

# Program Information

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## 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 a 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

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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.

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

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

**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.

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### 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
<b>ICTICT443</b> ICT443 (2) #	<b>ICTICT426</b> ICT426 (2) #
<b>ICTSAS443</b> SAS443WOS (2)	<b>ICTCLD401</b> CLD401ACF (4)
<b>Practical (6)</b>	<b>Practical (4)</b>
<b>10 hrs / week</b>	<b>10 hrs / week</b>

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

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

Stage 4	
Term 1	Term 2
<b>ICTSAS526</b> SAS526 (2)	<b>ICTSAS438</b> <b>ICTSAS441</b> SAS4C2MSS (4)
<b>ICTNWK422</b> NWK422ICW (4)	<b>VU23221</b> CVU221IRP (2)
<b>Practical (4)</b>	<b>Practical (4)</b>
<b>10 hrs / week</b>	<b>10 hrs / week</b>

**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

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### 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	<b>ICT443</b>	<p>This unit describes the skills required to work collaboratively in virtual Information and Communications (ICT) team environments to achieve organisational objectives. 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>
ICTICT426	<b>ICT426</b>	<p>This unit describes the skills and knowledge required to identify emerging technologies and practices in the ICT sector and evaluate their potential impact on organisational practices.</p> <p>It applies to individuals who work across a wide range of information technology (IT) areas, including technical support, network administration, web technologies, software applications and digital media technologies.</p>
ICTSAS443	<b>SAS443WOS</b>	<p>This unit describes the skills and knowledge required to support users who use windows operating systems (<b>WOS</b>) in a corporate or home environment and to troubleshoot applications on a range of Information and Communications Technology (ICT) devices.</p> <p>It applies to individuals who provide frontline support to users and apply technical and specialised knowledge to fault finding and problem solving.</p>
ICTCLD401	<b>CLD401ACF</b>	<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 <b>cloud fundamentals</b> course using the <b>Amazon Web Services (AWS)</b>.</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>
BSBCRT404	<b>CRT404</b>	<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.</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>

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Unit Code	IT Studies subject code	Description
ICTPRG302	<b>PRG302PYB</b>	<p>This unit describes the skills and knowledge required to create simple applications in <b>Python</b> 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>
ICTSAS432	<b>SAS432</b>	<p>This unit describes the skills and knowledge required to identify, record, prioritise and resolve client Information and Communications Technology (ICT) support activities and escalate as required.</p> <p>It applies to experienced individuals who use specialised and technical knowledge to take responsibility in providing client-based ICT support to end users in an office or working environment.</p>
ICTNWK424	<b>NWK4C3CIN</b>	<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 <b>Introduction to Networking</b> course using <b>Cisco</b> 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>
ICTICT451	<b>ICT451</b>	<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>
ICTSAS442	<b>SAS442</b>	<p>This unit describes the skills and knowledge required to resolve first-level user support issues and change requests remotely for a range of Information and Communications Technology (ICT) systems.</p> <p>It applies to experienced individuals who, while working under a level of supervision, have responsibility in a frontline technical support capacity to exercise discretion and judgement using required knowledge to provide assistance and remote help desk support to clients.</p>
BSBXCS404	<b>XCS404</b>	<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>
ICTICT441	<b>ICT441</b>	<p>This unit describes the skills and knowledge required to convey technical information to an individual client for their specific use.</p> <p>It applies to individuals who are competent in a wide range of general Information and Communications Technologies (ICT), and support clients in technical areas, including instructing others on an individual basis.</p>

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Unit Code	IT Studies subject code	Description
BSBXBD403	<b>XBD403PBI</b>	<p>This unit describes the skills and knowledge required to analyse transactional and non-transactional big data using <b>Power BI</b> 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>
ICTICT445	<b>SAS4C2</b>	<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	<b>SAS4C2</b>	<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>
ICTSAS526	<b>SAS526</b>	<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>
ICTSAS438	<b>SAS4C2MSS</b>	<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 <b>Maintenance</b> procedures to <b>Support ICT Systems</b></p> <p>It applies to individuals who use technical and specialised knowledge and apply a systematic approach to maintaining computer equipment in an organisation.</p>
ICTSAS441	<b>SAS4C2MSS</b>	<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 <b>Maintenance</b> procedures to <b>Support ICT Systems</b></p> <p>It applies to individuals who provide assistance and use technical and specialised knowledge and a systematic approach to tasks to ensure organisational standards are met in maintaining operating systems.</p>
ICTNWK422	<b>NWK422ICW</b>	<p>This unit describes the skills and knowledge required to <b>Install, Configure</b> and manage a <b>Windows</b> server. It includes the ability to conduct initial configuration and testing, administration, software distribution and updates, profiling and troubleshooting.</p> <p>It applies to individuals with Information and Communications Technology (ICT) skills, involved in network management, server administration and similar roles.</p>

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VU23221	<b>CVU221IRP</b>	This unit provides the basic knowledge and skills required to examine an organisation's existing incident response plan (IRP) and expand it as necessary to deal with incidents more thoroughly. This will require the ability to form a team, clarify roles, interpret an incident response plan (IRP), use red, blue, and purple teams to test the IRP, implement an incident, evaluate the IRP for its effectiveness and if required make improvements.
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