

Student Program Information 2021



Diploma of Information Technology Networking (ICT50418)

The recommended Diploma study plan has the following key features:

- > The recommended study plan will take a new student 24 months to complete.
- > There is a focus on the latest network technologies including Microsoft, Linux and Cisco
- > There is a focus on Industry certifications and students will have the opportunity to gain a number of Industry certificates as well as the TAFE Diploma.
- > Student will be able to obtain a number of Skill sets without having to complete the whole Diploma.

SUBSIDISED TRAINING

- > You may be eligible for government subsidised training based on your employment and training level.
- >
- > For full details, including visa eligibility, please see the [Skills SA website](#)
- >
- > While this course may attract government subsidies, there may also be upfront fees, depending on any required underpinning knowledge and skills.
- > This course is eligible for a VET Student Loan.
- >
- > **ALL STUDENTS, IRRESPECTIVE OF PREVIOUS STUDIES, WILL BE REQUIRED TO DO THE CORE SKILLS PROFILE FOR ADULTS (CSPA) BEFORE THEY ARE ELIGIBLE FOR GOVERNMENT SUBSIDY.**

IT Studies Subjects

This qualification is from the National Training Package [ICT18](#) that is developed by the Commonwealth Government. TAFE SA IT Studies clusters related competencies in the Training Package into subjects. The information below refers to the TAFE SA IT Studies subjects and outlines the competencies that makes up those subjects. Delivery and assessment for the subjects will be done holistically so you will be awarded the same result for all competencies taught in that subject. Your final official results will refer to the competencies listed below.

Course Admission Requirements

Satisfactory demonstration of reading, writing and numeracy skills by undertaking the Core Skills Profile for Adults (CSPA)

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Assumed Skills and Knowledge

This is not an entry level qualification. There are assumed skills and knowledge that are required to commence at this Certificate IV level. These could have been gained in several ways:

- > Completed the Certificate IV ICT40118 in Information Technology (Networking); or
- > Other study equivalent to it; or
- > Have work experience and knowledge equivalent to it.

Incidentals

This course also has an incidental cost of \$400.00 for 1 TB SSD portable hard drive, webcam and headset with microphone, for use in this qualification.

Hardware & Software

All software required to complete this course will be available for students at no additional cost.

It is important to note that for students studying this course online (externally) it will be assumed that you have the hardware required to run the required resources. It is recommended that you have the following as a minimum;

- Intel i5 CPU (or equivalent AMD)
- 16GB of RAM
- 1 TB SSD
- Internet Access

Internet

This qualification requires students to use virtual machines for learning activities and assessments. Students will be required to obtain these from either their local campus or from the Internet. Virtual machine file sizes can vary but are generally above 20GB in size. Downloading these virtual machines from the Internet may vary depending on your Internet connection speed.

New Training Package Transition

In July 2020 a new version (6.1) of the ICT training package was released. ASQA has approved an extended transition period for the ICT Release 5.0 superseded training products (ICT50418). The extended training, assessment and certification issuance period for this qualification ends on 31st December 2021.

Students studying beyond this date will be required to transition into the new ICT50220 Diploma of Information Technology. IT Studies have developed a transition plan to assist you in planning your studies and in discussion with you will developed a study plan that will assist you in transitioning into the new qualification without being disadvantaged.

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Assumed Skills and Knowledge

This is not an entry level qualification. There are assumed skills and knowledge that are required to commence at this Diploma level. These could have been gained in several ways:

- > Completed the Certificate IV in Information Technology Networking (ICT40118); or
- > Other study equivalent to it (refer to the table below); or
- > Have work experience and knowledge equivalent to it (refer to the table below).

If you do not have these underpinning skills and knowledge you will need to use a study plan that contains subjects listed or do the qualification listed above. If you need to complete all of these underpinning skills you would be adding another year of study.

These are PARTIALLY eligible for subsidy under Subsidised Training *

Subject	Description
3PRB	This subject introduces the programming constructs of sequence, selection and iteration, along with an introduction to modularisation, parameter passing, array handling and file processing. Small command-line programs and/or games are developed using Python scripting language
4CNS	This unit describes the skills and knowledge required to undertake scripted programming tasks for networking related activities. It applies to individuals with competent technical skills employed in network or systems administration roles.
4PICTS	This unit describes the skills and knowledge required to apply the principles of service management when working in an information and communications technology (ICT) service desk environment. It applies to individuals who work in ICT service roles and are responsible for providing ICT service desk support.
4WOSF	This unit describes the skills and knowledge required to install, configure and support a desktop or workstation operating system such as Microsoft Windows 10 and 8.1 in a networked environment. It applies to individuals with competent technical skills employed in information and communications technology (ICT) support roles.
4CIRS6	This subject prepares students for jobs as network technicians and helps them develop additional skills required for computer technicians and help desk technicians. It provides a basic overview of routing and switching, IP addressing and security. It also familiarises students with the OSI layer model as well as the TCP/IP protocol stack. Students learn about the soft skills required for help desk and customer service positions and the final chapter helps them prepare for the CCENT certification exam. Network monitoring and basic troubleshooting skills are taught in context.
4AWS	This subject provides students with the knowledge and skills to configure and troubleshoot Windows Server 2016 Network Infrastructures. It will cover networking technologies most commonly used with Windows Server 2016 such as Network Policy server and Network Access Protection and configuring secure network access with technologies such as VPN, secure web and firewalls. It also covers routing and remote access as well as other relevant technologies.
4CMDB	This unit describes the skills and knowledge required to install a Microsoft SQL Server and MySQL Server database, manage data, data access and data security, and improve database performance. It applies to individuals responsible for the maintenance and coordination of database operations. They usually work in an organisation, providing daily services as database administrators, database developers, database coordinators, or application developers.

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5IUOS	This subject will require students learn to be effective users of Linux systems, acquiring skills and understanding of command line functions, file systems, users and groups, bash shell, process management, text editors, network applications, searching and organizing data, and graphical applications. Students learn to be effective administrators of Linux systems, mastering tasks such as hardware and device configuration, file system management, user administration, network configurations, kernel services, attaching new Linux systems to a corporate network, configuring the new systems for end-users, and troubleshooting.
4ACSR	This subject requires the student to determine the cyber security requirements of an organisation. Student will use a range of resources and tools to identify and protect the valuable assets of the organisation. Students will participate in the identification and control cyber security threats or risks.
4MOS	In this subject, students will learn to be effective users of Microsoft Word, Excel and PowerPoint, acquiring skills and understanding of functions and features of these 3-office application. Students will learn to be effective users of Microsoft Word, Excel and PowerPoint, mastering tasks such as formatting, embedding and many other functions required in the day to day use of office applications. This subject will give the student the knowledge and skills to attain the MOS (Microsoft Office Specialist) certification.
4BSWN	This subject teaches students the skills and knowledge required to build and arrange connectivity to a single zone wireless local area network (WLAN). It applies to individuals with competent information and communications technology (ICT) skills using one wireless access point or wireless router in a small-to-medium enterprise.
4ICW	This subject describes the skills and knowledge required to determine client business system requirements and verify the accuracy of the information gathered. It provides in-depth training on implementing, configuring, managing and troubleshooting Active Directory Domain Services (AD DS) in Windows Server 2016 and Windows Server 2016 environments. It covers core AD DS concepts and functionality as well as implementing Group Policies, performing backup and restore and monitoring and troubleshooting Active Directory related issues. After completing these subject students will be able to configure AD DS in their Windows Server 2016 and Windows server 2016 environments.

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Required Competencies and Prerequisites

Diploma of Information Technology Networking

National Code: ICT50418 TAFE SA Code:

Subject	National Code	Unit Name	Unit Type	Assumed Knowledge and Skills
5CRS6	ICTTEN422	Configure and troubleshoot advanced network switching	LE	4CIRS7
	ICTNWK507	Install, operate and troubleshoot medium enterprise routers	LE	
5LXN	ICTNWK505	Design, build and test a network server	LE	5IUOS
5ISV**	ICTSUS501	Implement server virtualisation for a sustainable ICT system	C	4ICW, 4AWS
	ICTNWK525	Configure an enterprise virtual computing environment	LE	
5ITSD	ICTICT517	Match ICT needs with the strategic direction of the enterprise	C	4ICW, 4AWS
6DIS	ICTNWK509	Design and implement a security perimeter for ICT networks	LE	4CIRS6, 5CRS, 5LXN
5CSN6	ICTTEN611	Produce an ICT network architecture design	C	5CRS7
	ICTNWK508	Install, operate and troubleshoot medium enterprise switch	LE	
5PIES	ICTNWK536	Plan, implement and test enterprise communication solutions	LE	4ICW, 4AWS
4CEP*	ICTICT418	Contribute to copyright, ethics and privacy in an ICT environment	C	
5CNW	ICTNWK529	Install and manage complex ICT networks	C	4ICW, 4AWS, 5IUOS
6EWS	ICTNWK607	Design and implement wireless network security	E	4AWS, 5CRS6
5PTS	ICTTEN516	Produce technical solutions from business specifications	LE	4ICW, 4AWS, 5ISV
5DRCP**	ICTSAS505	Review and update disaster recovery and contingency plans	LE	
5DIRP**	ICTSAS501	Develop, implement and evaluate an incident response plan	LE	

*Indicates units will be replaced when transitioning from ICT50418 to ICT50220

** Indicates units that can be used as additional electives when transitioning from ICT50418 to ICT50220. Please note that due to the rules of the ICT20 Training package these units should be avoided if you are studying on a part-time basis.

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Subject Descriptions

Subject	Description
4CEP*	This subject involves maintaining professional and ethical conduct as well as to ensure that personal information of stakeholders is handled in a confidential and professional manner when dealing with stakeholders in an information technology (ICT) environment.
5ITSD	This subject will focus the skills and knowledge required to ensure information and communications technology (ICT) services meet current and future internal operational enterprise requirements. It will teach the skills and knowledge for those whose responsibilities may include maintaining and supporting critical infrastructure for objectives in small-to-medium sized organisations.
5PIES	This subject will introduce skills and knowledge required to ensure that IT services meet current and future internal operating enterprise requirements. Students will learn to install and operate enterprise messaging and content management and collaboration tools, namely Microsoft Exchange, SharePoint and Office 365. A focus on strategic planning in a business environment is an important aspect that more than ever before, addresses how IT can help create a business market advantage.
6DIS	Students study the Fortinet NSE4 curriculum. Students explore firewall policies, basic VPNs, antivirus, web filtering, application control, user authentication, and more. These administrative fundamentals provide a solid understanding of how to integrate basic network security.
6EWS	This subject covers the Aruba Mobility Academy program, which is a lab-intensive course designed to provide students a foundation in WLAN technologies, the basics of Radio Frequency (RF) technologies, 802.11 wireless standards (802.11ac, 802.11n), WLAN architectures: Mobility Controllers, 802.1X and RADIUS authentication, Spectrum analysis, WLAN design and planning. This subject provides the technical understanding and hands-on experience of configuring a single-controller and single Access Point (AP) Aruba WLAN and the ability to build a complete, secure single-controller network with multiple SSIDs. Successful conclusion of the course prepares the students for the Aruba Certified Mobility Associate (ACMA) exam.
5DCRP**	This subject focuses on the skills and knowledge required to analyse the impact of the system on the organisation and carry out risk analysis, disaster recovery and contingency planning.
5DIRP**	This subject focuses on the skills and knowledge required to develop and implement an incident response plan. The results of the incident response plan must be evaluated if they affect the mission of the organisation.
5PTS	This subject focuses on developing strategies where on premises datacentres can be migrated into the cloud. It will provide skill and knowledge that will form the basis of passing the Microsoft AZ103 certification exam.
5LXN	This subject will require students learn to deploy and administer the core networking services using CentOS Linux which includes the Apache Web Server, the Samba File Server, BIND Domain Name Service, the Sendmail Mail Transport Agent, the Network File System (NFS).
5CRS6	This course describes the architecture, components, and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with RIPv1, RIPng, single-area and multi-area OSPF, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks. This course plus 4CIN will help students prepare for the CCENT certification.

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5CSN6	This course describes the architecture, components, and operations of routers and switches in larger and more complex networks. Students learn how to configure routers and switches for advanced functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with OSPF, EIGRP, and STP in both IPv4 and IPv6 networks. Students will also develop the knowledge and skills needed to implement a WLAN in a small-to-medium network.
5CCN6	This course discusses the WAN technologies and network services required by converged applications in a complex network. The course enables students to understand the selection criteria of network devices and WAN technologies to meet network requirements. Students learn how to configure and troubleshoot network devices and resolve common issues with data link protocols. Students will also develop the knowledge and skills needed to implement virtual private network (VPN) operations in a complex network.
5ISV**	This subject will prove your ability to deploy and manage a Microsoft Server Virtualization infrastructure in an enterprise environment. You will also find out how to configure, manage, and maintain Windows Server 2016 Hyper-V and System Center 2016 Virtual Machine Manager, including networking and storage services. And you will learn how to configure key Microsoft Server virtualization features, such as Generation 2 Virtual Machines, Replication Extension, Online Export, Cross-Version Live Migration, Online VHDX Resizing, and Live Migration Performance tuning, in addition to Dynamic Virtual Switch Load Balancing and virtual Receive Side Scaling (vRSS).
5CNW	This subject will introduce students to the skills and knowledge required to install and manage enterprise-wide information and communications technology networks, including Voice over IP (VoIP).

***Indicates units will be replaced when transitioning from ICT50418 to ICT50220**

**** Indicates units that can be used as additional electives when transitioning from ICT50418 to ICT50220. Please note that due to the rules of the ICT20 Training package these units should be avoided if you are studying on a part -time basis.**

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Choosing a Study Plan

TAFE SA Study Plan for Full-Time Students with the assumed skills and Knowledge (18 Month Diploma) (N5XS)

The following table shows the recommended study plan for the Diploma of Information Technology Networking. Each stage is one Semester (or 6 months) in length for Full-Time students*.

These are **PARTIALLY** eligible for Subsidised Training *

Stage 1		Stage 2		Stage 3	
Term 1	Term 2	Term 1	Term 2	Term 21	Term 2
<i>Subjects required to achieve the Diploma qualification</i>					
5LXN (2) 5ITSD (2)		5CNW (2) 6DIS (2)		5ISV** (2) 6EWS (2) 5PTS (2)	
5CRS6 (4) Practical (6)	5PIES (4) Practical (6)	5CSN6 (4) Practical (6)	5CCN6 (4) Practical (6)	5DRCP** (2) Practical (6)	5DIRP** (2) 4CEP* (2) Practical (4)
(14)	(14)	(14)	(14)	(14)	(14)

Please Note: This program structure is subject to change.

Legend:

- * The length of time for Part-Time students will depend on the number of subjects studied in each semester.
- ^ These subjects are delivered in an external/online mode. Some other subjects maybe available in an external/online or blended delivery mode please check this with your lecturer at time of registration.
- () The number in brackets after the subject is the indicative number of contact hours per week that you expect to study at a TAFE campus for that subject.

Practical additional sessions to complete subject activities, assignments and tests.

NOTE: This study plan is for a full-time student with class-attendance. This is usually between 12-18 hours a week of attendance. Your local campus may offer the subject in a variety of formats including online, self-paced etc.

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TAFE SA Study Plan for Full-Time Students who do not have the assumed skills and Knowledge (24 Month Diploma) N5AS

The following table shows the recommended study plan for the Diploma of Information Technology Networking. Each stage is one Semester (or 6 months) in length for Full-Time students*.

These are **PARTIALLY** eligible for Subsidised Training *

Stage 1		Stage 2		Stage 3		Stage 4	
Term 1	Term 2	Term 1	Term 2	Term 1	Term 2	Term 1	Term 2
<i>Assumed Skills Required</i>							
4CIRS7 (4)		4CMDB (2)					
4MOS (2) 4WOSF (4) 4PICTS (2)	4ACSR (4) 3PRB (2)	4ICW (4) 5IUOS (4) 4BSWN (2)	4SCCM (4) 4AWS (4) 4CNS (4)				
<i>Subjects required to achieve the Diploma qualification</i>							
				5ISV** (2) 5ITSD (2)		5CNW (2) 6EWS (2) 5PTS (2) 6DIS (2)	
Practical (4)	Practical (4)	5CRS6 (4) Practical (2)	Practical (4)	(5CSN6 (4) 5LXN (4) Practical (4)	5PIES (4) 5CCN6 (4) 4CEP*^ (2) Practical (4)	5DRCP** (2) Practical (6)	5DIRP** (2) Practical (6)
(16)	(16)	(18)	(18)	(16)	(16)	(16)	(16)

Please Note: This program structure is subject to change.

Legend:

- * The length of time for Part-Time students will depend on the number of subjects studied in each semester.
- ^ These subjects are delivered in an external/online mode. Some other subjects maybe available in an external/online or blended delivery mode please check this with your lecturer at time of registration.
- () The number in brackets after the subject is the indicative number of contact hours per week that you expect to study at a TAFE campus for that subject.

Practical additional sessions to complete subject activities, assignments and tests.

NOTE: This study plan is for a full-time student with class-attendance. This is usually between 12-18 hours a week of attendance. Your local campus may offer the subject in a variety of formats including online, self-paced etc.

[TAFE SA Refund Policy Details](#)

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