Student Program Information

ICT50220 Diploma of Information Technology (Back end web development)

The Diploma of Information Technology, specialising in Back-End Web Development reflects the role of individual in a variety of information and communications technology (ICT) roles who have established specialised skills in a technical ICT function.

Individuals in these roles carry out moderately complex tasks in a specialist field, working independently, as part of a team or leading a deliverable with others. They may apply their skills across a wide range of industries, business functions and departments, or as a business owner (sole trader/contractor).

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

> designing dynamic and complex websites

> user experience solutions

> documents using extensible mark-up languages

> developing and maintaining website information architecture and data

> creating and maintaining databases

Employment Opportunities

> Web designer

> Database support programmer

> Web support programmer

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

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.

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.

International Students

International students should refer to the TAFE SA International Students website for fee information.

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Course Admission Requirements

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

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 completed:

> Certificate IV in Information Technology (Web Development); or

> Other study equivalent to it; or

> Have work experience and knowledge equivalent to it.

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

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National Code: ICT50220 TAFE SA Code: TP01272

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
ICTWEB452	Create a Markup Language Document	Listed Elective	None	WEB4C3HL5
ICTWEB430	Produce server-side script for dynamic web pages	Elective	WEB451SQL	WEB430PHP
ICTWEB433	Confirm Accessibility of Websites	Elective	WEB4C3HL5 PRG435JSB	WEB4C2WAP
ICTWEB441	Produce Basic Client-Side Script	Elective	WEB4C3HL5 PRG435JSB	WEB4C2WAP
ICTDBS506	Design Databases	Listed Elective	WEB451SQL WEB430PHP	DBS506MSQ
ICTWEB514	Create dynamic web pages	Listed Elective	WEB451SQL WEB430PHP	WEB5C2EWD
ICTDBS507	Integrate databases with websites	Specialist Elective	WEB451SQL WEB430PHP	WEB5C2EWD
ICTWEB522	Develop Website Information Architecture	Specialist Elective	WEB4C3HL5 WEB4C3CMS WEB4C3WAP	WEB5C2CMS
ICTWEB525	Implement quality assurance process for websites	Specialist Elective	WEB4C3HL5 WEB4C3CMS WEB4C3WAP	WEB5C2CMS
ICTCLD506	Implement virtual network in cloud environments	Listed Elective	None	CLD5C2ACO

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BSBXTW401#	Lead and facilitate a team	Core	None	XTW401
BSBXCS402#	Promote workplace cyber security awareness and best practices	Core	None	XCS402
ICTICT532#	Apply IP, ethics and privacy policies in ICT environments	Core	None	ICT532
ICTSAS527#	Manage client problems	Core	None	SAS527
ICTICT517	Match ICT needs with the strategic direction of the organisation	Core	None	ICT517
ICTPRG554	Manage data persistence using noSQL data stores	Specialist Elective	WEB451SQL	PRG554MDB
ICTPRG553	Create and develop REST APIs	Specialist Elective	WEB4C2WAP	PRG553RST
ICTPRG614	Create cloud computing services	Elective	WEB451SQL WEB430PHP	PRG614AWS
ICTCLD508	Manage infrastructure in cloud environments	Listed Elective	CLD401ACF	CLD52ACO
BSBCRT512#	Originate and develop concepts	Core	None	CRT512

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Subject Descriptions

Unit Code	IT Studies subject code	Description
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.
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 different languages. 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	WEB4C2WAP	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	WEB4C2WAP	This unit describes the skills and knowledge required to develop interactive and engaging websites, using a range of features from various languages. 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.
ICTDBS506	DBS506MSQ	This unit describes the skills and knowledge required to establish client needs and technical requirements and to design a database that meets identified requirements. It applies to those who are employed in roles including database administrators or designers who are required to design databases.
ICTWEB514	WEB5C2EWD	This unit describes the skills and knowledge required to produce both server and client-side content for web pages. It applies to individuals working as web developers, who are responsible for creating dynamic pages to provide interaction between the user and the website. They use highly developed technical and analytical skills when developing the user-website interface.
ICTDBS507	WEB5C2EWD	This unit describes the skills and knowledge required to integrate a database with a website. It applies to those employed as web software and database developers and responsible for creating data-driven web applications.
ICTWEB525	WEB5C2CMS	This unit describes the skills and knowledge required to develop and conduct planned and systematic actions to ensure that websites conform to applicable standards and fulfil client expectations.

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		It applies to individuals in the web field of work that use highly developed communication, analysis and technical skills to determine intelligent strategies for ongoing website improvement.
ICTWEB522	WEB5C2CMS	This unit describes the skills and knowledge required to develop information architecture for a complex website that meets business requirements.
BSBXTW401	XTW401	This unit describes the skills and knowledge required to effectively lead and facilitate a team in a workplace within any industry.
		This unit has a specific focus on the teamwork skills required for team leader or supervisor level (depending on organisational structure) workers with responsibility for others or teams.
BSBXCS402	XCS402	This unit describes the skills and knowledge required to promote cyber security in a work area.
		It applies to those working in a broad range of industries who as part of their job role support policies, procedures and practice within an organisation that promote cyber security.
ICTICT532	ICT532	This unit describes the skills and knowledge required to maintain 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 and Communications Technology (ICT) environment.
		It applies to ICT personnel who are required to gather information to determine the organisation's code of ethics and protect and maintain privacy policies and system security.
ICTSAS527	SAS527	This unit describes the skills and knowledge required to liaise and support clients to manage and resolve problems in an Information and Communications Technology (ICT) environment.
		It applies to individuals who apply high level technical and specialised knowledge in assisting clients to support, manage and resolve problems.
ICTICT517	ICT517	This unit describes the skills and knowledge required to ensure information and communications technology (ICT) products and systems match the strategic direction of the organisation.
		It applies to individuals whose responsibilities may include improving, evaluating, acquiring, maintaining and supporting ICT for organisations.
ICTPRG554	PRG554MDB	This unit describes the skills and knowledge required to implement a data store and manage data persistence using non structured query language (NoSQL) to provide automatic scaling as well as high performance and availability over semi-structured data.
		The unit applies to those working as senior software developers, senior back end developers or full stack developers, and responsible for managing information and communications technology (ICT) in small-to-large enterprises (SMEs).
ICTPRG553	PRG553RST	This unit describes the skills and knowledge required to create and implement representational state transfer (REST or RESTful) application program interfaces (APIs) in order to request and manipulate data from data sources.
		The unit applies to those working as senior software developers, senior back end developers or full stack developers, and responsible for managing

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		information and communications technology (ICT) in small-to-large enterprises.
ICTPRG614	PRG614AWS	This unit describes the skills and knowledge required to design, build, test and deploy web services and cloud computing applications to specifications.
		It applies to individuals in software engineering roles with the Information and Communications Technology (ICT) skills required to create and install web services and cloud computing applications.
ICTCLD508	CLD52ACO	This unit describes the skills and knowledge required to configure, monitor, maintain and update resources running in a cloud environment.
		It applies to cloud engineers, cloud systems administrators and those who work within cloud computing environments and responsible for the day-to-day running of cloud resources.
ICTCLD506	CLD52ACO	This unit describes the skills and knowledge required to design and configure a virtual network according to networking requirements for a multi-tiered application on a cloud platform.
BSBCRT512	CRT512	This unit describes the skills and knowledge required to originate and develop concepts for products, programs, processes or services to an operational level.
		The unit applies to individuals who develop concepts for any business or community activity or process. This may include marketing and advertising campaigns, staff development programs, information technology and communication systems, radio and television programs and entertainment events. These individuals operate with a high degree of autonomy and also collaborate with others to generate ideas and refine concepts for implementation.

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

The following table shows the recommended study plan for the Diploma of Information Technology (Front end web development) & (Back end web development). Each stage is one semester (or 6 months) in length for Full-Time student*.

These are eligible for Subsidised Training

Please Note: This program structure is subject to change.

Stage 1	
Term 1	**Term 2**
DBS506MSQ (2) ICTDBS506	
WEB5C2EWD (2) ICTWEB514, ICTDBS507	
WEB430PHP (2) ICTWEB430	
WEB5C2CMS (2) ICTWEB525, ICTWEB521	
XTW401 (2) # BSBXTW401	
XCS402 (2) # BSBXCS402	**SAS527 (2) #** ICTSAS527
ICT532 (2) # ICTICT532	
Practical (6)	**Practical (8)**
20 hrs / week	**20 hrs / week**

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Stage 2	
Term 1	**Term 2**
ICT517 (2) ICTICT517	
PRG554MDB (2) ICTPRG554	
PRG553RST (2) ICTPRG553	
PRG614AWS (2) ICTPRG614	
CLD5C2ACO (2) ICTCLD506, ICTCLD508	
WEB4C2WAP (2) ICTWEB433, ICTWEB441	
WEB4C3HL5 ICTWEB452 (2)	**CRT512 (2) #** BSBCRT512
Practical (6)	**Practical (6)**
20 hrs / week	**20 hrs / week**

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.

( ) 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 between 16-20 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.

Click here to apply for this qualification

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