study opportunities are provided to assist students to undertake industry qualifications, including Cisco and Microsoft certifications. These sought-after industry certifications make graduates highly employable.

GRADUATE OUTCOMES
Graduates from this program work in:
- IT administration
- Network administration
- Systems analysis and design
- Network support
- Internet services and support
- Network programming
- Network systems engineering

Course Summary
- SATAC COURSE CODE: 116041
- CAMPUS: Casuarina
- MODE: INTERNAL, EXTERNAL
- DURATION: 1 YR F/T, EQUIV P/T
- SEMESTER INTAKE: S1, S2
- LANGUAGE REQUIREMENTS: IELTS 6.0 or better with no band less that 5.5, or equivalent
COURSE STRUCTURE

CORE UNITS (7)

Application Concepts (S1)
Students are introduced to web development technologies and a programming language, learning practical programming skills with associated theoretical concepts.

Network Engineering 1 (S1)
This unit provides students with an introduction to the principles and concepts of modern-day data communications systems and networks. In particular, the student is introduced to the underlying principles of a data communications system. These principles are then applied to explain the operating and functioning of the internet and its associated TCP/IP protocol family. This unit also includes part of the training for the Cisco Certified Network Associate Part 1 (CCNA1) qualification. Completion of the CCNA1 qualification is optional, and does require students to complete weekly on-site practical training and an on-site Cisco exam at CDU.

Professional Certification 1 (S1, S2)
This prepares students to undertake the examination for an introductory Microsoft Certified Technology Specialist (MCTS) certification, such as 70-680 Configuring Windows 7.

To achieve the certification students will have to pass an external examination.

Design and Innovation (S1, S2, SS)
This unit is an introduction to design and creative thinking: technical, environmental and economic evaluation of design, aesthetics of design, cultural aspects of design, legal factors, tropical considerations in design, working in groups, decision making and public presentations.

Information Technology Concepts (S2)
IT professionals will encounter a variety of platforms and networks in their career. The role of the IT professional is to select, deploy, integrate and administer platforms, components and networks in an organisation. This unit covers the fundamentals of hardware and operating systems and how they integrate to form essential components of IT systems. An introduction of to networking and its application is also covered.

Professional Certification 2 (S1, S2)
This prepares students to undertake the examination for a networking Microsoft Certified Technology Specialist (MCTS) certification.

To achieve the certification students will have to pass an external examination.

Northern Perspectives (S1, S2, SS)
Every work and research context requires thought about and engagement with issues relating to culture, diversity and the value of different perspectives. This unit provides a foundation for students and professionals working in culturally diverse contexts such as those in north Australia, to understand the implications for that diversity on their study and workplace policy and practice.

ELECTIVE UNIT (1)

Internet Security and Risk (S1)
This unit provides an overview of web-enabled operations within the context of security and risk management. It deals with legal and ethical issues in web operations, computer and Internet crime, the risks of insecure systems, risk management strategies for business, Internet security standards, cryptography and authentication, firewalls, securing payments over the Internet and intelligent agents.

Project Management (S2)
This unit covers formalised project management techniques for successful completion of information technology projects.

Network Engineering 2 (S2)
This unit aims to provide students with an in-depth understanding of modern day data communications. Concepts such as classless network addressing are introduced, as are OSPF, EIGRP, Virtual Lans and the associated issues of the Virtual Trunking and Spanning Tree Protocols.

This unit also provides students the opportunity to qualify for Cisco Networking Academy (CNA) CCNA 2 qualification. It requires weekly on campus attendance to complete on-site practical training and an on-site Cisco exam at CDU.

PATHWAYS

- Certificate IV in a thematically related area (e.g. IT, business, multimedia, engineering) usually gives a semester credit towards the degree
- International students can follow the pathway Certificate III and IV of Business for entry into the Diploma of Network Engineering

S1 = Semester 1, commencing March
S2 = Semester 2, commencing July
SS = Summer Semester, commencing November