Victorian Purchasing Guide

for

ICA11 Information and Communications Technology Training Package Version No 1

March 2012

Disclaimer

In compiling the information contained in and accessed through this resource, the Department of Education and Early Childhood Development (DEECD) has used its best endeavours to ensure that the information is correct and current at the time of publication but takes no responsibility for any error, omission or defect therein.

To the extent permitted by law DEECD, its employees, agents and consultants exclude all liability for any loss or damage (including indirect, special or consequential loss or damage) arising from the use of, or reliance on the information contained herein, whether caused or not by any negligent act or omission. If any law prohibits the exclusion of such liability, DEECD limits its liability to the extent permitted by law, for the resupply of the information.

Third party sites

This resource may contain links to third party websites and resources. DEECD is not responsible for the condition or content of these sites or resources as they are not under its control.

Third party material linked from this resource is subject to the copyright conditions of the third party. Users will need to consult the copyright notice of the third party sites for conditions of usage.

Victorian Purchasing Guide — Version History

Training Package Version	Date VPG Approved	Comments
ICA11 Information and Communications Technology Training Package 1	27 September 2011	This Victorian Purchasing Guide reflects the changes made to ICA05 Information and Communications Technology Training Package Version 3, now superseded.

ICA11 Information and Communications Technology Training Package Victorian Purchasing Guide

CONTENTS

INTRODUCTION

What is a Victorian Purchasing Guide?

The Victorian Purchasing Guide provides information for use by Registered Training Organisations (RTOs) in the provision of Victorian government subsidised training.

Specifically the Victorian Purchasing Guide provides the following information related to the delivery of nationally endorsed Training Packages in Victoria:
- The nominal hour range (minimum-maximum) available for each qualification.
- Nominal hours for each unit of competency within the Training Package.
- Sample Training Programs

Registration

RTOs must be registered by either the Victorian Registration and Qualifications Authority (VRQA) or the Australian Skills Qualification Authority (ASQA) regulatory body to be eligible to issue qualifications and statements of attainment under the Australian Quality Framework (AQF).

The VRQA is the regulatory authority for Victoria that registers VET training organisations who provide courses to domestic students only and who only offer training in Victoria.

To register to provide training to international students and in other Australian states and territories you will need to apply with ASQA.

QUALIFICATIONS

CODE	TITLE	QUALIFICATION NOMINAL HOUR RANGE	
		MINIMUM	MAXIMUM
ICA10111	Certificate I in Information, Digital Media and Technology	180	210
ICA20111	Certificate II in Information, Digital Media and Technology	370	560
ICA30111	Certificate III in Information, Digital Media and Technology	440	690
ICA40111	Certificate IV in Information Technology	455	1195
ICA40211	Certificate IV in Information Technology Support	680	950
ICA40311	Certificate IV in Web-Based Technologies	600	780
ICA40411	Certificate IV in Information Technology Networking	650	970
ICA40511	Certificate IV in Programming	750	970
ICA40611	Certificate IV in Information Technology Testing	650	870
ICA40711	Certificate IV in Systems Analysis and Design	870	1040
ICA40811	Certificate IV in Digital Media Technologies	530	895
ICA40911	Certificate IV in Digital and Interactive Games	570	860
ICA41011	Certificate IV in Computer Systems Technology	740	1040
ICA50111	Diploma of Information Technology	490	1360
ICA50211	Diploma of Digital and Interactive Games	500	925
ICA50311	Diploma of Information Technology Systems Administration	640	1000
ICA50411	Diploma of Information Technology Networking	595	1210
ICA50511	Diploma of Database Design and Development	700	950
ICA50611	Diploma of Website Development	705	1085
ICA50711	Diploma of Software Development	690	950
ICA50811	Diploma of Systems Analysis and Design	695	975
ICA50911	Diploma of Digital Media Technologies	655	1060
ICA60111	Advanced Diploma of Information Technology	595	850
ICA60211	Advanced Diploma of Network Security	559	945
ICA60311	Advanced Diploma of Information Technology Business Analysis	610	810
ICA60411	Advanced Diploma of Information Technology Project Management	530	780
ICA60511	Advanced Diploma of Computer Systems Technology	1070	1400
ICA70111	Vocational Graduate Certificate in Information Technology and Strategic Management	225	320
ICA70211	Vocational Graduate Certificate in Information Technology Sustainability	225	320

UNITS OF COMPETENCY AND NOMINAL HOURS

RTOs are advised that there is a mapping inside the Training Package that describes the relationship between new units and superseded or replaced units from the previous version of ICA11 Information and Communications Technology Training Package. Information regarding transition arrangements can be obtained from the state or national VET Regulating Authority (see Contacts and Links section).

You must be sure that all training and assessment leading to qualifications or Statements of Attainment from the Training Package is conducted against the Training Package units of competency and complies with the requirements in the assessment guidelines.

Listing of the Units of Competency and Nominal Hours

Unit Code	Unit Title	Nominal Hours
ICADBS401A	Identify physical database requirements	80
ICADBS402A	Complete database backup and restore	30
ICADBS403A	Create basic databases	40
ICADBS404A	Identify and resolve common database performance problems	30
ICADBS407A	Monitor physical database implementation	50
ICADBS408A	Link an RFID system to a database	60
ICADBS409A	Monitor and administer a database	50
ICADBS412A	Build a database	30
ICADBS501A	Monitor and improve knowledge management system	20
ICADBS502A	Design a database	50
ICADBS503A	Create a data warehouse	60
ICADBS504A	Integrate database with a website	25
ICADBS601A	Build a data warehouse	80
ICADBS602A	Develop a knowledge management strategy	80
ICADBS603A	Determine suitability of database functionality and scalability	60
ICADMT401A	Create visual design components for digital media	40
ICADMT402A	Produce interactive animation	60
ICADMT403A	Produce and edit digital images	40
ICADMT501A	Incorporate and edit digital video	50
ICAGAM301A	Apply simple modelling techniques	50
ICAGAM302A	Design and apply simple textures to digital art	50
ICAGAM303A	Review and apply the principles of animation	60
ICAGAM401A	Produce an interactive game	60
ICAGAM402A	Identify and apply principles of games design and game playing	40
ICAGAM403A	Create design documents for interactive games	30
ICAGAM404A	Apply artificial intelligence in game development	60
ICAGAM405A	Write story and content for digital games	30
ICAGAM406A	Create visual design components for interactive games	40
ICAGAM407A	Write scripts for interactive games	60
ICAGAM408A	Use 3-D animation interface and toolsets	40

Unit Code	Unit Title	Nominal Hours
ICAGAM409A	Create 3-D characters for interactive games	40
ICAGAM410A	Develop 3-D components for interactive games	50
ICAGAM412A	Design interactive media	40
ICAGAM413A	Design and create 3-D digital models	50
ICAGAM414A	Create audio for digital games	40
ICAGAM415A	Develop simple environments for 3-D games	30
ICAGAM416A	Prepare and complete image rendering processes	50
ICAGAM417A	Apply digital effects to interactive products	50
ICAGAM418A	Use simple modelling for animation	40
ICAGAM419A	Build a database to support a computer game	30
ICAGAM501A	Create design concepts for digital games and 3-D media	30
ICAGAM503A	Create a complex 3-D interactive computer game	60
ICAGAM504A	Manage interactive media production	40
ICAGAM506A	Create complex code for mobile game devices	60
ICAGAM507A	Develop intermediate 3-D software for games and interactive media	60
ICAGAM508A	Develop complex 3-D software for games and interactive media	60
ICAGAM509A	Design interactive 3-D applications for scientific and mathematical modelling	60
ICAGAM510A	Prepare games for different platforms and delivery modes	50
ICAGAM511A	Manage testing of games and interactive media	30
ICAGAM512A	Create and implement designs for a 3-D games environment	50
ICAGAM514A	Design and create models for a 3-D and digital effects environment	50
ICAGAM515A	Design and create advanced particles, fluids and bodies for 3-D digital effects	50
ICAGAM516A	Animate a 3-D character for digital games	40
ICAGAM517A	Produce a digital animation sequence	60
ICAGAM518A	Animate physical attributes of models and elements	30
ICAGAM519A	Manage technical art and rigging in 3-D animation	50
ICAGAM520A	Create and combine 3-D digital games and components	30
ICAGAM521A	Create interactive 3-D environments for digital games	30
ICAGAM522A	Complete digital editing for the 3-D and digital effects environment	20
ICAGAM523A	Collaborate in the design of 3-D game levels and environments	40
ICAGAM524A	Integrate multiple data sources into interactive 3-D environments	30
ICAGAM525A	Apply digital texturing for the 3-D environment in digital games	30
ICAGAM526A	Create complex 3-D characters for games	60
ICAGAM527A	Integrate database with online game	30
ICAGAM528A	Create games for mobile devices	60
ICAGAM529A	Analyse business opportunities in the digital games environment	30
ICAGAM530A	Develop and implement physics in a 3-D digital game	40

Unit Code	Unit Title	Nominal Hours
ICAGAM531A	Complete compositing to create elements for the 3-D and digital effects environment	40
ICAICT101A	Operate a personal computer	30
ICAICT102A	Operate word-processing applications	30
ICAICT103A	Use, communicate and search securely on the internet	50
ICAICT104A	Use digital devices	30
ICAICT105A	Operate spreadsheet applications	30
ICAICT106A	Operate presentation packages	25
ICAICT107A	Use personal productivity tools	20
ICAICT108A	Use digital literacy skills to access the internet	20
ICAICT201A	Use computer operating systems and hardware	60
ICAICT202A	Work and communicate effectively in an IT environment	40
ICAICT203A	Operate application software packages	60
ICAICT204A	Operate a digital media technology package	40
ICAICT205A	Design basic organisational documents using computing packages	40
ICAICT206A	Install software applications	20
ICAICT207A	Integrate commercial computing packages	60
ICAICT208A	Operate accounting applications	40
ICAICT209A	Interact with ICT clients	20
ICAICT210A	Operate database applications	40
ICAICT211A	Identify and use basic current industry-specific technologies	40
ICAICT212A	Incorporate Indigenous needs and perspectives into IT environment	20
ICAICT301A	Create user documentation	20
ICAICT302A	Install and optimise operating system software	20
ICAICT303A	Connect internal hardware components	20
ICAICT304A	Implement system software changes	40
ICAICT305A	Identify and use current industry-specific technologies	60
ICAICT306A	Migrate to new technology	20
ICAICT307A	Customise packaged software applications for clients	80
ICAICT308A	Use advanced features of computer applications	40
ICAICT401A	Determine and confirm client business requirements	40
ICAICT402A	Determine project specifications and secure client agreement	20
ICAICT403A	Apply software development methodologies	20
ICAICT404A	Use online learning tools	30
ICAICT405A	Develop detailed technical design	60
ICAICT406A	Build a graphical user interface	20
ICAICT407A	Maintain website information standards	30
ICAICT408A	Create technical documentation	20
ICAICT409A	Develop macros and templates for clients using standard products	60

Unit Code	Unit Title	Nominal Hours
ICAICT410A	Conduct post-implementation IT system reviews	30
ICAICT411A	Select and employ software and hardware testing tools	40
ICAICT412A	Coordinate and maintain IT work teams	20
ICAICT413A	Relate to clients on a business level	40
ICAICT415A	Provide one-to-one instruction	20
ICAICT416A	Contribute to the development of strategic plans	40
ICAICT417A	Identify, evaluate and apply current industry-specific technologies to meet industry standards	60
ICAICT418A	Contribute to copyright, ethics and privacy in an IT environment	40
ICAICT419A	Work effectively in the digital media industry	30
ICAICT420A	Develop client user interface	40
ICAICT421A	Connect, maintain and configure hardware components	40
ICAICT422A	Participate in IT services	20
ICAICT501A	Research and review hardware technology options for organisations	20
ICAICT502A	Develop detailed component specifications from project specifications	40
ICAICT503A	Validate quality and completeness of system design specifications	20
ICAICT504A	Confirm transition strategy for a new system	10
ICAICT505A	Determine acceptable developers for projects	30
ICAICT506A	Implement process re-engineering strategies	20
ICAICT507A	Select new technology models for business	20
ICAICT508A	Evaluate vendor products and equipment	20
ICAICT509A	Gather data to identify business requirements	30
ICAICT510A	Determine appropriate IT strategies and solutions	40
ICAICT511A	Match IT needs with the strategic direction of the enterprise	50
ICAICT512A	Plan process re-engineering strategies for business	30
ICAICT514A	Identify and manage the implementation of current industry-specific technologies	60
ICAICT515A	Verify client business requirements	40
ICAICT601A	Develop IT strategic and action plans	30
ICAICT602A	Develop contracts and manage contracted performance	30
ICAICT603A	Manage the use of appropriate development methodologies	30
ICAICT604A	Identify and implement business innovation	60
ICAICT605A	Implement a knowledge management strategy	30
ICAICT606A	Develop communities of practice	30
ICAICT608A	Interact with clients on a business level	40
ICAICT609A	Lead the evaluation and implementation of current industry-specific technologies	80
ICAICT610A	Manage copyright, ethics and privacy in an IT environment	30
ICAICT701A	Lead research into identifying new marketplace opportunities	80

Unit Code	Unit Title	Nominal Hours
ICAICT702A	Direct ICT services	80
ICAICT703A	Endorse business plan components for a new initiative	80
ICAICT704A	Direct ICT in a supply chain	80
ICAICT705A	Direct ICT procurement	80
ICAICT706A	Direct outsourced ICT services	80
ICAICT707A	Direct research and business response to new ICT technology	80
ICAICT708A	Direct the development of a knowledge management strategy for a business	80
ICAICT709A	Facilitate business analysis	80
ICAICT710A	Synchronise IT projects	80
ICAICT711A	Manage an information architecture project	80
ICAICT712A	Develop a business intelligence framework	80
ICAICT713A	Manage IT services	80
ICANWK301A	Provide network systems administration	60
ICANWK302A	Determine and action network problems	50
ICANWK303A	Configure and administer a network operating system	70
ICANWK304A	Administer network peripherals	20
ICANWK305A	Install and manage network protocols	40
ICANWK401A	Install and manage a server	40
ICANWK402A	Install and configure virtual machines for sustainable ICT	50
ICANWK403A	Manage network and data integrity	40
ICANWK404A	Install, operate and troubleshoot a small enterprise branch network	60
ICANWK405A	Build a small wireless local area network	20
ICANWK406A	Install, configure and test network security	50
ICANWK407A	Install and configure client-server applications and services	40
ICANWK408A	Configure a desktop environment	40
ICANWK409A	Create scripts for networking	60
ICANWK410A	Install hardware to a network	40
ICANWK411A	Deploy software to networked computers	40
ICANWK412A	Create network documentation	40
ICANWK414A	Create a common gateway interface script	40
ICANWK416A	Build security into virtual private networks	20
ICANWK417A	Build an enterprise wireless network	80
ICANWK418A	Implement backbone technologies in a local area network	40
ICANWK501A	Plan, implement and test enterprise communication solutions	80
ICANWK502A	Implement secure encryption technologies	20
ICANWK503A	Install and maintain valid authentication processes	25
ICANWK504A	Design and implement an integrated server solution	50
ICANWK505A	Design, build and test a network server	50

Unit Code	Unit Title	Nominal Hours
ICANWK506A	Configure, verify and troubleshoot WAN links and IP services in a medium enterprise network	90
ICANWK507A	Install, operate and troubleshoot medium enterprise routers	120
ICANWK508A	Install, operate and troubleshoot medium enterprise switches	90
ICANWK509A	Design and implement a security perimeter for ICT networks	60
ICANWK510A	Develop, implement and evaluate system and application security	60
ICANWK511A	Manage network security	80
ICANWK513A	Manage system security	50
ICANWK514A	Model preferred system solutions	30
ICANWK515A	Develop configuration management protocols	30
ICANWK516A	Determine best-fit topology for a local network	20
ICANWK517A	Determine best-fit topology for a wide area network	20
ICANWK518A	Design an enterprise wireless local area network	30
ICANWK519A	Design an IT security framework	30
ICANWK520A	Design IT system security controls	30
ICANWK521A	Install, configure and test a payment gateway	30
ICANWK522A	Build decks using wireless markup language	30
ICANWK524A	Install and configure network access storage devices	40
ICANWK525A	Configure an enterprise virtual computing environment	60
ICANWK526A	Install an enterprise virtual computing environment	60
ICANWK527A	Manage an enterprise virtual computing environment	60
ICANWK529A	Install and manage complex ICT networks	100
ICANWK531A	Configure an internet gateway	40
ICANWK532A	Identify and resolve network problems	50
ICANWK601A	Design and implement a security system	90
ICANWK602A	Plan, configure and test advanced server based security	80
ICANWK603A	Plan, configure and test advanced internetwork routing solutions	120
ICANWK604A	Plan and configure advanced internetwork switching solutions	120
ICANWK605A	Design and configure secure integrated wireless systems	40
ICANWK606A	Implement voice applications over secure wireless networks	40
ICANWK607A	Design and implement wireless network security	60
ICANWK608A	Configure network devices for a secure network infrastructure	40
ICANWK609A	Configure and manage intrusion prevention system on network sensors	40
ICANWK610A	Design and build integrated VoIP networks	50
ICANWK611A	Configure call processing network elements for secure VoIP networks	40
ICANWK612A	Plan and manage troubleshooting advanced integrated IP networks	120
ICANWK613A	Develop plans to manage structured troubleshooting process of enterprise networks	40

Unit Code	Unit Title	Nominal Hours
ICANWK614A	Manage IT security	80
ICAPMG401A	Support small scale IT projects	60
ICAPMG501A	Manage IT projects	80
ICAPMG601A	Establish IT project governance	40
ICAPMG602A	Manage IT project initiation	40
ICAPMG603A	Manage IT project planning	40
ICAPMG604A	Manage IT project delivery	40
ICAPMG605A	Manage IT project closure	40
ICAPMG606A	Manage IT project quality	40
ICAPMG607A	Manage and control IT project risks	40
ICAPMG608A	Manage IT project systems implementation	40
ICAPMG609A	Plan and direct complex IT projects	80
ICAPRG301A	Apply introductory programming techniques	40
ICAPRG401A	Maintain open-source code programs	20
ICAPRG402A	Apply query language	60
ICAPRG403A	Develop data-driven applications	60
ICAPRG404A	Test applications	50
ICAPRG405A	Automate processes	40
ICAPRG406A	Apply introductory object-oriented language skills	60
ICAPRG407A	Write script for software applications	40
ICAPRG409A	Develop mobile applications	50
ICAPRG410A	Build a user interface	50
ICAPRG412A	Configure and maintain databases	50
ICAPRG413A	Use a library or pre-existing components	40
ICAPRG414A	Apply introductory programming skills in another language	60
ICAPRG415A	Apply skills in object-oriented design	40
ICAPRG416A	Manage a software component reuse library	40
ICAPRG417A	Apply mathematical techniques for software development	30
ICAPRG418A	Apply intermediate programming skills in another language	80
ICAPRG419A	Analyse software requirements	60
ICAPRG425A	Use structured query language	60
ICAPRG426A	Prepare software development review	30
ICAPRG427A	Use XML effectively	50
ICAPRG428A	Use regular expressions in programming languages	40
ICAPRG501A	Apply advanced object-oriented language skills	80
ICAPRG502A	Manage a project using software management tools	60
ICAPRG503A	Debug and monitor applications	40
ICAPRG504A	Deploy an application to a production environment	40
ICAPRG505A	Build advanced user interface	60

Unit Code	Unit Title	Nominal Hours
ICAPRG506A	Design application architecture	40
ICAPRG507A	Implement security for applications	50
ICAPRG508A	Create mashups	50
ICAPRG509A	Build using rapid application development	40
ICAPRG510A	Maintain custom software	40
ICAPRG511A	Monitor and support data conversion to new IT system	10
ICAPRG512A	Prepare for the build phase of an IT system	20
ICAPRG513A	Coordinate the build phase of an IT system	20
ICAPRG514A	Prepare for software development using rapid application development	30
ICAPRG515A	Review developed software	30
ICAPRG516A	Develop integration blueprint for IT systems	20
ICAPRG517A	Install, test and evaluate pilot version of IT system	20
ICAPRG518A	Monitor the system pilot	20
ICAPRG520A	Validate an application design against specifications	40
ICAPRG523A	Apply advanced programming skills in another language	80
ICAPRG524A	Develop high-level object-oriented class specifications	60
ICAPRG525A	Build Java applets	30
ICAPRG526A	Maintain functionality of legacy code programs	40
ICAPRG527A	Apply intermediate object-oriented language skills	60
ICAPRG528A	Perform IT data conversion	20
ICAPRG529A	Apply testing techniques for software development	40
ICAPRG601A	Develop advanced mobile multi-touch applications	80
ICAPRG602A	Manage the development of technical solutions from business specifications	40
ICAPRG603A	Create cloud computing services	60
ICASAD401A	Develop and present feasibility reports	30
ICASAD501A	Model data objects	30
ICASAD502A	Model data processes	30
ICASAD503A	Minimise risk of new technologies to business solutions	30
ICASAD504A	Implement quality assurance processes for business solutions	30
ICASAD505A	Develop technical requirements for business solutions	30
ICASAD506A	Produce a feasibility report	30
ICASAD601A	Perform IT-focused enterprise analysis	40
ICASAD602A	Conduct knowledge audits	40
ICASAD603A	Plan and monitor business analysis activities in an IT environment	40
ICASAD604A	Manage and communicate IT solutions	40
ICASAD605A	Elicit IT requirements	40
ICASAD606A	Analyse stakeholder requirements	40
ICASAD607A	Manage assessment and validation of IT solutions	40

Unit Code	Unit Title	Nominal Hours
ICASAS201A	Maintain inventories for equipment, software and documentation	10
ICASAS202A	Apply problem-solving techniques to routine IT malfunctions	20
ICASAS203A	Connect hardware peripherals	20
ICASAS204A	Record client support requirements	10
ICASAS205A	Maintain IT system integrity	20
ICASAS206A	Detect and protect from spam and destructive software	10
ICASAS207A	Protect and secure information assets	20
ICASAS208A	Maintain IT equipment and consumables	20
ICASAS209A	Connect and use a home-based local wireless network	30
ICASAS301A	Run standard diagnostic tests	20
ICASAS303A	Care for computer hardware	20
ICASAS304A	Provide basic system administration	20
ICASAS305A	Provide IT advice to clients	40
ICASAS306A	Maintain equipment and software	20
ICASAS307A	Install, configure and secure a small office home office network	50
ICASAS401A	Perform unit test for a class	40
ICASAS402A	Implement configuration management strategies	30
ICASAS403A	Review site environmental factors prior to IT system implementation	20
ICASAS404A	Acquire IT system components	10
ICASAS405A	Identify and evaluate IT industry vendor technologies	10
ICASAS406A	Implement and hand over system components	20
ICASAS407A	Conduct pre-installation audit for software installation	20
ICASAS408A	Complete data transition in data migration process	20
ICASAS409A	Manage risks involving ICT systems and technology	20
ICASAS410A	Identify and resolve client IT problems	40
ICASAS411A	Assist with policy development for client support procedures	20
ICASAS412A	Action change requests	40
ICASAS413A	Manage resolution of system faults on a live system	40
ICASAS414A	Evaluate system status	20
ICASAS415A	Optimise IT system performance	30
ICASAS416A	Implement maintenance procedures	10
ICASAS417A	Undertake IT system capacity planning	50
ICASAS418A	Monitor and administer security of an IT system	30
ICASAS419A	Support system software	50
ICASAS420A	Provide first-level remote help-desk support	30
ICASAS421A	Support users and troubleshoot desktop applications	20
ICASAS422A	Scope implementation requirements	20
ICASAS424A	Support different operating systems	40
ICASAS425A	Configure and troubleshoot operating system software	40

Unit Code	Unit Title	Nominal Hours
ICASAS426A	Locate and troubleshoot IT equipment, system and software faults	40
ICASAS501A	Develop, implement and evaluate an incident response plan	30
ICASAS502A	Establish and maintain client user liaison	20
ICASAS503A	Perform systems tests	30
ICASAS504A	Develop and conduct client acceptance test	20
ICASAS505A	Review and update disaster recovery and contingency plans	30
ICASAS506A	Update IT system operational procedures	30
ICASAS507A	Implement and evaluate systems for regulatory and standards compliance	20
ICASAS509A	Provide client IT support services	20
ICASAS510A	Review and develop IT maintenance strategy	30
ICASAS511A	Prioritise IT change requests	20
ICASAS512A	Review and manage delivery of maintenance services	20
ICASAS513A	Develop detailed test plans	30
ICASAS514A	Perform integration tests	30
ICASAS515A	Manage the testing process	20
ICASAS516A	Perform stress and load tests on integrated platforms	30
ICASAS517A	Use network tools	50
ICASAS518A	Install and upgrade operating systems	50
ICASAS601A	Implement change-management processes	30
ICASUS701A	Plan and manage virtualisation for IT sustainability	80
ICASUS702A	Conduct a business case study for integrating sustainability in IT planning and design projects	80
ICASUS703A	Research strategies using SAP solutions for sustainable economic and environmental outcomes	80
ICAWEB201A	Use social media tools for collaboration and engagement	20
ICAWEB301A	Create a simple markup language document	30
ICAWEB302A	Build simple websites using commercial programs	40
ICAWEB303A	Produce digital images for the web	30
ICAWEB401A	Design a website to meet technical requirements	40
ICAWEB402A	Confirm accessibility of websites for people with special needs	10
ICAWEB403A	Transfer content to a website using commercial packages	20
ICAWEB404A	Maintain website performance	30
ICAWEB405A	Monitor traffic and compile website traffic reports	15
ICAWEB406A	Create website testing procedures	20
ICAWEB407A	Conduct operational acceptance tests of websites	20
ICAWEB408A	Ensure basic website security	20
ICAWEB409A	Develop cascading style sheets	20
ICAWEB410A	Apply web authoring tool to convert client data for websites	20
ICAWEB411A	Produce basic client-side script for dynamic web pages	40

Unit Code	Unit Title	Nominal Hours
ICAWEB412A	Produce interactive web animation	80
ICAWEB413A	Optimise search engines	50
ICAWEB414A	Design simple web page layouts	50
ICAWEB415A	Produce server-side script for dynamic web pages	60
ICAWEB416A	Customise content management system	80
ICAWEB417A	Integrate social web technologies	40
ICAWEB418A	Use development software and IT tools to build a basic website	20
ICAWEB419A	Develop guidelines for uploading information to a website	20
ICAWEB420A	Write content for web pages	30
ICAWEB421A	Ensure website content meets technical protocols and standards	30
ICAWEB422A	Ensure website access and useability	15
ICAWEB423A	Ensure dynamic website security	30
ICAWEB424A	Evaluate and select a web hosting service	15
ICAWEB425A	Apply structured query language to extract and manipulate data	60
ICAWEB429A	Create a markup language document to specification	20
ICAWEB501A	Build a dynamic website	60
ICAWEB502A	Create dynamic web pages	40
ICAWEB503A	Create web-based programs	60
ICAWEB504A	Build a document using eXtensible markup language	30
ICAWEB505A	Develop complex web page layouts	40
ICAWEB506A	Develop complex cascading style sheets	40
ICAWEB507A	Customise a complex IT content management system	80
ICAWEB508A	Develop website information architecture	30
ICAWEB509A	Use site server tools for transaction management	20
ICAWEB510A	Analyse information and assign meta-tags	20
ICAWEB511A	Implement quality assurance process for websites	20
ICAWEB512A	Administer business websites and servers	30
ICAWEB515A	Implement and use web services	50
ICAWEB516A	Research and apply emerging web technology trends	80

SAMPLE TRAINING PROGRAMS

A range of Sample Training Plans have been provided to demonstrate the flexibility of qualifications contained in the **ICA11 Information and Communications Technology Training Package**, but are by no means mandatory.

Occupation / Work Function	Entry level qualification (see TP)	
Qualification Title	Certificate I in Information, Digital Media and Technology	
Qualification Code	ICA10111	
Unit Code	**Unit Title**	**Hours**
Core		
ICAICT101A	Operate a personal computer	30
ICAICT102A	Operate word-processing applications	30
ICAICT103A	Use, communicate and search securely on the internet	50
ICAICT104A	Use digital devices	30
Electives		
ICAICT105A	Operate spreadsheet applications	30
ICAICT106A	Operate presentation packages	25
Total Hours		**195**

Occupation / Work Function	Junior ICT & Office Support	
Qualification Title	Certificate II in Information, Digital Media and Technology	
Qualification Code	ICA20111	
Unit Code	**Unit Title**	**Hours**
Core		
BSBOHS201A	Participate in OHS processes	20
BSBSUS201A	Participate in environmentally sustainable work practices	20
ICAICT201A	Use computer operating systems and hardware	60
ICAICT202A	Work and communicate effectively in an IT environment	40
ICAICT203A	Operate application software packages	60
ICAICT204A	Operate a digital media technology package	40
ICAWEB201A	Use social media tools for collaboration and engagement	20
Electives		
ICAICT205A	Design basic organisational documents using computing packages	40
ICAICT207A	Integrate commercial computing packages	60
ICAICT211A	Identify and use basic current industry-specific technologies	40
ICAICT210A	Operate database applications	40
ICASAS208A	Maintain IT equipment and consumables	20
ICASAS202A	Apply problem-solving techniques to routine IT malfunctions	20
ICASAS204A	Record client support requirements	10
Total Hours		**490**

Occupation / Work Function	IT Support Assistant	
Qualification Title	Certificate III in Information, Digital Media and Technology	
Qualification Code	ICA30111	
Description	Appropriate for a person providing technical support on software and web based applications either via a call centre or on customer premises. This role includes providing IT advice to clients, providing basic website administration and customising client software.	
Unit Code	**Unit Title**	**Hours**
Core		
BSBOHS302B	Participate effectively in OHS communication and consultative processes	30
BSBSUS301A	Implement and monitor environmentally sustainable work practices	40
ICAICT202A	Work and communicate effectively in an IT environment	40
ICAICT301A	Create user documentation	20
ICAICT302A	Install and optimise operating system software	20
ICASAS301A	Run standard diagnostic tests	20
Electives — Group A Applications		
ICAICT203A	Operate application software packages	60
ICAICT304A	Implement system software changes	40
ICAICT307A	Customise packaged software applications for clients	80
ICAICT308A	Use advanced features of computer applications	40
ICAICT409A	Develop macros and templates for clients using standard products	60
Electives from any other specialist group or from Group F General electives		
ICAICT306A	Migrate to new technology	20
ICAICT305A	Identify and use current industry-specific technologies	60
BSBEBU401A	Review and maintain a website	50
ICAWEB302A	Build simple websites using commercial programs	40
ICASAS305A	Provide IT advice to clients	40
ICASAS306A	Maintain equipment and software	20
Total Hours		**680**

Occupation / Work Function	Junior IT Officer	
Qualification Title	Certificate III in Information, Digital Media and Technology	
Qualification Code	ICA30111	
Description	Appropriate for a person providing technical support computing equipment and support at either enterprise or customer premises. This role includes providing IT advice to clients, providing basic system and equipment administration and small office networking.	
Unit Code	**Unit Title**	**Hours**
Core		
BSBOHS302B	Participate effectively in OHS communication and consultative processes	30
BSBSUS301A	Implement and monitor environmentally sustainable work practices	40
ICAICT202A	Work and communicate effectively in an IT environment	40
ICAICT301A	Create user documentation	20
ICAICT302A	Install and optimise operating system software	20
ICASAS301A	Run standard diagnostic tests	20
Electives Group **C** *—Support*		
ICAICT303A	Connect internal hardware components	20
ICASAS303A	Care for computer hardware	20
ICASAS304A	Provide basic system administration	20
ICASAS305A	Provide IT advice to clients	40
ICASAS306A	Maintain equipment and software	20
Electives from any other specialist group or from Group F General electives		
ICAICT306A	Migrate to new technology	20
ICAICT305A	Identify and use current industry-specific technologies	60
ICANWK302A	Determine and action network problems	50
ICANWK304A	Administer network peripherals	20
ICASAS307A	Install, configure and secure a small office home office network	50
ICANWK305A	Install and manage network protocols	40
Total Hours		**530**

Occupation / Work Function	Web Application Support	
Qualification Title	Certificate III in Information, Digital Media and Technology	
Qualification Code	ICA30111	
Description	Appropriate for a person providing website support and technical support of web based applications either via a call centre or on customer premises. This role includes providing IT advice to clients, providing basic website administration and maintaining websites.	
Unit Code	**Unit Title**	**Hours**
Core		
BSBOHS302B	Participate effectively in OHS communication and consultative processes	30
BSBSUS301A	Implement and monitor environmentally sustainable work practices	40
ICAICT202A	Work and communicate effectively in an IT environment	40
ICAICT301A	Create user documentation	20
ICAICT302A	Install and optimise operating system software	20
ICASAS301A	Run standard diagnostic tests	20
Electives — Group D *Web Technologies*		
BSBEBU401A	Review and maintain a website	50
ICAWEB201A	Use social media tools for collaboration and engagement	20
ICAWEB301A	Create a simple markup language document	30
ICAWEB302A	Build simple websites using commercial programs	40
ICAWEB303A	Produce digital images for the web	30
Electives from any other specialist group or from Group F General Electives		
BSBIPR301A	Comply with organisational requirements for protection and use of intellectual property	40
ICAICT305A	Identify and use current industry-specific technologies	60
CUFANM301A	Create 2D digital animations	35
ICAGAM303A	Review and apply the principles of animation	60
CUFDIG304A	Create visual design components	30
CUFDIG302A	Author interactive sequences	40
Total Hours		**605**

Occupation / Work Function	Networking, Generic, Technical Support, Programming
Qualification Title	Certificate IV in Information Technology
Qualification Code	ICA40111
Description	Qualification has been devised to provide general Technical Support skills and fundamental programming skills. Technical Support Help Desk professionals are usually the first point of contact for either external clients or internal customers who require help with problems or queries regarding technical issues. Entry programmer assists in the translation or requirements for new or modified computer applications into program specifications. This may involve installing IT, designing, modifying, testing and writing programs, supporting work teams and solving problems with software. The role requires knowledge of a variety of programming languages.

Unit Code	Unit Title	Hours
Core		
BSBOHS302B	Participate effectively in OHS communication and consultative processes	30
BSBSUS301A	Implement and monitor environmentally sustainable work practices	40
ICAICT202A	Work and communicate effectively in an IT environment	40
ICAICT401A	Determine and confirm client business requirements	40
ICAICT418A	Contribute to copyright, ethics and privacy in an IT environment	40
Electives		
Group A Networking		
ICANWK404A	Install, operate and troubleshoot a small enterprise branch network	60
ICANWK405A	Build a small wireless local area network	20
ICANWK409A	Create scripts for networking	60
Group B Programming		
ICAPRG401A	Maintain open-source code programs	20
ICAPRG406A	Apply introductory object-oriented language skills	60
ICAPRG418A	Apply intermediate programming skills in another language	80
ICAPRG425A	Use structured query language	60
Group C IT Support		
ICADBS403A	Create basic databases	40
ICAICT406A	Build a graphical user interface	20
ICAICT408A	Create technical documentation	20
ICAICT417A	Identify, evaluate and apply current industry-specific technologies to meet industry standards	60

| ICASAS410A | Identify and resolve client IT problems | 40 |

Continued

Occupation / Work Function	Networking, Generic, Technical Support, Programming	
Qualification Title	Certificate IV in Information Technology	
Qualification Code	ICA40111	
Unit Code	**Unit Title**	**Hours**
Group D Web Design and Development		
ICAWEB420A	Write content for web pages	30
Group G Project Management		
ICAPMG401A	Support small scale IT projects	60
Electives from elsewhere in ICA11		
ICTTEN4199A	Install, configure and test a router	60
Total Hours		**880**

Occupation / Work Function	Level 1 Helpdesk
Qualification Title	Certificate IV in Information Technology Support
Qualification Code	ICA40211
Description	Appropriate for a person providing technical support for enterprise or customer premises running networked computer and software applications. This role includes providing IT advice and instruction to clients, troubleshooting applications, remote network administration and systems maintenance.

Unit Code	Unit Title	Hours
Core		
BSBOHS402B	Contribute to the implementation of the OHS consultation process	40
BSBSUS301A	Implement and monitor environmentally sustainable work practices	40
ICAICT401A	Determine and confirm client business requirements	40
ICAICT408A	Create technical documentation	20
ICAICT418A	Contribute to copyright, ethics and privacy in an IT environment	40
ICASAS307A	Install, configure and secure a small office home office network	50
ICASAS410A	Identify and resolve client IT problems	40
ICASAS412A	Action change requests	40
Electives —Group **C** *Service desk*		
ICAICT421A	Connect, maintain and configure hardware components	40
ICASAS414A	Evaluate system status	20
ICASAS421A	Support users and troubleshoot desktop applications	20
ICASAS425A	Configure and troubleshoot operating system software	40
ICASAS426A	Locate and troubleshoot IT equipment, system and software faults	40
Electives from other Specialist Groups or from Group E Electives		
ICAICT413A	Relate to clients on a business level	40
ICAICT415A	Provide one-to-one instruction	20
ICAICT422A	Participate in IT services	20
ICANWK409A	Create scripts for networking	60
ICANWK411A	Deploy software to networked computers	40
ICASAS411A	Assist with policy development for client support procedures	20
ICASAS413A	Manage resolution of system faults on a live system	40
ICASAS416A	Implement maintenance procedures	10
ICASAS420A	Provide first-level remote help-desk support	30

Total Hours	**750**

Occupation / Work Function	Webmaster	
Qualification Title	Certificate IV in Web-Based Technologies	
Qualification Code	ICA40311	
Description	A webmaster is responsible for maintaining websites for individuals and companies and for ensuring that they are easy to navigate and address the needs of the client and the target audience. The core job of a webmaster is to monitor, maintain and update the performance of existing websites. Technical tasks are performed to make sure that a website works properly and can be accessed quickly. Additionally, a webmaster is responsible for; search engine optimisation, file security, making sure the web server hardware and software is running properly and examining traffic of sites.	
Unit Code	**Unit Title**	**Hours**
Core		
BSBOHS302B	Participate effectively in OHS communication and consultative processes	30
ICAICT401A	Determine and confirm client business requirements	40
ICAICT418A	Contribute to copyright, ethics and privacy in an IT environment	40
ICAWEB401A	Design a website to meet technical requirements	40
ICAWEB402A	Confirm accessibility of websites for people with special needs	10
ICAWEB403A	Transfer content to a website using commercial packages	20
ICAWEB424A	Evaluate and select a web hosting service	15
ICAWEB429A	Create a markup language document to specification	20
Electives **Group A Administration**		
ICAWEB404A	Maintain website performance	30
ICAWEB405A	Monitor traffic and compile website traffic reports	15
ICAWEB406A	Create website testing procedures	20
ICAWEB407A	Conduct operational acceptance tests of websites	20
ICAWEB408A	Ensure basic website security	20
Electives from other Specialist Groups — Group B Design and Development		
ICAWEB409A	Develop cascading style sheets	20
ICADBS403A	Create basic databases	40
ICAWEB411A	Produce basic client-side script for dynamic web pages	40
ICAWEB415A	Produce server-side script for dynamic web pages	60
ICAWEB425A	Apply structured query language to extract and manipulate data	60
Group C General electives, or elsewhere in ICA11		
ICANWK401A	Install and manage a server	40
ICAWEB413A	Optimise search engines	50
ICAWEB414A	Design simple web page layouts	50
ICAWEB421A	Ensure website content meets technical protocols and standards	30
Total Hours		**710**

Occupation / Work Function	Network support technician	
Qualification Title	Certificate IV in Information Technology Networking	
Qualification Code	ICA40411	
Description	Appropriate for an for an individual installing and managing small scale networks either as an independent network support technician or as part of a team.	
Unit Code	**Unit Title**	**Hours**
Core		
BSBOHS302B	Participate effectively in OHS communication and consultative processes	30
ICAICT401A	Determine and confirm client business requirements	40
ICAICT418A	Contribute to copyright, ethics and privacy in an IT environment	40
ICANWK401A	Install and manage a server	40
ICANWK402A	Install and configure virtual machines for sustainable ICT	50
ICANWK403A	Manage network and data integrity	40
ICANWK404A	Install, operate and troubleshoot a small enterprise branch network	60
ICTTEN4198A	Install, configure and test an internet protocol network	50
Electives from list		
ICANWK409A	Create scripts for networking	60
ICANWK406A	Install, configure and test network security	50
ICASAS426A	Locate and troubleshoot IT equipment, system and software faults	40
ICANWK408A	Configure a desktop environment	40
ICANWK412A	Create network documentation	40
ICANWK410A	Install hardware to a network	40
ICANWK405A	Build a small wireless local area network	20
ICTTEN4199A	Install, configure and test a router	60
Electives from elsewhere in ICA11		
ICANWK507A	Install, operate and troubleshoot medium enterprise routers	120
Total Hours		**820**

Occupation / Work Function	Assistant Programmer
Qualification Title	Certificate IV in Programming
Qualification Code	ICA40511
Description	This qualification develops basic programming skills in programming languages, which allows them to work as an assistant programmer in a team of software developers.

Unit Code	Unit Title	Hours
Core		
ICAICT418A	Contribute to copyright, ethics and privacy in an IT environment	40
ICAPRG402A	Apply query language	60
ICAPRG403A	Develop data-driven applications	60
ICAPRG404A	Test applications	50
ICAPRG405A	Automate processes	40
ICAPRG406A	Apply introductory object-oriented language skills	60
ICAPRG410A	Build a user interface	50
ICAPRG414A	Apply introductory programming skills in another language	60
ICAPRG415A	Apply skills in object-oriented design	40
ICAPRG419A	Analyse software requirements	60
Electives from list		
ICAICT417A	Identify, evaluate and apply current industry-specific technologies to meet industry standards	60
ICAPMG401A	Support small scale IT projects	60
ICASAD401A	Develop and present feasibility reports	30
ICAPRG427A	Use XML effectively	50
ICAPRG418A	Apply intermediate programming skills in another language	80
Electives from elsewhere in ICA11		
ICAICT401A	Determine and confirm client business requirements	40
ICAWEB429A	Create a markup language document to specification	20
ICASAS401A	Perform unit test for a class	40
Total Hours		**900**

Occupation / Work Function	Junior Web Tester	
Qualification Title	Certificate IV in Information Technology Testing	
Qualification Code	ICA40611	
Unit Code	Unit Title	Hours
Core		
BSBSUS301A	Implement and monitor environmentally sustainable work practices	40
ICAICT401A	Determine and confirm client business requirements	40
ICAICT408A	Create technical documentation	20
ICAICT411A	Select and employ software and hardware testing tools	40
ICAICT418A	Contribute to copyright, ethics and privacy in an IT environment	40
ICAPMG401A	Support small scale IT projects	60
ICAPRG405A	Automate processes	40
ICASAS301A	Run standard diagnostic tests	20
Electives from list		
ICAPRG404A	Test applications	50
ICASAS503A	Perform systems tests	30
ICASAS504A	Develop and conduct client acceptance test	20
ICASAS515A	Manage the testing process	20
ICASAS516A	Perform stress and load tests on integrated platforms	30
ICAWEB406A	Create website testing procedures	20
ICAWEB407A	Conduct operational acceptance tests of websites	20
ICAWEB423A	Ensure dynamic website security	30
Electives from elsewhere in ICA11		
ICAWEB415A	Produce server-side script for dynamic web pages	60
ICAWEB421A	Ensure website content meets technical protocols and standards	30
ICAWEB422A	Ensure website access and useability	15
ICAWEB429A	Create a markup language document to specification	20
Total Hours		**645**

Occupation / Work Function	Junior Systems Support	
Qualification Title	Certificate IV in Systems Analysis and Design	
Qualification Code	ICA40711	
Unit Code	Unit Title	Hours
Core		
BSBSUS301A	Implement and monitor environmentally sustainable work practices	40
ICAICT401A	Determine and confirm client business requirements	40
ICAICT403A	Apply software development methodologies	20
ICAICT405A	Develop detailed technical design	60
ICAICT418A	Contribute to copyright, ethics and privacy in an IT environment	40
ICAPRG405A	Automate processes	40
ICASAD401A	Develop and present feasibility reports	30
Electives from list		
BSBCRT401A	Articulate, present and debate ideas	40
ICADBS401A	Identify physical database requirements	80
ICAICT402A	Determine project specifications and secure client agreement	20
ICAICT413A	Relate to clients on a business level	40
ICAPMG401A	Support small scale IT projects	60
ICAPRG406A	Apply introductory object-oriented language skills	60
ICAPRG415A	Apply skills in object-oriented design	40
ICAPRG425A	Use structured query language	60
ICAICT408A	Create technical documentation	20
ICADBS412A	Build a database	30
ICAPRG404A	Test applications	50
Electives from elsewhere in ICA11		
ICAICT503A	Validate quality and completeness of system design specifications	20
ICAPRG410A	Build a user interface	50
ICAPRG427A	Use XML effectively	50
ICASAS401A	Perform unit test for a class	40
Total Hours		**930**

Occupation / Work Function	Multimedia Developer and web developer	
Qualification Title	Certificate IV in Digital Media Technologies	
Qualification Code	ICA40811	
Unit Code	**Unit Title**	**Hours**
Core		
BSBCRT401A	Articulate, present and debate ideas	40
BSBOHS302B	Participate effectively in OHS communication and consultative processes	30
CUFDIG401A	Author interactive media	50
ICAICT404A	Use online learning tools	30
ICAICT418A	Contribute to copyright, ethics and privacy in an IT environment	40
ICAICT419A	Work effectively in the digital media industry	30
ICAPMG401A	Support small scale IT projects	60
Specialist elective units		
Group A Web development		
ICAWEB301A	Create a simple markup language document	30
ICAWEB409A	Develop cascading style sheets	20
ICAWEB411A	Produce basic client-side script for dynamic web pages	40
ICAWEB414A	Design simple web page layouts	50
ICAWEB406A	Create website testing procedures	20
Group C Interactive media		
CUFANM301A	Create 2D digital animations	35
ICADMT401A	Create visual design components for digital media	40
ICADMT402A	Produce interactive animation	60
ICADMT403A	Produce and edit digital images	40
Group D General electives		
ICADBS412A	Build a database	30
Total Hours		**645**

Occupation / Work Function	Junior Games Designer	
Qualification Title	Certificate IV in Digital and Interactive Games	
Qualification Code	ICA40911	
Unit Code	Unit Title	Hours
Core		
BSBOHS302B	Participate effectively in OHS communication and consultative processes	30
ICAGAM401A	Produce an interactive game	60
ICAICT418A	Contribute to copyright, ethics and privacy in an IT environment	40
ICAICT419A	Work effectively in the digital media industry	30
Electives		
Group A Design		
CUFPPM404A	Create storyboards	40
Group B Programming		
ICAICT406A	Build a graphical user interface	20
ICAPRG301A	Apply introductory programming techniques	40
ICAPRG405A	Automate processes	40
ICAPRG406A	Apply introductory object-oriented language skills	60
ICAPRG413A	Use a library or pre-existing components	40
Group C Art		
CUFANM302A	Create 3D digital animations	75
CUFANM303A	Create 3D digital models	75
ICADMT403A	Produce and edit digital images	40
ICAGAM301A	Apply simple modelling techniques	50
ICAGAM302A	Design and apply simple textures to digital art	50
ICAGAM418A	Use simple modelling for animation	40
Total Hours		**730**

Occupation / Work Function	HelpDesk Support Officer	
Qualification Title	Certificate IV in Computer Systems Technology	
Qualification Code	ICA41011	
Description	Appropriate for a person with a broad range of skills in installing, testing and fault finding in computer networks and computing equipment.	
Unit Code	**Unit Title**	**Hours**
Core		
BSBOHS302B	Participate effectively in OHS communication and consultative processes	30
BSBSUS301A	Implement and monitor environmentally sustainable work practices	40
ICAICT401A	Determine and confirm client business requirements	40
ICAICT418A	Contribute to copyright, ethics and privacy in an IT environment	40
ICAICT421A	Connect, maintain and configure hardware components	40
ICANWK404A	Install, operate and troubleshoot a small enterprise branch network	60
ICANWK405A	Build a small wireless local area network	20
ICAPRG414A	Apply introductory programming skills in another language	60
ICASAS425A	Configure and troubleshoot operating system software	40
ICASAS426A	Locate and troubleshoot IT equipment, system and software faults	40
ICAWEB411A	Produce basic client-side script for dynamic web pages	40
ICTTEN4199A	Install, configure and test a router	60
Electives		
ICAPRG406A	Apply introductory object-oriented language skills	60
ICAICT405A	Develop detailed technical design	60
ICANWK401A	Install and manage a server	40
ICANWK402A	Install and configure virtual machines for sustainable ICT	50
ICAPMG401A	Support small scale IT projects	60
Electives from other endorsed training packages		
UEENEEE003B*	Solve problems in extra-low voltage single path circuits	40
UEENEEE004B*	Solve problems in multiple path d.c. circuits	40
UEENEEE019C	Solve problems in multiple path a.c. circuits	40
Total Hours		**900**

*UEENEEE003B is a pre-requisite to UEENEEE004B which is a pre-requisite to UEENEEE019C
.

Occupation / Work Function	Software developer, web developer, network analyst, analyst/programmer, network system administrator and general IT systems support	
Qualification Title	Diploma of Information Technology	
Qualification Code	ICA50111	
Notes	This qualification provides the skills and knowledge for an individual to administer and manage information and communications technology (ICT) support in small-to-medium enterprises (SMEs) using a wide range of general ICT technologies	
Unit Code	**Unit Title**	**Hours**
Core		
BSBOHS509A	Ensure a safe workplace	60
BSBSUS501A	Develop workplace policy and procedures for sustainability	50
ICAICT509A	Gather data to identify business requirements	30
ICAICT511A	Match IT needs with the strategic direction of the enterprise	50
Group A Networking		
ICANWK507A	Install, operate and troubleshoot medium enterprise routers	120
ICANWK508A	Install, operate and troubleshoot medium enterprise switches	90
ICANWK509A	Design and implement a security perimeter for ICT networks	60
ICANWK511A	Manage network security	80
ICANWK531A	Configure an internet gateway	40
Group B Programming		
ICAPRG503A	Debug and monitor applications	40
ICAPRG523A	Apply advanced programming skills in another language	80
ICAPRG524A	Develop high-level object-oriented class specifications	60
ICAPRG527A	Apply intermediate object-oriented language skills	60
ICASAD502A	Model data processes	30
Group C IT support		
ICAICT510A	Determine appropriate IT strategies and solutions	40
Group D Web design and development		
ICAWEB501A	Build a dynamic website	60
ICAWEB502A	Create dynamic web pages	40
ICAWEB503A	Create web-based programs	60
ICAWEB507A	Customise a complex IT content management system	80
ICAWEB508A	Develop website information architecture	30
Total Hours		**1160**

Occupation / Work Function	Assistant Games Designer/Animator
Qualification Title	Diploma of Digital and Interactive Games
Qualification Code	ICA50211
Description	Assistant Graphic Media Developers take the creative plans developed by game designers and artists and 2D and 3D skills the programs necessary to render the games programs. Games Programmers will take the work of Graphic Media Developers to integrate their work into the game stages and then run tests to see how games work, making corrections as needed.
Notes	* This selection of units focuses solely on art development for games development. There is NO consideration for programming in this selection.

Unit Code	Unit Title	Hours
Core		
BSBOHS402B	Contribute to the implementation of the OHS consultation process	40
ICAGAM501A	Create design concepts for digital games and 3-D media	30
ICAGAM503A	Create a complex 3-D interactive computer game	60
ICAGAM523A	Collaborate in the design of 3-D game levels and environments	40
ICAICT419A	Work effectively in the digital media industry	30
Electives		
Group B Art		
ICAGAM512A	Create and implement designs for a 3-D games environment	50
ICAGAM514A	Design and create models for a 3-D and digital effects environment	50
ICAGAM515A	Design and create advanced particles, fluids and bodies for 3-D digital effects	50
ICAGAM516A	Animate a 3-D character for digital games	40
ICAGAM517A	Produce a digital animation sequence	60
ICAGAM518A	Animate physical attributes of models and elements	30
ICAGAM519A	Manage technical art and rigging in 3-D animation	50
ICAGAM520A	Create and combine 3-D digital games and components	30
ICAGAM526A	Create complex 3-D characters for games	60
Group C Digital media		
ICAGAM521A	Create interactive 3-D environments for digital games	30
ICAGAM525A	Apply digital texturing for the 3-D environment in digital games	30
Total Hours		**680**

Occupation / Work Function	Systems Administrator	
Qualification Title	Diploma of Information Technology Systems Administration	
Qualification Code	ICA50311	
Description	Appropriate for a person administering a variety of networked computer systems.	
Unit Code	Unit Title	Hours
Core		
BSBSUS501A	Develop workplace policy and procedures for sustainability	50
ICAICT418A	Contribute to copyright, ethics and privacy in an IT environment	40
ICAICT509A	Gather data to identify business requirements	30
ICANWK513A	Manage system security	50
ICASAS406A	Implement and hand over system components	20
ICASAS502A	Establish and maintain client user liaison	20
ICASAS505A	Review and update disaster recovery and contingency plans	30
ICASAS512A	Review and manage delivery of maintenance services	20
ICASAS515A	Manage the testing process	20
ICTTEN5204A	Produce technical solutions from business specifications	50
Electives from list		
ICAICT501A	Research and review hardware technology options for organisations	20
ICAICT511A	Match IT needs with the strategic direction of the enterprise	50
ICANWK526A	Install an enterprise virtual computing environment	60
ICANWK527A	Manage an enterprise virtual computing environment	60
ICASAS517A	Use network tools	50
Electives from elsewhere in ICA11		
ICASAS518A	Install and upgrade operating systems	50
ICAPMG501A	Manage IT projects	80
ICANWK529A	Install and manage complex ICT networks	100
ICANWK505A	Design, build and test a network server	50
Total Hours		**850**

Occupation / Work Function	Network Support Technician	
Qualification Title	Diploma of Information Technology Networking	
Qualification Code	ICA50411	
Description	Network administrators provide operational support for and management of computer networks to ensure they run efficiently. The IT networks can range from internet and private networks to large communications networks.	
Unit Code	**Unit Title**	**Hours**
Core		
ICAICT418A	Contribute to copyright, ethics and privacy in an IT environment	40
ICAICT511A	Match IT needs with the strategic direction of the enterprise	50
ICANWK529A	Install and manage complex ICT networks	100
ICTSUS5187A	Implement server virtualisation for a sustainable ICT system	80
ICTTEN6206A	Produce an ICT network architecture design	60
Electives		
ICANWK503A	Install and maintain valid authentication processes	25
ICANWK506A	Configure, verify and troubleshoot WAN links and IP services in a medium enterprise network	90
ICANWK507A	Install, operate and troubleshoot medium enterprise routers	120
ICANWK508A	Install, operate and troubleshoot medium enterprise switches	90
ICANWK509A	Design and implement a security perimeter for ICT networks	60
ICANWK510A	Develop, implement and evaluate system and application security	60
ICTTEN5201A	Install, configure and test a server	60
ICANWK511A	Manage network security	80
ICAPMG501A	Manage IT projects	80
ICTTEN5204A	Produce technical solutions from business specifications	50
ICTTEN4213A	Configure and troubleshoot advanced network switching	80
Total Hours		**1125**

Occupation / Work Function	Database administrator / Database developer	
Qualification Title	Diploma of Database Design and Development	
Qualification Code	ICA50511	
Description	Database administrators design, implement, maintain and repair an organisation's database. The role includes developing and designing the database strategy, monitoring and improving database performance and capacity, and planning for future expansion requirements. They may also plan, co-ordinate and implement security measures to safeguard the database.	
Unit Code	**Unit Title**	**Hours**
Core		
ICADBS502A	Design a database	50
ICAICT418A	Contribute to copyright, ethics and privacy in an IT environment	40
ICAICT502A	Develop detailed component specifications from project specifications	40
ICANWK514A	Model preferred system solutions	30
ICAPRG425A	Use structured query language	60
ICAPRG509A	Build using rapid application development	40
ICASAD501A	Model data objects	30
ICASAD502A	Model data processes	30
ICTSUS6233A	Integrate sustainability in ICT planning and design projects	55
Electives		
ICAPRG501A	Apply advanced object-oriented language skills	80
ICAPRG523A	Apply advanced programming skills in another language	80
ICAWEB502A	Create dynamic web pages	40
ICASAS505A	Review and update disaster recovery and contingency plans	30
ICASAS502A	Establish and maintain client user liaison	20
ICTTEN5204A	Produce technical solutions from business specifications	50
ICAPRG507A	Implement security for applications	50
ICADBS504A	Integrate database with a website	25
Electives from elsewhere in ICA11		
ICAPRG418A	Apply intermediate programming skills in another language	80
ICAPRG527A	Apply intermediate object-oriented language skills	60
ICAPRG529A	Apply testing techniques for software development	40
Total Hours		**930**

Occupation / Work Function	Web Developer/Programmer	
Qualification Title	Diploma of Website Development	
Qualification Code	ICA50611	
Unit Code	**Unit Title**	**Hours**
Core		
BSBOHS509A	Ensure a safe workplace	60
ICADBS504A	Integrate database with a website	25
ICAICT418A	Contribute to copyright, ethics and privacy in an IT environment	40
ICAICT515A	Verify client business requirements	40
ICAWEB501A	Build a dynamic website	60
ICAWEB502A	Create dynamic web pages	40
ICAWEB503A	Create web-based programs	60
ICAWEB516A	Research and apply emerging web technology trends	80
Electives		
ICAPRG418A	Apply intermediate programming skills in another language	80
ICAWEB505A	Develop complex web page layouts	40
ICAWEB506A	Develop complex cascading style sheets	40
ICAWEB508A	Develop website information architecture	30
ICAWEB504A	Build a document using eXtensible markup language	30
ICADBS412A	Build a database	30
ICADBS502A	Design a database	50
ICAPRG425A	Use structured query language	60
ICAPRG501A	Apply advanced object-oriented language skills	80
ICAPRG523A	Apply advanced programming skills in another language	80
ICAPRG413A	Use a library or pre-existing components	40
ICAPRG527A	Apply intermediate object-oriented language skills	60
Total Hours		**1025**

Occupation / Work Function	Software Developer / Programmer	
Qualification Title	Diploma of Software Development	
Qualification Code	ICA50711	
Description	A software developer designs codes and implements computer solutions for individuals and companies. A software developer may be responsible for ensuring software created meets client requirements, as well as modifying or maintaining existing software.	
Unit Code	**Unit Title**	**Hours**
Core		
ICAICT418A	Contribute to copyright, ethics and privacy in an IT environment	40
ICAPRG418A	Apply intermediate programming skills in another language	80
ICAPRG501A	Apply advanced object-oriented language skills	80
ICAPRG502A	Manage a project using software management tools	60
ICAPRG503A	Debug and monitor applications	40
ICAPRG504A	Deploy an application to a production environment	40
ICAPRG520A	Validate an application design against specifications	40
ICAPRG523A	Apply advanced programming skills in another language	80
ICAPRG527A	Apply intermediate object-oriented language skills	60
ICAPRG529A	Apply testing techniques for software development	40
Electives		
ICAPRG505A	Build advanced user interface	60
ICAICT509A	Gather data to identify business requirements	30
ICAPRG509A	Build using rapid application development	40
ICAPRG601A	Develop advanced mobile multi-touch applications	80
ICAPRG514A	Prepare for software development using rapid application development	30
ICANWK514A	Model preferred system solutions	30
Total Hours		**830**

Occupation / Work Function	System Analyst	
Qualification Title	Diploma of Systems Analysis and Design	
Qualification Code	ICA50811	
Description	This qualification provides the skills to determine client business requirements to support a project team in the analysis and design of a system to meet the client/s needs.	
Unit Code	**Unit Title**	**Hours**
Core		
ICADBS502A	Design a database	50
ICAICT401A	Determine and confirm client business requirements	40
ICAICT403A	Apply software development methodologies	20
ICAICT418A	Contribute to copyright, ethics and privacy in an IT environment	40
ICAICT502A	Develop detailed component specifications from project specifications	40
ICAICT509A	Gather data to identify business requirements	30
ICAICT511A	Match IT needs with the strategic direction of the enterprise	50
ICTSUS6233A	Integrate sustainability in ICT planning and design projects	55
ICTTEN5204A	Produce technical solutions from business specifications	50
Electives		
ICAICT512A	Plan process re-engineering strategies for business	30
ICANWK514A	Model preferred system solutions	30
ICAPRG515A	Review developed software	30
ICAPRG524A	Develop high-level object-oriented class specifications	60
ICASAD501A	Model data objects	30
ICASAD502A	Model data processes	30
ICASAS505A	Review and update disaster recovery and contingency plans	30
ICASAS507A	Implement and evaluate systems for regulatory and standards compliance	20
ICAICT510A	Determine appropriate IT strategies and solutions	40
ICASAS502A	Establish and maintain client user liaison	20
ICAICT514A	Identify and manage the implementation of current industry-specific technologies	60
ICAPMG501A	Manage IT projects	80
Total Hours		**835**

Occupation / Work Function	Media Developer	
Qualification Title	Diploma of Digital Media Technologies	
Qualification Code	ICA50911	
Description	Appropriate for a person involved with the design, development and management of website and media projects, including the design and development of games, interactive media productions and interactive websites.	
Unit Code	**Unit Title**	**Hours**
Core		
BSBCRT501A	Originate and develop concepts	30
BSBOHS509A	Ensure a safe workplace	60
ICAGAM504A	Manage interactive media production	40
ICAICT418A	Contribute to copyright, ethics and privacy in an IT environment	40
ICAICT419A	Work effectively in the digital media industry	30
ICAICT515A	Verify client business requirements	40
ICAPMG501A	Manage IT projects	80
Electives		
CUFDIG502A	Design web environments	50
ICADBS504A	Integrate database with a website	25
ICADMT501A	Incorporate and edit digital video	50
ICAPRG425A	Use structured query language	60
ICASAS504A	Develop and conduct client acceptance test	20
ICAWEB501A	Build a dynamic website	60
ICAWEB516A	Research and apply emerging web technology trends	80
CUFDIG404A	Apply scripting language in authoring	60
CUFDIG504A	Design games	30
CUFDIG505A	Design information architecture	70
CUFPOS401A	Edit screen content for fast turnaround	30
Total Hours		**855**

Occupation / Work Function	Software Development Manager	
Qualification Title	Advanced Diploma of Information Technology	
Qualification Code	ICA60111	
Description	Appropriate for a person involved with the design, development and management of computer software application development, including planning, quality control, development and testing. It involves a high degree of autonomy and may include some supervision of others.	
Unit Code	**Unit Title**	**Hours**
Core		
BSBWOR502B	Ensure team effectiveness	60
ICAICT608A	Interact with clients on a business level	40
ICAICT610A	Manage copyright, ethics and privacy in an IT environment	30
ICAPMG609A	Plan and direct complex IT projects	80
ICTSUS6233A	Integrate sustainability in ICT planning and design projects	55
Group A Knowledge management		
ICADBS501A	Monitor and improve knowledge management system	20
ICADBS601A	Build a data warehouse	80
ICADBS602A	Develop a knowledge management strategy	80
ICAICT604A	Identify and implement business innovation	60
ICAICT605A	Implement a knowledge management strategy	30
Group C General Electives		
ICAPMG606A	Manage IT project quality	40
ICAPRG601A	Develop advanced mobile multi-touch applications	80
ICAPRG602A	Manage the development of technical solutions from business specifications	40
ICAICT603A	Manage the use of appropriate development methodologies	30
ICAICT609A	Lead the evaluation and implementation of current industry-specific technologies	80
ICAICT606A	Develop communities of practice	30
Total Hours		**835**

Occupation / Work Function	IT Security Specialist	
Qualification Title	Advanced Diploma of Network Security	
Qualification Code	ICA60211	
Description	Protecting the IT infrastructure from external threats is now a high priority for every organisation. Graduates of this course master critical skills to identify computer and network security risks, then plan and implement counter measures to keep systems safe	
Unit Code	**Unit Title**	**Hours**
Core		
ICANWK502A	Implement secure encryption technologies	20
ICANWK509A	Design and implement a security perimeter for ICT networks	60
ICANWK601A	Design and implement a security system	90
ICANWK602A	Plan, configure and test advanced server based security	80
ICTSUS6233A	Integrate sustainability in ICT planning and design projects	55
Electives		
ICANWK603A	Plan, configure and test advanced internetwork routing solutions	120
ICANWK604A	Plan and configure advanced internetwork switching solutions	120
ICANWK612A	Plan and manage troubleshooting advanced integrated IP networks	120
ICANWK503A	Install and maintain valid authentication processes	25
ICANWK509A	Design and implement a security perimeter for ICT networks	60
CPPSEC5004A	Prepare security risk management plan	40
CPPSEC5005A	Implement security risk management plan	40
Total Hours		**830**

Occupation / Work Function	Business System Analyst	
Qualification Title	Advanced Diploma of Information Technology Business Analysis	
Qualification Code	ICA60311	
Description	This qualification provides the skills to be competent in business analysis in an information and communication technology (ICT) environment to analyse, identify and coordinate relevant ICT business solutions.	
Unit Code	**Unit Title**	**Hours**
Core		
ICAICT608A	Interact with clients on a business level	40
ICAICT610A	Manage copyright, ethics and privacy in an IT environment	30
ICAPMG609A	Plan and direct complex IT projects	80
ICASAD601A	Perform IT-focused enterprise analysis	40
ICASAD603A	Plan and monitor business analysis activities in an IT environment	40
ICASAD604A	Manage and communicate IT solutions	40
ICASAD605A	Elicit IT requirements	40
ICASAD606A	Analyse stakeholder requirements	40
ICASAD607A	Manage assessment and validation of IT solutions	40
Electives		
ICAPRG602A	Manage the development of technical solutions from business specifications	40
ICAICT601A	Develop IT strategic and action plans	30
ICAICT604A	Identify and implement business innovation	60
ICAPMG603A	Manage IT project planning	40
ICAPMG606A	Manage IT project quality	40
ICAICT609A	Lead the evaluation and implementation of current industry-specific technologies	80
Total Hours		**680**

Occupation / Work Function	ICT Project Manager	
Qualification Title	Advanced Diploma of Information Technology Project Management	
Qualification Code	ICA60411	
Unit Code	Unit Title	Hours
Core		
ICAICT610A	Manage copyright, ethics and privacy in an IT environment	30
ICAPMG601A	Establish IT project governance	40
ICAPMG602A	Manage IT project initiation	40
ICAPMG603A	Manage IT project planning	40
ICAPMG604A	Manage IT project delivery	40
ICAPMG605A	Manage IT project closure	40
Electives from list		
BSBINN601B	Manage organisational change	60
ICAICT608A	Interact with clients on a business level	40
ICAICT609A	Lead the evaluation and implementation of current industry-specific technologies	80
ICAICT713A	Manage IT services	80
ICAPMG606A	Manage IT project quality	40
ICASAS505A	Review and update disaster recovery and contingency plans	30
Electives from elsewhere in ICA11		
ICAPMG609A	Plan and direct complex IT projects	80
ICASAD604A	Manage and communicate IT solutions	40
ICASAD607A	Manage assessment and validation of IT solutions	40
Total Hours		**720**

Occupation / Work Function	Enterprise systems administrator	
Qualification Title	Advanced Diploma of Computer Systems Technology	
Qualification Code	ICA60511	
Description	This sample program contains units relevant to enterprise network systems administration, including Cisco and Microsoft industry certifications and enterprise web systems programming,	
Unit Code	**Unit Title**	**Hours**
Core		
ICANWK506A	Configure, verify and troubleshoot WAN links and IP services in a medium enterprise network	90
ICANWK507A	Install, operate and troubleshoot medium enterprise routers	120
ICANWK508A	Install, operate and troubleshoot medium enterprise switches	90
ICANWK509A	Design and implement a security perimeter for ICT networks	60
ICANWK529A	Install and manage complex ICT networks	100
ICANWK602A	Plan, configure and test advanced server based security	80
ICANWK607A	Design and implement wireless network security	60
ICAPMG608A	Manage IT project systems implementation	40
ICAPMG609A	Plan and direct complex IT projects	80
ICAPRG527A	Apply intermediate object-oriented language skills	60
ICAWEB501A	Build a dynamic website	60
ICAWEB502A	Create dynamic web pages	40
Electives from list		
ICANWK505A	Design, build and test a network server	50
ICANWK525A	Configure an enterprise virtual computing environment	60
ICADBS504A	Integrate database with a website	25
ICAWEB503A	Create web-based programs	60
ICANWK605A	Design and configure secure integrated wireless systems	40
ICANWK610A	Design and build integrated VoIP networks	50
Total Hours		**1165**

Occupation / Work Function	Information Systems Manager	
Qualification Title	Vocational Graduate Certificate in Information Technology and Strategic Management	
Qualification Code	ICA70111	
Unit Code	**Unit Title**	**Hours**
Core		
ICAICT709A	Facilitate business analysis	80
Electives		
ICAICT702A	Direct ICT services	80
ICAICT701A	Lead research into identifying new marketplace opportunities	80
ICASUS701A	Plan and manage virtualisation for IT sustainability	80
Total Hours		**320**

Occupation / Work Function	IT Sustainability Technology Specialist	
Qualification Title	Vocational Graduate Certificate in Information Technology Sustainability	
Qualification Code	ICA70211	
Description	Key roles for this occupation will be assessing business carbon usage and identifying strategies and methods to reduce carbon usage.	
Unit Code	**Unit Title**	**Hours**
Core		
ICASUS702A	Conduct a business case study for integrating sustainability in IT planning and design projects	80
Electives		
ICAICT707A	Direct research and business response to new ICT technology	80
ICASUS701A	Plan and manage virtualisation for IT sustainability	80
ICTSUS8238A	Conduct and manage a life cycle assessment for sustainability	60
Total Hours		**300**

CONTACTS AND LINKS

Industry Skills Council (ISC)		
Innovation and Business Skills Australia (IBSA)	This ISC is responsible for developing this **ICA11 Information and Communications Training Package** and can be contacted for further information. You can also source copies of the Training Package and support material.	Address: Level 11, 176 Wellington Parade, East Melbourne, VIC, 3002 Phone/fax: 03 9815 7000 Email: http://www.ibsa.org.au/contact-us.aspx Web: http://www.ibsa.org.au
National Register for VET in Australia		
Training.gov.au (TGA)	TGA is the Australian governments' official National Register of information on Training Packages, qualifications, courses, units of competency and RTOs.	training.gov.au
Australian Government		
The Department of Education, Employment and Workplace Relations (DEEWR)	DEEWR provides a range of services and resources to assist in delivery of Training Packages. Search the DEEWR website for links to a range of relevant resources and publications.	www.deewr.gov.au
State Government		
Department of Education and Early Childhood Development Higher Education and Skills Group	Higher Education and Skills Group is responsible for funding and the implementation of Vocational Education and Training (VET) in Victoria, including Apprenticeships and Traineeships.	General information: www.skills.vic.gov.au Approved Training Schemes: http://www.skills.vic.gov.au/corporate/publications/brochures-and-fact-sheets/apprenticeships-and-traineeships-in-victoria-industry-guides
Curriculum Maintenance Manager (CMM)		
Business Industries	The CMM service is provided by Executive Officers located within Victorian TAFE institutes on behalf of Higher Education Skills Group.	Alan Daniel Address: Chisholm Institute P O Box 684 Dandenong VIC 3175 Phone/fax: 03 9238 8501/9238 8504 Email: Alan.Daniel@chisholm.edu.au Web: http://trainingsupport.vic.gov.au/

State VET Regulatory Authority		
Victorian Registration and Qualifications Authority (VRQA)	The VRQA is a statutory authority responsible for the registration of education and training providers in Victoria to ensure the delivery of quality education and training.	www.vrqa.vic.gov.au Phone: 03 9637 2806
National VET Regulatory Authority		
Australian Skills Quality Authority (ASQA)	ASQA is the national regulator for Australia's VET sector vocational education and training sector. ASQA regulates courses and training providers to ensure nationally approved quality standards are met.	www.asqa.gov.au Info line: 1300 701 801
Industry Regulatory Body		
e.g. Energy Safe Victoria	The industry Regulatory body can provide advice on licensing, legislative or regulatory requirements which may impact on the delivery of training or the issuance of qualifications in this Training Package.	Address: Phone/fax: Email: Web:
WorkSafe		
WorkSafe Victoria	WorkSafe needs to provide written verification before High Risk Work Units can be added to an RTO's scope of registration.	www.worksafe.vic.gov.au Info line: 1800 136 089

GLOSSARY

Code	Nationally endorsed Training Package qualification code.
Title	Nationally endorsed Training Package qualification title.
Unit Code	Nationally endorsed Training Package unit code.
Unit Title	Nationally endorsed Training Package unit title.
Nominal Hours	The anticipated hours of supervised learning or training deemed necessary to conduct training and assessment activities associated with the program of study. These hours are determined by the Victorian State Training Authority. Nominal hours may vary for a qualification depending on the units of competency selected.
Scope of Registration	Scope of registration specifies the AQF qualifications and/or units of competency the training organisation is registered to issue and the industry training and/or assessment services it is registered to provide.