

ICT60220

# Advanced Diploma of Information Technology (Telecommunications)

## About this course

Be equipped to kickstart or advance a career in telecommunications network engineering. Build your skills in configuring enterprise-level communication networks, implementing troubleshooting, improving IP networks and more.

If you're a graduate of the Diploma of Information Technology, or looking to launch a telecommunications network engineering career, this could be a good course for you.

## What will I learn?

- Learn how to monitor complex enterprise IP networks and implement troubleshooting strategies to resolve issues
- Build your skills in creating network architecture designs that align with client requirements
- Develop your ability to use command-line, software and hardware tools to maintain high security networks
- Discover how to design, install and test servers in complex network environments
- Learn how to evaluate network capacity and implement strategies to overcome traffic congestion
- Build your ability to install, operate and troubleshoot enterprise switches and routers
- Grow your understanding of key legislation and regulatory bodies governing telecommunication networks in Australia

## Career Opportunities

- Telecommunications Network Specialist
- Network Consultant
- IP Network Solution Designer
- Network Architect
- Telecommunications Technical Officer

## What are the entry requirements

### International students:

- Have completed Australian Year 12 or equivalent
- IELTS 6.0 English language equivalence if a non-native English speaker
- Be at least 18 years of age
- Have technological literacy (ability to use and access a computer with word processing applications)

## Course Overview



Qualification  
**Advanced Diploma**



CRICOS code  
**105626D**



Study mode  
**Blended learning**



Duration  
**104 Weeks**



Units  
**16 Units of Competency**

# Course Units

Unit code	Unit name	What you'll learn
ICTTEN622	Produce ICT network architecture designs	Be equipped to compile and evaluate business specifications from a client for their network architecture design. Then create physical network diagrams, forecast traffic demands, determine costs and finalise network architecture design.
ICTNWK612	Plan and manage troubleshooting advanced integrated IP networks	Learn how to plan, manage and implement troubleshooting strategies for complex enterprise networks. In this unit, you'll build your skills in monitoring IP networks for their performance and creating maintenance plans for monitoring routing protocols and configurations. You'll also develop your ability to implement tests of advanced network solutions and use industry-standard network testing tools.
ICTNWK540	Design, build and test network servers	Discover how to design, install and test servers in complex network environments. Build your ability to document network configuration requirements, determine user disruptions and back up local data. Also grow your understanding of installing network operating systems, implementing security designs and testing servers.
ICTTEN615	Manage network traffic	Build your understanding of how to effectively manage traffic flow in networks. In this unit, you'll learn how to evaluate network capacity and traffic congestion. Then develop and apply develop traffic control strategies that can solve both short-term and long-term problems.
ICTNPL413	Evaluate networking regulations and legislation for the telecommunications industry	Over the course of this unit, you'll grow your understanding of important networking legislation relevant to carriers and service providers in Australia. You'll explore the impact of Australian federal government regulation and deregulation on the networking industry. You'll also build your knowledge of networking requirements set by the Australian Competition and Consumer Commission (ACCC) and Universal Services Obligation (USO).
ICTSAS530	Use network tools	Learn how to select, operate and test a range of tools that enable organisations to maintain high security networks. Build your ability to write and run command-line text. Also develop your skills in testing network security using hardware and software tools.
ICTPMG613	Manage ICT project planning	Gain important IT project management skills. In this unit, you'll explore how you can develop project management plans and subplans for IT-based initiatives. You'll also learn how to create realistic project schedules and budgets that can set up an IT project for success.
ICTNWK543	Install, operate and troubleshoot medium enterprise switches	Build your understanding of enterprise switches; high-performance, managed networking devices used by large organisations. Grow your understanding of a range of industry standard installation requirements of switches, such as spanning tree protocol (STP), switch command line interface (CLI) commands, secure shell (SSH) and debug commands. Also build your skills in installing enterprise switches and testing network elements.
ICTNWK542	Install, operate and troubleshoot medium enterprise routers	Discover how to use enterprise routers; high-performance network edge devices that connect private networks to the internet. In this unit, you'll build your ability to install enterprise routers and configure dynamic classless routing protocols, including using variable length subnet mapping (VLSM) approaches. You'll also learn how to troubleshoot device configuration and network connectivity.

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Unit code	Unit name	What you'll learn
ICTCYS604	Implement best practices for identity management	Jump into the world of identity management. In this unit, you'll discover best practices for ensuring only authorised identities, such as individuals, devices and applications, securely access the correct resources at the right time. You'll learn how to analyse an organisation's identity management environment. Then take action to minimise threats, risks and cybercrime attacks.
BSBCRT611	Apply critical thinking for complex problem solving	Build your ability to develop solutions to complex IT issues. In this unit, you'll discover how you can use problem solving frameworks to develop structured and innovative IT solutions. You'll also gain hands-on skills in facilitating ideation sessions, preparing solution briefs and developing feedback registers.
BSBXC402	Promote workplace cyber security awareness and best practices	In this unit, you'll explore the latest cyber security threats and trends impacting organisations. You'll learn how to assess employees' understanding of cyber security practices. You'll also discover how to improve your coworkers' understanding of cyber security threats and practical ways they can be minimised or avoided.
BSBTWK502	Manage team effectiveness	Develop key leadership skills you need to effectively manage IT teams. Discover how to prepare team performance plans, promote team member accountability and resolve work performance problems. Also learn how to take corrective action address concerns and problems raised by internal and external stakeholders.
ICTSAD609	Plan and monitor business analysis activities in an ICT environment	Build your ability to undertake business analysis activities for medium and large organisations. Discover how to determine business analysis deliverables, tasks and estimates. Then document a scope of work, establish a requirements repository, perform business analysis and recommend preventative or corrective actions.
ICTICT618	Manage IP, ethics and privacy in ICT environments	Learn how to manage issues relating to Intellectual Property (IP), copyright and privacy in IT environments, including through the use of IT security systems. Build your understanding of important laws that IT managers need to know. Also develop your ability to enhance organisational policies relating IP, ethical conduct and privacy.
ICTICT608	Interact with clients on a business level	By studying this unit, you'll gain valuable skills in interacting with IT clients at a management level. You'll build your ability to review a client's business domain, research client service needs and propose opportunities for new business. You'll also discover how to present clear, concise and engaging client proposals. Then negotiate terms with the client, monitor progress in achieving new client initiatives and use strategies to maintain positive client relationships.