Student Program Information

ICT40120 Certificate IV in Information Technology (Web Development)

This 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:

> Designing, writing, testing and deploying sites using both front end and back-end web technologies

Employment Opportunities

> Junior front end web developer
> Junior back-end web developer
> Freelance web developer (front and back end)

The recommended study plan will require 12 months of study to complete this qualification.

IT Studies Subjects

This qualification is from the National Training Package ICT 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.

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 wifi.
> Use a word processor such as MS Word to produce well-structured documents.
> Use a video conferencing tool such as Zoom or Teams.
> 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.

If you need to develop 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.

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Incidentals

This course also has an incidental cost of $300.00 for 1TB SSD portable hard drive, webcam and headset with microphone.

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
- 1Tb SSD
- Internet Access

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

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.

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Required Competencies

ICT40120 Certificate IV in Information Technology (Web Development)

National Code: ICT40120 TAFE SA Code: TP01250

This table outlines the competencies required to earn this qualification, along with the IT subjects you need to complete. The competencies and subjects are listed in the recommended order of completion, which is especially crucial for part-time students.

CORE AND ELECTIVE UNITS (listed in delivery sequence)				
Unit Code	**Unit Title**	**Core/Specialist Elective/Elective**	**Assumed knowledge & skills**	**IT Studies subject code**
ICTWEB431	Create and style simple markup language documents	Elective	None	WEB4C3HL5
ICTWEB452	Create a markup language document	Specialist Elective	None	WEB4C3HL5
ICTWEB434	Transfer content to websites	Specialist Elective	None	WEB4C3HL5
ICTWEB432	Design website layouts	Specialist Elective	WEB4C3HL5	WEB4C3CMS
ICTWEB450	Evaluate and select a web hosting service	Specialist Elective	WEB4C3HL5	WEB4C3CMS
ICTWEB445	Implement Content Management Systems	Elective	WEB4C3HL5	WEB4C3CMS
ICTPRG302	Apply introductory programming techniques	Core	None	PRG302PYB
#ICTSAS432	Identify and resolve client ICT problems	Core	None	SAS432
ICTWEB451	Apply structured query language in relational databases	Elective	None	WEB451SQL
ICTWEB443	Implement search engine optimisations	Specialist Elective	WEB4C3CMS	ICT443
ICTPRG435	Write scripts for software applications	Elective	PRG302PYB WEB4C3HL5	PRG435JSB
ICTWEB430	Produce server-side script for dynamic web pages	Elective	WEB451SQL	WEB430PHP
#BSBXCS404	Contribute to cyber security risk management	Core	None	XCS404
#BSBCRT404	Apply advanced critical thinking to work processes	Core	None	CRT404

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ICTWEB433	Confirm accessibility of websites	Specialist Elective	PRG302PYB WEB4C3HL5 PRG435JSB	WEB4C2WAP
ICTWEB441	Produce basic client-side script	Elective	PRG302PYB WEB4C3HL5 PRG435JSB	WEB4C2WAP
#ICTICT451	Comply with IP, ethics and privacy policies in ICT environments	Core	None	ICT451
#ICTICT426	Identify and evaluate emerging technologies and practices	Core	None	ICT426
ICTCLD401	Configure Cloud Services	Elective	None	CLD401ACF
#ICTICT443	Work collaboratively in the ICT industry	Core	None	ICT443

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Subject Descriptions

Unit Code	IT Studies subject code	Description
ICTWEB451	WEB451SQL	This unit describes the skills and knowledge required to produce structured query language (**SQL**) statements to work with server-side scripts, enabling web developers to interact with web server databases. The unit applies to individuals in a range of roles who are responsible for creating server-side interaction with dynamic web pages, using SQL as a means of communicating with databases
BSBXCS404	XCS404	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. 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.
ICTWEB431	WEB4C3HL5	This unit describes the skills and knowledge required to design and create basic markup language documents and cascading style sheets (**CSS3**) using the **HTML5** standard to define the structure and style of a website. It applies to individuals in ICT roles who are required to create web pages with consistency in appearance and user experience.
ICTWEB434	WEB4C3HL5	This unit describes the skills and knowledge required to transfer content, from a remote location to a web server, using a range of commercial information and communications technology (ICT) products. The objective of this skill is the upload of new and revised information on a website. The unit applies to individuals who work as web developers and designers and required to update websites.
ICTWEB452	WEB4C3HL5	This unit describes the skills and knowledge required to use a text editor to design, create and save web pages to a given specification. The unit applies to individuals working as web designers and developers, who generate a framework for internet information using a markup language according to client briefs.
ICTPRG302	PRG302PYB	This unit describes the skills and knowledge required to create simple applications in Python through introductory programming techniques. 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.
ICTICT426	ICT426	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. 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.
ICTWEB432	WEB4C3CMS	This unit describes the skills and knowledge required to design a website to client specifications, within a particular technical and human interface environment.

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		The unit applies to those who are responsible for the analysis, documentation and design of the human computer interface, including requirements that drive design for either internal or external clients.
ICTWEB445	WEB4C3CMS	This unit describes the skills and knowledge required to create and integrate a website into an open-source content management system. The unit applies to individuals working as web developers, who apply a wide range of knowledge and skills across ICT, to support small to medium enterprises (SMEs) requiring broader rather than more specialised, ICT support.
ICTWEB450	WEB4C3CMS	This unit describes the skills and knowledge required to determine a client's current and future internet service providers (ISPs) needs. The unit applies to individuals working in Information and Communications Technology (ICT) who take responsibility for comparing and evaluating internet service provider (ISP) services.
ICTSAS432	SAS432	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. It prepares you to confidently support end users in a workplace environment by using an IT Service Management system and following organisational procedures.
ICTPRG435	PRG435JSB	This unit describes the skills and knowledge required to write scripts using JavaScript and automate client-side validation of data on a web page form. The use of functions is explored and updating html elements by ID. It applies to those who work in Information and Communications Technology (ICT) support roles and who are required to automate tasks.
ICTICT451	ICT451	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. 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.
ICTWEB430	WEB430PHP	This unit describes the skills and knowledge required to produce server-side scripts for dynamic web pages using a range of relevant features from database integration using PHP and MySQL. It applies to individuals working as web designers who apply a wide range of knowledge and skills across different information and communications technology (ICT) environments to support organisations that require broad ICT support.
ICTWEB433	WEB4C3WAP	This unit describes the skills and knowledge required to confirm accessibility of websites for users with auditory, visual, mobility and cognitive impairments. The unit applies to web developers and designers who are required to adhere to international and Australian industry standards and practices to ensure that users with accessibility requirements are not disadvantaged when using websites.
ICTWEB441	WEB4C3WAP	This unit describes the skills and knowledge required to develop interactive and engaging websites, using a range of features from various languages.

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		The unit applies to individuals working in web development environments who are required to produce client-side scripts as a common means of creating interactive websites. These scripts offer an effective simple means of enabling websites to provide greater interaction with clients.
BSBCRT404	CRT404	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. 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.
ICTICT443	ICT443	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. It applies to all individuals who work in teams that utilise multiple technologies to complete a collective task.
ICTCLD401	CLD401ACF	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. 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.
ICTWEB443	ICT443	This unit describes the skills and knowledge required to implement industry standard internet-marketing practices using search engine optimisation (SEO) techniques, including introducing web pages to search engines and monitoring search engine performance. The unit applies to individuals who make recommendations and monitor keyword enhancements, search engine marketing (SEM) and social network marketing (SNM).

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TAFE SA Study Plan for Full-Time Students (12 months)

The following table shows the recommended study plan for the Certificate IV in Information Technology (Web Development). Each stage is one semester (or 6 months) in length for Full-Time students*.

These are eligible for Subsidised Training

Please Note: This program structure is subject to change.

Stage 1	
Term 1	**Term 2**
WEB451SQL (2) ICTWEB451	
WEB4C3CMS (2) ICTWEB432 ICTWEB450 ICTWEB445	
# XCS404 (2) BSBXCS404	**# ICT426 (2)** ICTICT426
WEB4C3HL5 (2) ICTWEB431, ICTWEB434, ICTWEB452	**# SAS432 (2)** ICTSAS432
PRG302PYB (2) ICTPRG302	**PRG435JSB (2)** ICTPRG435
Practical (10)	**Practical (10)**
20 hrs / week	**20 hrs / week**

Stage 2	
Term 1	**Term 2**
WEB430PHP (2) ICTWEB430	
WEB4C2WAP (2) ICTWEB433 ICTWEB441	
# ICT451(2) ICTICT451	**CLD401ACF (4)** ICTCLD401
WEB443SEO (2) ICTWEB443	**# ICT443 (2)** ICTICT443
# CRT404 (2) **BSBCRT404**	
Practical (10)	**Practical (10)**
20 hrs / week	**20 hrs / week**

Please Note: This program structure is subject to change.

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Legend:

*	The length of time for Part-Time students will depend on the number of subjects studied in each semester.
( )	The number in brackets after the subject is the indicative number of contact hours per week that you expect to study at a TAFE SA campus for that subject.
#	This subject will be offered exclusively as online study in the registration period

Practical sessions to complete subject activities, assignments and tests

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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TAFE SA Study Plan for Part-Time Students (24 months)

The following table shows the recommended study plan for studying the Certificate IV in Information Technology (Web Development) 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**
WEB4C3CMS (2) ICTWEB432 ICTWEB450 ICTWEB445	
WEB4C3HL5 (2) ICTWEB431, ICTWEB434, ICTWEB452	**PRG435JSB (2)** ICTPRG435
PRG302PYB (2) ICTPRG302	
Practical (2)	**Practical (4)**
8 hrs / week	**8 hrs / week**

Stage 2	
Term 1	**Term 2**
WEB451SQL (2) ICTWEB451	
WEB443SEO (2) ICTWEB443	**# SAS432 (2)** ICTSAS432
Practical (4)	**Practical (4)**
8 hrs / week	**8 hrs / week**

Stage 3	
Term 1	**Term 2**
WEB430PHP (2) ICTWEB430	
# XCS404 (2) BSBXCS404	**# CRT404 (2)** BSBCRT404
Practical (4)	**Practical (4)**
8 hrs / week	**8 hrs / week**

Stage 4	
Term 1	**Term 2**
WEB4C2WAP (2) ICTWEB433 ICTWEB441	
# ICT451(2) ICTICT451	**CLD401ACF(2)** ICTCLD401
# ICT426 (2) ICTICT426	**# ICT443 (2)** ICTICT443
Practical (2)	**Practical (2)**
8 hrs / week	**8 hrs / week**