

Program Information

Information

ICT40120 Certificate IV in Information Technology (Systems Administration Support)

This qualification comes from a training package created by the Commonwealth Government for Information and Communications Technology (ICT) defining core and elective competency units. We've chosen specific elective units from the training package, based on input from industry experts, to address South Australia's workforce requirements.

This ICT40120 National Training Package qualification reflects the role of individuals who are job ready and competent in a wide range of information and communications technology (ICT) roles and apply a broad range of skills in varied work contexts, using problem solving skills and effective communication with others.

The skills required for these roles may include, but are not restricted to:

- > Implementing maintenance procedures
- > Support to help troubleshoot system applications
- > Resolve ICT problems
- > Project support
- > Supporting information systems and software including Microsoft windows desktop operating systems, Microsoft windows server operating systems
- > Data analytics (power bi and excel)

Employment Opportunities

- > IT Technician
- > Client Support Officer (ICT)
- > Help Desk Assistant (ICT)
- > Network Operations Technician
- > Software Support Technician
- > Technical Officer (ICT)
- > System Administrator (ICT)
- > Help Desk Team Leader (ICT)

The recommended full-time study plan, see below, will require 12 months of study to complete this qualification.

Assumed Skills and Knowledge

There are no formal entry requirements for this course however, participants are best equipped to achieve the course outcomes if they have the following digital capabilities:

- > Navigate and manage files and folders in a Windows environment, or similar.
- > Connect to a network through Wi-Fi.
- > Use a word processor such as MS Word to produce well-structured documents.
- > Able to install and configure new software on a Windows computer
- > Use video chat tools or video conferencing tools such as Google Meet, FaceTime, Zoom, Teams etc.
- > Recognise the purpose of basic components of computer hardware such as RAM, hard drive, network card, external drive.
- > Problem solve computer issues that may arise in relation to the above
- > Use a web Browser and the internet to research a topic.
- > Prompt an AI tool, such as ChatGPT, Copilot, Gemini etc

Program Information

Information



If you need to develop yourself in many of these capabilities, we suggest you consider enrolling in our Certificate III in Information Technology.

Information on the contents of the Certificate III can be found here:

[Certificate III in Information Technology Program Information Document.](#)

Incidental Costs

You will be required to provide your own access to the following hardware. This hardware costs approximately \$300.00.

- > 1TB SSD portable drive,
- > Webcam and
- > Headset with Microphone.

Software

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

Hardware

Access to computer hardware is provided at certain TAFE SA campuses.

It is important to note that for students studying this course and not able to attend a suitable campus it will be assumed that you have the necessary computer hardware to run the required resources. You will need to have a Windows machine with the following as a minimum.

- > Intel i5 CPU (or equivalent AMD), (Intel i7, recommended)
- > 16GB of RAM, (32GB, recommended)
- > 1Tb SSD

Note: Apple MAC notebooks are not compatible with some of the software required for this course and cannot be supported.

Internet

To study away from a campus you will be required to have internet access.

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 download from the Internet. Virtual machine file sizes can vary but are generally above 20GB in size. The time to download these virtual machines from the Internet may vary depending on your Internet connection speed.

Program Information

Information

Required Competencies

Certificate IV in Information Technology (Systems Administration Support)

National Code: ICT40120 TAFE SA Code: TP01249

This table shows the units of competency that you must have on your academic record to achieve this qualification. The National Training Package requires 20 units. The units are listed in the sequence that you should complete them. This is particularly important for part-time students. Standard study plans are provided below. The table also provides details of any assumed knowledge and skills for each subject. You must have these skills before attempting these subjects.

Units of Competency (listed in delivery sequence)			
Unit Code	Unit Title	Training Package Core/Specialist Elective/Elective	Assumed knowledge & skills
ICTICT443	Work collaboratively in the ICT industry	Core	None
ICTSAS443	Support operating system users and troubleshoot applications	Specialist Elective	None
ICTICT426	Identify and evaluate emerging technologies and practices	Core	None
ICTCLD401	Configure cloud services	Elective	None
BSBCRT404	Apply advanced critical thinking to work processes	Core	None
ICTSAS432	Identify and resolve client ICT problems	Core	None
ICTPRG302	Apply introductory programming techniques	Core	None
ICTSAS526	Review and update disaster recovery and contingency plans	Elective	None
ICTICT451	Comply with IP, ethics and privacy policies in ICT environments	Core	None
BSBXCS404	Contribute to cyber security risk management	Core	None
BSBXBD403	Analyse big data	Elective	ICTPRG302
ICTNWK424	Install and operate small enterprise branch networks	Elective	None
ICTSAS442	Provide first-level remote help desk support	Specialist Elective	None
ICTICT441	Provide one-to-one instruction	Elective	None
ICTICT445	Connect and configure devices and hardware components	Specialist Elective	None
ICTSAS436	Evaluate ICT system status	Specialist Elective	None
ICTNWK422	Install and manage servers	Elective	ICTNWK424
ICTSAS438	Implement maintenance procedures	Specialist Elective	ICTNWK422
ICTSAS441	Support ICT system software	Specialist Elective	ICTNWK422
VU23221	Evaluate and test an incident response plan for an enterprise	Elective	ICTNWK422

Program Information

Information

Study Plan for Full-Time Students (12 months)

The following table shows the recommended study plan for the Certificate IV in Information Technology (System Administration Support). Each stage is one semester (or 6 months) in length. Codes in brackets are the IT Subject names which are described in the Subject table below.

Stage 1		Stage 2	
Term 1	Term 2	Term 1	Term 2
ICTICT443 ICT443 (2) #	ICTSAS432 SAS432 (2)	ICTICT451 ICT451 (2) #	ICTSAS442 SAS442 (2)
ICTSAS443 SAS443WOS (2)	ICTCLD401 CLD401ACF (4)	BSBXCS404 XCS404 (2) #	ICTICT441 ICT441 (2)
BSBCRT404 CRT404 (2) #	ICTPRG302 PRG302PYB (2)	BSBXBD403 XBD403PBI (2)	ICTICT445 ICTSAS436 SAS4C2 (2)
ICTICT426 ICT426 (2) #	ICTSAS526 SAS526 (2)	ICTNWK422 NWK422ICW (4)	ICTSAS438 ICTSAS441 SAS4C2MSS (4)
ICTNWK424 NWK4C3CIN (4)		VU23221 CVU221IRP (2)	
Practical (8)	Practical (6)	Practical (8)	Practical (8)
20 hrs / week	20 hrs / week	20 hrs / week	20 hrs / week

Please Note: This program structure is subject to change.

Legend:

- # Competencies delivered online are marked with an asterisk
- () The number in brackets after the subject is the number of hours per week that you would expect to attend class for that subject as a campus or virtual student.

IT Practical sessions provide support to complete subject activities and assessments.

NOTE: The study plan is for a full-time student with class-attendance. This is usually 20 hours a week of attendance. It is expected that an additional 12-15 hours would be required outside of class time to complete activities and assessments.

Program Information

Information

Study Plan for Part-Time Students (24 months)

The following table shows the recommended study plan for studying the Certificate IV in Information Technology (System Administration Support) as part-time (half-time). If a half-time plan does not meet your needs, you can study more or less subjects per term/semester, but you must follow the recommended sequence in the Required Competencies table above. Each stage is one semester (or 6 months) in length.

Stage 1	
Term 1	Term 2
ICTICT443 ICT443 (2) #	ICTICT426 ICT426 (2) #
ICTSAS443 SAS443WOS (2)	ICTCLD401 CLD401ACF (4)
Practical (6)	Practical (4)
10 hrs / week	10 hrs / week

Stage 2	
Term 1	Term 2
ICTSAS432 SAS432 (2)	ICTPRG302 PRG302PYB (2)
BSBCRT404 CRT404 (2) #	ICTSAS526 SAS526 (2)
ICTNWK424 NWK4C3CIN (4)	
Practical (2)	Practical (2)
10 hrs / week	10 hrs / week

Stage 3	
Term 1	Term 2
ICTICT451 ICT451 (2) #	ICTSAS442 SAS442 (2)
BSBXCS404 XCS404 (2) #	ICTICT441 ICT441 (2)
BSBXBD403 XBD403PBI (2)	ICTICT445 ICTSAS436 SAS4C2 (2)
Practical (4)	Practical (4)
10 hrs / week	10 hrs / week

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Stage 4	
Term 1	Term 2
ICTNWK422 NWK422ICW (4)	ICTSAS438 ICTSAS441 SAS4C2MSS (4)
VU23221 CVU221IRP (2)	
Practical (4)	Practical (4)
10 hrs / week	10 hrs / week

Please Note: This program structure is subject to change.

Legend:

- # Competencies delivered online are marked with an asterisk
- () The number in brackets after the subject is the number of hours per week that you would expect to attend class for that subject as a campus or virtual student.

IT Practical sessions provide support to complete subject activities and assessments.

NOTE: The study plan is for a part-time student studying a half-time load. This is approximately 10 hours a week of class time. It is expected that an additional 6-10 hours would be required outside of class time to complete activities and assessments

Program Information

Information

IT Studies Subjects

TAFE SA IT Studies uses subject codes to indicate the context that has been chosen for the unit, guided by industry needs in South Australia. For example, **SAS443WOS** indicates that the content for delivery of unit SAS443WOS will include coverage of **Windows Operating System**

The table below provided information on the context for each unit and provides the subject code that is used. If a subject contains more than one unit delivery and assessment will be done holistically so you will be awarded the same result for all units assessed in that subject that you have enrolled in. Your final official results will refer to the units.

Subject Descriptions

Unit Code	IT Studies subject code	Description
ICTICT443	ICT443	<p>This unit describes the skills required to work collaboratively in virtual Information and Communications (ICT) team environments to achieve organisational objectives.</p> <p>Individuals must develop protocols, review compliance of protocols, and seek and respond to feedback.</p> <p>It includes contributing to performance and capability within teams, participating in team activities, exchanging knowledge and skills and providing support to team members.</p> <p>It applies to all individuals who work in teams that utilise multiple technologies to complete a collective task.</p>
ICTSAS443	SAS443WOS	<p>The unit focuses on developing the capability to assist users at the frontline—responding to requests, managing incidents, and delivering practical solutions to technical problems. Individuals undertaking this unit are expected to apply specialised technical knowledge in areas such as application troubleshooting, system configuration, user support procedures, and device maintenance. They will draw on logical reasoning and problem-solving strategies to analyse faults, implement fixes, and ensure that ICT systems function efficiently and reliably.</p> <p>As part of this unit, students will utilise a virtualisation platform—VMware Workstation Pro—to complete the required assessment tasks. Pre-built virtual machines (VMs) are provided within the assessment materials, and students will be responsible for downloading and running these VMs within the virtualised environment. The primary focus of these activities is hands-on troubleshooting, allowing students to simulate real-world support scenarios, diagnose issues, and apply corrective actions in a safe and controlled environment.</p> <p>Overall, the skills gained enable support personnel to confidently assist end users, enhance system usability, and contribute to a stable and productive computing environment.</p>

Program Information

Information

Unit Code	IT Studies subject code	Description
ICTICT426	ICT426	<p>This unit introduces students to the rapidly evolving landscape of emerging technologies and their impact on modern organisations. The unit focuses on developing the ability to identify & evaluate new and evolving ICT technologies and practices, analyse industry trends, and evaluate how these innovations can improve business operations. Students will engage in researching emerging technologies, assessing their relevance to different industry contexts, and communicating findings clearly to stakeholders who may need guidance on adopting new solutions.</p> <p>Learners apply critical thinking to judge whether a technology should be adopted, create recommendations, and justify decisions based on evidence and organisational needs.</p>
ICTCLD401	CLD401ACF	<p>This unit describes the skills and knowledge required to configure core cloud services including compute, storage, databases and autoscaling according to business needs and workload. It is a cloud fundamentals course using the Amazon Web Services (AWS).</p> <p>The unit applies to cloud computing architects, developers and cloud engineers utilising cloud services and those engaged in deploying cloud computing solutions for a business.</p>
ICTSAS432	SAS432	<p>This unit focuses on developing the skills and knowledge needed to identify, document, prioritise, and solve ICT support issues for clients. You will also learn how to recognise when a problem needs to be escalated to someone with higher-level expertise.</p> <p>It prepares you to confidently support end users in a workplace environment by using an IT Service Management system and following organisational procedures.</p>
BSBCRT404	CRT404	<p>This unit describes the skills and knowledge required to use advanced-level critical thinking skills in a professional context. This includes using methods of analysis, synthesis and evaluation. You will use advanced critical thinking to analyse existing procedures and improve them according to the legal requirements of a given scenario.</p> <p>This unit applies to individuals who evaluate processes, products and services that may be proposed or already existing. This unit applies to individuals who are typically responsible for developing work processes, products and services that may be proposed or already existing.</p>
ICTPRG302	PRG302PYB	<p>This unit describes the skills and knowledge required to create simple applications in Python through introductory programming techniques.</p> <p>It applies to those who have responsibility for creating applications and includes applying language syntax, control structures to create code, using programming standards, testing and debugging.</p>
ICTSAS526	SAS526	<p>This unit describes 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.</p> <p>It applies to individuals who apply a wide range of higher-level technical skills and systematic problem-solving approaches in Information and Communications Technology (ICT) related areas.</p>

Program Information

Information

Unit Code	IT Studies subject code	Description
ICTNWK424	NWK4C3CIN	<p>This unit describes the skills and knowledge required to utilise networking fundamentals, including wide area network (WAN) technologies, basic security, route and switch operations as well as to configure simple networks. It is an Introduction to Networking course using Cisco resources.</p> <p>It applies to individuals involved in network support positions with the Information Communications Technologies (ICT) skills required to use tools, equipment, software and protocols to install, operate, a small enterprise branch network.</p> <p>Students identify network protocols and models, then design a network solution. They manage the implementation tasks by securely installing and configuring routers and switches. Finally, they test, verify, and finalise the network to ensure it operates correctly.</p>
ICTICT451	ICT451	<p>This unit describes the skills and knowledge required to comply with the protection and lawful use of intellectual property (IP) and to implement relevant organisational ethics and privacy policies.</p> <p>It applies to individuals who are required to use IP owned by other persons and organisations, and to support organisations and stakeholders with the compliance of organisational ethics, and privacy policies.</p>
BSBXCS404	XCS404	<p>This unit describes the skills and knowledge required to contribute to cyber security risk management, which includes assisting in developing and managing associated risk management strategies.</p> <p>It applies to those working in a broad range of industries and job roles who work alongside technical experts to develop cyber security risk-management strategies.</p>
BSBXBD403	XBD403PBI	<p>This unit describes the skills and knowledge required to analyse transactional and non-transactional big data using Power BI to provide insights that are used in an organisation. It involves identifying trends and relationships within big data and establishing data acceptability. It also involves forming recommendations based on the analysis and reporting on analysis findings.</p> <p>It applies to those who work in a broad range of industries and job roles using big data analysis techniques in their day-to-day work.</p>
ICTSAS442	SAS442	<p>This unit covers the skills and knowledge needed to remotely diagnose, troubleshoot, and resolve first-level ICT support issues and change requests across different types of ICT systems. You will learn how to interact with clients through IT Service Management tools, gather information, apply standard support procedures, and follow organisational guidelines when handling requests.</p> <p>You will use your judgement, technical knowledge, and problem-solving skills to provide effective remote assistance to end users.</p>
ICTICT441	ICT441	<p>This unit focuses on developing the ability to deliver effective one to one technical instruction tailored to an individual client's needs. The unit covers identifying a client's learning requirements, selecting appropriate instructional methods, planning and preparing learning resources, and delivering personalised training that supports a client's understanding and use of ICT tools or systems.</p> <p>In this unit students demonstrate their ability to deliver clear, user focused instruction, respond to client needs, and recommend any further training required. They also learn to write and distribute feedback tools, analyse client responses, and refine future instruction practices based on evaluation</p>

Program Information

Information

Unit Code	IT Studies subject code	Description
ICTICT445	SAS4C2	<p>This unit describes the skills and knowledge required to install and configure devices and hardware components including mobile devices.</p> <p>It applies to individuals who use a range of technical skills to configure and connect a device to other devices and maintain system components in a home or workplace environment.</p>
ICTSAS436	SAS4C2	<p>This unit describes skills and knowledge required to evaluate the status of a running system, covering both hardware and software aspects to determine system performance and reliability while Information and Communications Technology (ICT) system is still in an operational state.</p> <p>It applies to individuals who apply specialised and technical knowledge and a systematic approach to assessing and evaluating ICT systems prior to problem resolution or upgrades.</p>
ICTNWK422	NWK422ICW	<p>This unit equips students with the foundational skills required to install, configure, and manage server systems within a networked environment. The unit covers essential tasks including preparing for server installation, selecting appropriate operating system features, configuring network services, and ensuring data is safely backed up before deployment. Students learn how to set up disk partitions, install server operating systems and applications, configure directory services, manage user access, and apply security measures to maintain reliable server performance.</p> <p>Students learn to perform practical server installation, configuration and testing via Virtual Machines running the Microsoft Windows Server operating system, respond to feedback, validate system changes, and document configuration processes in line with workplace standards.</p>
ICTSAS438	SAS4C2MSS	<p>This unit describes the skills and knowledge required to improve existing organisational maintenance procedures to keep equipment and software operating effectively. The individual is required to improve and use the existing Maintenance procedures to Support ICT Systems</p> <p>Students develop, update, and implement maintenance procedures and Service Level Agreements (SLAs) in line with organisational requirements. They apply and evaluate these maintenance procedures, and document and report on their effectiveness.</p>
ICTSAS441	SAS4C2MSS	<p>This unit describes the skills and knowledge required to support Information and Communications Technology (ICT) system software through the management of ICT system files, management of ICT system security, ICT system backups and ICT system restores. The individual is required to improve and use the existing Maintenance procedures to Support ICT Systems</p> <p>Students monitor, review, and improve ICT systems and processes in line with organisational requirements. This includes implementing and reviewing disaster recovery strategies, applying system and data security controls, analysing system performance, and documenting and reporting on outcomes.</p>

Program Information

Information

Unit Code	IT Studies subject code	Description
VU23221	CVU221IRP	<p>This unit introduces the foundational knowledge and practical skills needed to assess an organisation's existing Incident Response Plan (IRP) and enhance it to ensure more comprehensive incident management. Students will learn how to assemble an incident response team, define team roles, interpret and apply an IRP, and conduct red, blue, and purple team exercises to test the plan's effectiveness. Learners will also implement an IRP during simulated incidents, evaluate its performance, and make improvements where required.</p> <p>In addition, the unit covers the development of Incident Response Playbooks and Runbooks, the collection and preservation of forensic evidence, and the review of key incident management metrics such as Mean Time to Detect (MTTD) and Mean Time to Respond (MTTR).</p> <p>Red Teaming activities will include Tabletop Exercises and the design and execution of a phishing campaign.</p> <p>Throughout all incident response activities, students will be expected to follow appropriate communication strategies, adhere to reporting hierarchies, and comply with organisational incident handling policies.</p>