

Graduate Diploma in Information and Communications Technology (Computer Networks)

Level 7

This one year graduate diploma will enable you to gain the skills and knowledge that are in high demand in the ICT industry. Career opportunities exist in a variety of roles, such as: network designer, network administrator, desktop support, security specialist.

PROGRAMME CONTENT

- Analyse and evaluate industry principles and practice in a professional context
- Explore a specific topic to extend skills to a higher level
- Analyse and evaluate ICT management practices
- Analyse, evaluate and design networks
- Design and construct complex multi user client/server networks
- Implement and explain key network services and protocols
- Gain practical and technical networking knowledge through the Cisco Network Academy (CCNA) curriculum



ENTRY REQUIREMENTS

Entry will be open to graduates who hold a degree in an ICT related discipline or are able to demonstrate equivalent practical, professional or educational experience in ICT. For international students, an IELTS score of 6.0 or equivalent is required.

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| Location: | UCOL Palmerston North Campus | |
| Fees: | Domestic Students: | NZD\$5,257 |
| | International Students: | NZD\$15,323 |

UCOL is a New Zealand Government Funded Institute of Technology.



(The programme fees shown are per annum and are subject to change. All fees shown are in NZ dollars and include NZ Goods & Services Tax, Student Association fee and Student Levy.)

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UCOL
UNIVERSAL COLLEGE OF LEARNING



Graduate Diploma in ICT (Computer Networks) Level 7

Papers required: I301, I303, I309, T201, T203, T204, T301 and T311

120 credits consisting of:
Minimum of 5 x Level 7 papers = 75 credits
Remaining 45 credits from Level 6 or 7 papers

MARCH ENROLMENT

| Semester One | Semester Two |
|----------------------------|-----------------------------|
| I301 Professional Practice | I309 Special Topic |
| T301 Network Design | I303 Managerial Practice |
| T201 Network Services | T311 Systems Administration |
| T203 Cisco 1 & 2 | T204 Cisco 3 & 4 |

JULY ENROLMENT

| Semester One | Semester Two |
|----------------------------|-----------------------------|
| I301 Professional Practice | I309 Special Topic |
| I303 Managerial Practice | T311 Systems Administration |
| T201 Network Services | T301 Network Design |
| T203 Cisco 1 & 2 | T204 Cisco 3 & 4 |

Pending ITP Quality approval. All papers approved by the New Zealand Qualifications Authority. This is intended as a general guide only. Some of the information contained in this flyer may be subject to change. This flyer supersedes all previous flyers. Please ensure you have the current flyer or check the UCOL web site for the current programme information.

CONTACT AND ENQUIRIES

Enquiries may be made to the Universal College of Learning (UCOL)

Phone: +64 6 952 7000 or 0800 GO UCOL
Email: internationalstudent@ucol.ac.nz
or enquiry@ucol.ac.nz
Website: www.ucol.ac.nz



OVERVIEW OF THE PAPERS FOR 2010

* = Paper

| Compulsory Paper | Title | Credits | Extract from Curriculum Paper Description |
|------------------|--|---------|---|
| I301 | Professional Practice | 15 | <p>To apply communication theories and practice in a professional context. Students will also source an industry project and produce appropriate documentation.</p> <p>Learning Outcomes</p> <ul style="list-style-type: none"> • Analyse and evaluate applied communication principles • Demonstrate effective communication skills • Procure an industry based project • Create project scope documentation • Demonstrate ability to work in teams |
| I309 | Special Topic | 15 | <p>Pursue an area of special interest under the guidance of a UCOL academic staff member.</p> |
| I303 | Managerial Practice | I201 | <p>To enable students to analyse and evaluate management practices as they relate to the ICT industry</p> <p>Learning Outcomes</p> <ul style="list-style-type: none"> • Discuss and analyse key issues associated with managing and structuring the ICT capability within an organisation • Recommend and design a quality management programme for an organisation • Apply best practice human resource management techniques • Commentate on relevant legislation and social responsibility issues as they relate to the ICT industry |
| T201 | Network Services | T101 | <p>To implement key network services as used in modern LANs and to explain the network protocols that these services use.</p> <p>Learning Outcomes</p> <ul style="list-style-type: none"> • Implement and explain the operation of name resolution • Implement automatic network configuration • Implement and explain the operation of directory services • Implement and explain the operation of a web proxy • Implement automatic browser configuration when a web proxy is used • Implement and explain the operation of time synchronisation in the LAN • Implement a mail gateway and explain the operation of common email protocols |
| T203 | Networks (CCNA Curriculum 1 & 2) | | <p>To enable students to gain practical and technical networking knowledge that will assist in designing, building and analysing networks and their protocols.</p> <p>Learning Outcomes</p> <ul style="list-style-type: none"> • Complete networking arithmetic • Demonstrate knowledge of network addressing schemes • Identify, describe and apply appropriate networking media and hardware • Demonstrate network design, implementation and analysis of local area and wide area networks (LANs and WANs) • Describe the concepts, protocols and technologies associated to networking models. • Demonstrate the configuration of Routers to include routing protocols and access control lists |

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| T204 | Networks (CCNA Curriculum 3 & 4) | T203 | <p>To gain practical and technical networking knowledge that will assist in designing, building and analysing networks and their protocols using advanced technologies.</p> <p>Learning Outcomes</p> <ul style="list-style-type: none"> • Design a LAN according to a recognised design methodology • Implement a network using switching technologies • Configure a VLAN as part of a network design. • Implement a Single Area OSPF network into a routed Cisco network • Implement the EIGRP protocol into a routed Cisco network • Implement classless routing into a routed Cisco network • Demonstrate WAN design and WAN protocols • Implement the Point to Point (PPP) protocol within a network • Implement Frame Relay into a routed Cisco network • Demonstrate the Integrated Services Digital Network (ISDN) protocol and Dial on Demand Routing (DDR) • Demonstrate knowledge of network administration and emerging technologies |
| T301 | Network Design | T201 | <p>To recommend uses for thin and thick client architectures and to design a thin client architecture. Students will be able to analyse and evaluate network designs, select an appropriate technology and design for a given situation, and justify their selection.</p> <p>Learning Outcomes</p> <ul style="list-style-type: none"> • Assess and recommend at least two different thin client technologies • Select an appropriate thin/thick architecture for a given situation and justify the selection • Evaluate the performance differences between different thin/thick architectures • Devise and create a proof of technology • Assess server and client virtualisation strategies |
| T311 | Systems Administration | T211 | <p>To provide the ability to design and construct a complex multi-user client/server network. Students will gain skills needed to configure and integrate complex systems.</p> <p>Learning Outcomes</p> <ul style="list-style-type: none"> • Create a multi-user implementation of a client/server network • Implement techniques to integrate multi-vendor operating systems • Implement a common authentication source for drivers systems which may include file, database, web and proxy servers • Devise and implement strategies which will ease the administrative burden through automation and log checking • Implement remote administration of central services • Assess the advantages and disadvantages of open source systems |