



CANTERBURY  
TECHNICAL INSTITUTE

CRICOS Code: 02938M / RTO No: 31645

CANTERBURY TECHNICAL INSTITUTE

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# TRAINING & ASSESSMENT STRATEGY

## ICT50715 Diploma of Software Development

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## Training and Assessment Strategy

<b>Name of RTO</b>	<b>Canterbury Technical Institute</b>			
<b>Training Package</b>	<b>ICT50715 Information &amp; Communication Technology Training Package</b>			
<b>Code and title of qualification</b>	<b>ICT50715 Diploma of Software Development</b> CRICOS Code: 086699D <b>10 Core units, 6 Electives, Total 16 Units</b>			
<b>Units of competencies</b>				
<b>Cluster Name</b>	<b>Unit Code</b>	<b>Unit Name</b>	<b>Nominal Hours</b>	<b>Core / Elective</b>
<b>Intermediate Programming</b>	ICAICT418	Contribute to copyright, ethics and privacy in an IT environment	40	Core
	ICTPRG502	Manage a project using software management tools	60	Core
	ICTPRG418	Apply intermediate programming skills in another language	80	Core
	ICTPRG527	Apply intermediate object-oriented language skills	60	Core
<b>Advanced Programming</b>	ICTPRG505	Build advanced user interface	60	Elective
	ICTPRG501	Apply advanced object-oriented language skills	80	Core
	ICTPRG523	Apply advanced programming skills in another language	80	Core
	ICTPRG507	Implement security for applications	50	Elective
<b>Networks and Servers</b>	ICTPRG508	Create mashups	50	Elective
	ICTNWK505	Design, build and test a network server	50	Elective
	ICTNWK531	Configure an internet gateway	40	Elective
	ICTNWK511	Manage network security	80	Elective
<b>Testing and Validation</b>	ICTPRG503	Debug and monitor applications	40	Elective
	ICTPRG504	Deploy an application to a production environment	40	Core
	ICTPRG520	Validate an application design against specifications	40	Elective
	ICTPRG529	Apply testing techniques for software development	40	Core

<b>Clients</b>	<p>CTI's clients for this qualification are dominantly international students coming from South American nations, India, China, Thailand, Bangladesh, Nepal &amp; Sri Lanka.</p> <p>Entry requirements for students:</p> <ul style="list-style-type: none"> <li>• An overall IELTS band 5.5 or equivalent and above</li> <li>• 18 years and above with a High School Certificate (Year 12)</li> <li>• Students will / may have to meet the entry criteria's depending on individual qualification requirements.</li> </ul> <p><b>Qualification Pathways</b> There are no entry requirements for this qualification. <i>(As per ICT15 Information and Communication Technology Training Package Version 1)</i></p> <p><b>Pathways INTO the qualification</b></p> <p>Preferred pathways for candidates considering this qualification include:</p> <ul style="list-style-type: none"> <li>• After achieving ICA40511 Certificate IV in Programming, or other relevant qualifications or units equivalent to the core of ICA40511 as listed below – <ul style="list-style-type: none"> <li>- ICTICT418 Contribute to copyright, ethics and privacy in an IT environment</li> <li>- ICTPRG402 Apply query language</li> <li>- ICTPRG403 Develop data-driven applications</li> <li>- ICTPRG404 Test applications</li> <li>- ICTPRG405 Automate processes</li> <li>- ICTPRG406 Apply introductory object-oriented language skills</li> <li>- ICTPRG410 Build a user interface</li> <li>- ICTPRG414 Apply introductory programming skills in another language</li> <li>- ICTPRG415 Apply skills in object-oriented design</li> <li>- ICTPRG419 Analyse software requirements</li> </ul> </li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>• With demonstrated vocational experience in a range of programming-related work environments in software programming, application programming, web development or similar.</li> <li>• Overseas candidates must provide evidence of successful completion of an IT course which meets the unit outcomes as mentioned above.</li> <li>• If candidate already hold a Certificate II, III, IV or Dip of IT, he/she will need to submit verified Certificates / Statement of Attainment for recognition purposes.</li> </ul> <p><b>Pathways FROM the qualification</b> ICT15 Advanced Diploma or Vocational Graduate Certificate qualifications or other higher education sector qualifications.</p>
<b>Training and assessment arrangements</b>	<p><b>Duration</b></p> <p>The training program for Diploma of Software Development is conducted over a 52-week period (includes term breaks) and is divided into 4 terms.</p> <p>CTI students will attend class equivalent to 20 hours per week in full-time mode. Additional self paced study resources are also made available.</p>

**Organisation – Training units combinations**

The ICT50715 program contains 16 units (10 Core & 6 Elective) and will be delivered at the organisation's training centre.

To meet the requirements of the Diploma qualification involves the completion of all 16 units.

**Organisation's Delivery plan**

All units within this qualification are combined into 4 clusters (Refer to cluster breakdown). A logical sequence is maintained for all the clusters.

Where applicable unit assessments having similar elements / criteria's / outcomes will be combined with appropriate assessment tools (Refer to the assessment plan to review the assessment tools used in the qualification) to achieve holistic assessment requirements to complete the qualification.

The clusters are placed in a logical fashion to achieve critical aspects of assessments for progressive development of competency achieved from previous units / clusters. Units within clusters have multiple assessment tools to simulate / reflect real time workplace requirements.

The qualification combines face-to-face trainer led theory/practical classes involving small groups/ individual activities, within a simulated environment resembling a workplace setting as close as possible. Additional self paced study is also made available using regularly updated server based resources.

**RPL**

Students, who hold a Certificate II, III and/or Certificate IV in IT, will need to submit verified Certificate/Statement of Attainment (issue by a RTO) for recognition purposes. Students with either a Certificate or Statement of Attainment for Certificate II, III and/or Certificate IV in IT units will be exempted from common/elective units.

**LLN**

Canterbury Technical Institute is committed to provide education opportunities to its students from non- English- speaking background (NESB).

Canterbury Technical Institute will use enrolment procedures aimed at ensuring that only students with the requisite LLN skills enrol in its courses as stated in its Assessing student's qualifications and English language proficiency Policy and Procedure.

Canterbury Technical Institute recognises the need to pay particular attention to issues related to language in its training and assessment, in order to cater to the needs of the largest section of its target market, i.e. NESB students.

Canterbury Technical Institute will take all reasonable measures to ensure that its staff are aware of the students' specific learning needs and make reasonable adjustments to training and assessment practices to cater for such needs.

Canterbury Technical Institute reserves the right to refer students whose English language proficiency is demonstrably inadequate for their course to enrol in a package course comprising an ELICOS course of sufficient duration in an approved English Language Teaching (ELT) Centre.

If after the commencement of a program it is identified that a student has a Language, Literacy and Numeracy (LLN) issue; our staff can discuss different ways of conducting training and assessment to assist students to access additional tutorial (generally on Fridays) with the Head Trainer.

Students requiring any assistance or support with language, literacy or numeracy should speak confidentially with their trainers and assessor who will call on the Head Trainer and/or other assessors for assistance and guidance as required.

	Cluster Name	Unit (s) of Competency
	<b>Intermediate Programming</b>	ICTICT418
		ICTPRG502
		ICTPRG418
		ICTPRG527
	<b>Advanced Programming</b>	ICTPRG505
		ICTPRG501
		ICTPRG523
		ICTPRG507
	<b>Networks and Servers</b>	ICTPRG508
		ICTNWK505
		ICTNWK531
		ICTNWK511
	<b>Testing and Validation</b>	ICTPRG503
		ICTPRG504
		ICTPRG520
		ICTPRG529

## Delivery modes

### Simulated workplace environment

CTI ensures that the training delivered is to the standards of a real workplace environment. To meet this requirement CTI has implemented a variety of assessment tools that will be implemented during the course of the qualification. These assessment tools assess various different elements of a real / actual workplace however in a simulated training environment.

CTI meets the need for a real-time workplace simulation environment by:

- A dedicated computer lab to reflect a real-time work environment for all practical training components of the course.
- The CTI trainers represent the role of a real client and portray the workplace demands while working on projects. This includes role play of difficult & diverse type customers.
- Students prepare time lines, schedule milestones, communicate, prepare documentation, conduct training in accordance with the client (trainer)
- Working as a team (group work/assignments), fulfilling responsibilities and expectations of the job and workplace.
- Assignments, which include multi-tasking, different roles within assignments, using workplace policies and templates.

Emphasis will be made to reflect real work situations in order to develop skills identified in the “employability skills” for this qualification. Those skills may include:

### Evidence-gathering techniques / Assessment tools

#### A. Practical Tools

- a. Demonstration
- b. Programming / Projects
- c. Diagrammatical Representation
- d. Design Algorithm
- e. Troubleshooting

#### B. Written Tools

- a. Report Writing
- b. Case Scenario – Problem Solving
- c. Written Exam
- d. Research Documentation

#### C. Observation Tools

- a. Role Play
- b. Help Desk
- c. Presentation
- d. Discussion
- e. Oral Questioning

Combinations of these methods will be used for most situations (eg. observations and oral questioning)

Cluster	Unit of competency	A	B	C
<b>Intermediate Programming</b>	ICTICT418		✓	✓
	ICTPRG502	✓	✓	✓
	ICTPRG418	✓	✓	✓
	ICTPRG527	✓		✓
<b>Advanced Programming</b>	ICTPRG505	✓	✓	✓
	ICTPRG501	✓	✓	✓
	ICTPRG523	✓	✓	✓
	ICTPRG507	✓	✓	✓
<b>Networks and Servers</b>	ICTPRG508		✓	✓
	ICTNWK505		✓	✓

		ICTNWK531	✓		✓	
		ICTNWK511	✓		✓	
	<b>Testing and Validation</b>		ICTPMG503		✓	
			ICTPRG504	✓	✓	✓
			ICTPRG520		✓	✓
			ICTPRG529	✓		✓
Please contact the Student Services (andrea@cti.qld.edu.au) for more information on Evidence gathering techniques / Assessment tools.						
<p><b>Schedule</b></p> <p>The training program is conducted over 40-week period. <b>Please contact Student Services (andrea@cti.qld.edu.au) for a copy of the timetable.</b></p> <p>Evidence-gathering techniques takes place throughout the whole process and units of competency are assessed individually and within the cluster organisation.</p>						
<p><b>Delivery and assessment staff</b></p> <p>All trainers/Assessors hold Certificate IV in Training and Assessment TAE40110, vocational qualifications at least up to the same level they are delivering and assessing and proven relevant industry experience.</p> <p>Staff Matrix is available for review on request.</p>						
<p><b>Assessment validation process</b></p> <p>Student Services &amp; Academic Manager &amp; IT Head of Department contact representatives from industry / enterprises on a regular basis to check that the performance standards required in the program are consistent with industry practice.</p> <p>CTI Student Services &amp; Academic Manager and Trainers conduct validation meetings every as per CTI validation and moderation schedule. Meetings confirm the evidence-gathering techniques and the required standards of performance and reviewing assessment tools and decisions.</p> <p>Student Services &amp; Academic Manager along with the IT Head of Department have responsibility for developing, managing and monitoring strategies that ensure consistency in assessment. Validation meetings are led by Student Services &amp; Academic Manager with the participation of assessors involved in a unit/cluster being reviewed.</p> <p>For each cluster / unit of competency the resources and benchmark answers available for all trainers/assessors. These can comprise of samples of candidate work that are considered to be exemplary.</p> <p>There is also a continuous feedback process in place, which involves gathering information from candidates, employers and other users of the assessment process to guide the continual improvement process.</p>						

## Industry Consultation

CBC as part of CEG in association CTI has liaised with the following organization / individuals for its industry consultation for ICT15 Package. Validation documentation is available on request.

### **Shushant Sathpathy**

#### ***IT Consultant***

Phone: 0410 208 200

[sathpathy@hotmail.com](mailto:sathpathy@hotmail.com)

CTI has liaised with the following organization / individuals for its industry consultation for ICT15 Training Package. Industry contact correspondence is available for review on request.

### **Richard Mellor**

#### ***CEO and Creative Director Hyperactive London***

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[info@hyperinteractive.co.uk](mailto:info@hyperinteractive.co.uk)

## Other requirements

All staff involved in the delivery and assessment of this qualification, have direct access to the current version of the ICT15 Information & Communication Technology Training Package, including the appropriate units of competency, assessment guidelines and qualification structure.

All staff involved in delivering the program, have access to trainer, assessor and candidate support materials relevant to their areas of delivery and assessment. There is a "Cluster Folder", which include specific documents such as: Training Program, Sessions Plans, Student Guide, Assessment Plan, Evidence Gathering Matrix, Marking Guide and Assessment Tools.

## Pathways

This qualification provides the skills and knowledge for an individual to be competent in programming and software development. A person with this qualification would create new software products to meet an initial project brief or customise existing software products to meet customer needs. Upon completion of Diploma qualifications following are the opportunities available:

### *Career & Pathway opportunities:*

- analyst programmer support
- assistant programming developer
- assistant software applications programmer
- assistant software developer
- database support programmer
- web support programmer
- The course also provides a path (advanced standing) for those intending to further study into a Bachelor Degree