



**Curriculum
Council**

APPLIED INFORMATION TECHNOLOGY

IMPORTANT INFORMATION

Syllabus review

Once a course syllabus has been accredited by the Curriculum Council, the implementation of that syllabus will be monitored by the syllabus committee. This committee can advise council about any need for syllabus review. Syllabus change deemed to be minor requires schools to be notified of the change at least six months before implementation. Major syllabus change requires schools to be notified 18 months before implementation. Formal processes of syllabus review and requisite reaccreditation will apply.

Other sources of information

The Western Australian Certificate of Education (WACE) Manual contains essential information on assessment, moderation and other procedures that need to be read in conjunction with this course.

The Curriculum Council will support teachers in delivering the course by providing resources and professional development online.

The council website www.curriculum.wa.edu.au provides support materials including sample programs, assessment outlines, assessment tasks, with marking keys, sample examinations with marking keys and grade descriptors with annotated student work samples.

Training package support materials are developed by Registered Training Organisations (RTOs), government bodies and industry training advisory bodies to support the implementation of industry training packages. Approved support materials are listed at www.ntis.gov.au

WACE providers

Throughout this course booklet the term 'school' is intended to include both schools and other WACE providers.

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Rationale

Information and communication technologies (ICT) are rapidly changing the way we live and work in Australia. They affect the nature of communication, entertainment and lifestyle decisions. Almost every area of employment requires some understanding and use of ICT for greater productivity and creativity. Every school graduate needs to be capable of using ICT in his/her personal, community and future professional lives. This course aims to address that need, by providing students with creative opportunities through interesting practical experiences, using exciting and innovative software and equipment.

These technologies are increasingly becoming part of everything we do within a knowledge-based society, built around the innovative, creative and enterprising use of ICT to improve the standard of living. All Australians need to possess and be empowered by understanding, experience and skills in the nature and use of ICT. This course aims to equip post-compulsory secondary students for current and future study (TAFE or University), employability and successful inclusion in a modern society.

The course focuses on the application of computer technologies to living in the community and working in industry and business environments. It looks at the impact on workplaces, individuals and society. As such, it provides opportunities for students to develop knowledge and skills relevant to the use of ICT to meet everyday challenges. Students consider a variety of computer applications for use in their own lives, business and the wider community. They consider the ethical implications of ICT solutions and develop an appreciation of the role and impact of these technologies on their personal values, and those within a democratic and ethnically diverse society.

An integral aspect of the course is the opportunity to address vocational competencies, leading to the possibility of a range of VET accreditation, thereby contributing to the international employability of students.

The emphasis of the course is on developing an understanding, from a user's perspective, of the application of computer technology in various contexts and the design of information solutions to meet challenges encountered in those contexts. This will require an understanding of the nature of these challenges and contexts as well as associated work processes.

Students build their understanding, experience and skills by investigating, designing, constructing and evaluating ICT solutions, using a variety of software applications, including some commercial applications commonly used in business and home environments. They consider such solutions within personal, community and workplace environments.

Students gain essential life and work skills in problem-solving, time management and communications skills, while working both independently and collaboratively. The course provides an excellent general grounding in ICT for the future study aspirations and professional lives of all students.

This course provides students with the opportunity to further their achievement of specific overarching learning outcomes from the Curriculum Framework together with the development of the core-shared values.

Course outcomes

The course is designed to facilitate the achievement of four outcomes. These outcomes are based on the Technology and Enterprise learning area outcomes in the Curriculum Framework. Outcomes are statements of what students should know, understand, value and be able to do as a result of the syllabus content taught.

Outcome 1: Technology process

Students apply a technology process when creating or modifying information solutions using information communication technologies.

In achieving this outcome, students:

- investigate ideas considering alternatives;
- devise, communicate and evaluate proposals and design plans in appropriate forms; and
- implement and evaluate production processes and strategies to manage resources efficiently.

Outcome 2: Understanding information and communication technologies

Students understand the nature and use of computer hardware and software to achieve information solutions.

In achieving this outcome, students:

- understand the ICT-related concepts, formats and terminology required to select and use appropriate software and hardware to achieve information solutions;
- understand the relationship between forms, structures and conventions of information solutions that influence the selection and use of ICT; and
- understand management, processes, procedures and techniques required to achieve information solutions.

Outcome 3: Quality of information solutions

Students explore alternatives and use skills, techniques, processes, standards and conventions to achieve information solutions.

In achieving this outcome, students:

- apply appropriate forms, structures and conventions to create or modify information solutions;
- apply skills, techniques and processes to develop information solutions; and

- apply enterprising capabilities, exploring alternatives, in working to achieve information solutions.

Outcome 4: Information and communication technologies in society

Students understand how cultural beliefs, values, abilities and ethical positions are interconnected in the development and use of information and communication technologies.

In achieving this outcome, students:

- understand the cultural beliefs, values, abilities and ethical positions that can impact on the use of ICT;
- understand the consequences of ICT use in different contexts and how this relates to beliefs, values, abilities and ethical positions; and
- understand the consequences of technological developments on structures and environments.

Outcome progressions

Each of the outcomes is described as a learning progression across Foundation and eight broad levels (see Appendix 1). In teaching a particular course unit, teachers can use the outcome progressions along with the unit content and contexts to:

- plan appropriate lessons and activities for their students, and
- develop specific assessment tasks and marking keys.

Course content

The course content needs to be the focus of the learning program. It enables students to maximise their achievement of both the overarching learning outcomes from the Curriculum Framework and the Applied Information Technology course outcomes.

The course content is divided into four content areas:

- social implications and trends
- hardware and software
- digital data and information
- Workplace, practices and careers.

Social implications and trends

The impact of ICT on individuals, communities and environments

Changes in ICT and the rate of change have diverse affects in our society. They affect personal and community practices, and work and communication patterns. They have an impact on structures and lifestyles, resource allocation and costs and environments. Students examine the differences between local, national and international ICT structures, exploring the impact on specific communities and environments and on the behaviour, attitudes and relationships of individuals. The quality of information from various sources influences the opinions of individuals and their

decisions. Through the analysis of specific examples and independent research, the impact of these ICT choices are evaluated in terms of economic, social and cultural factors and the benefits and consequences of these choices.

Values, ethics and inclusivity

Understanding values, ethical concerns, legal issues and the need for inclusivity (determined by culture, language, gender, disability and locality) in the design, construction and use of ICT are examined. The rights of individuals, groups and communities for privacy and the responsibility for the access, availability and security of information and their potential misuse are explored. Students examine the role of the government, regulatory bodies and other groups in the development of legislation and other protective measures to uphold these rights and responsibilities. In particular, ethical considerations relating to the use of information systems by organisations and individuals will be explored.

Past and emerging trends in ICT

Examining the past and emerging trends in ICT helps develop an understanding of how technologies impact on and influence the decision-making and choices of individuals, groups and communities.

Hardware and software

Hardware components and functions

It is essential that students understand common computer hardware system components and connections. Compatibility between these components needs to be taken into account. Functions such as processing, input, output, memory/storage and communication are considered. Skills are developed to install, operate, maintain and update hardware. Students use appropriate terminology, technical references/manuals, help procedures and other support facilities.

Applications and systems software

To use hardware effectively requires an understanding of the types of operating systems software, their purpose, function and operation. The installation, configuration, maintenance and updating of systems software also needs to be understood. The development of ICT solutions requires the selection and efficient use of applications software. The type of software must be appropriate to the particular task: for example publishing, graphics, multimedia, database, audio, video or communications. When selecting and using applications software, the student needs to understand the purpose, desired output, required operating skills and techniques, how to integrate the various applications and the terminology associated with the software.

Design and acquisition of hardware and software

Students investigate the design features of current hardware and software and the factors influencing future designs and configurations. They explore methods to acquire hardware and software (purchase or lease options and wholesale or retail outlets), the costs involved and the implications for maintenance and upgrades of the system (warranty considerations and licence agreements). Students understand the legal implications of these acquisitions, particularly the acquisition of software.

Digital data and information

The nature, forms and transfer of digital data

Students learn about the technologies used to organise and store data and the various file formats for different types of data.

Processing and managing data

Students acquire an understanding of the information processing cycle and how to source, organise, process, transform and manage a range of digital data types. They explore efficient search strategies and the characteristics of information produced for different purposes. An understanding of community expectations and statutory requirements in relation to information processing and management is developed.

Creative application of information design principles

When designing quality solutions it is necessary to consider the influence of the intended audience and then use appropriate principles and elements of design. Students develop strategies for applying ICT technologies in creative and original ways and appreciate the characteristics of information that is produced for different purposes. Designs will include techniques for navigating complex documents: such as hyperlinks, buttons, icons, table of contents, index and page numbering. Criteria to evaluate the effectiveness of the design solutions include readability, completeness, attractiveness, accuracy, ease of use and achievement of purpose.

Workplace, practices and careers

Careers, work and jobs

Most jobs involve some use of ICT. Many jobs are dependent on ICT or substantially affected by the use of these technologies. All students need to be aware of the qualifications, experiences and personal attributes required for entry into the areas of work in which they are interested. Various pathways in the transition from school to jobs are explored.

Work environments and legislation

The work environment (including hardware and software aspects) affects the way in which individuals and groups operate. There are economic and social effects on individuals and organisations that result from the implementation of ICT (ability to work from home, skills training, faster decision-

making and better sharing of resources). ICT promotes change to work practices and the impacts of these changes are investigated. Governments enact a variety of legislation related to the use of ICT and knowledge of relevant legislation is essential in this course, for example safety principles and ergonomic practices related to the use of ICT, critical environmental factors (noise, lighting, ventilation, electricity, posture and work practices), and an understanding and application of individual responsibilities in relation to work practices.

Technology processes in the workplace

There are general and particular processes involved in the use of ICT in every workplace. An awareness of the many and varied roles that individuals are required to undertake in the workplace is critical to the use of ICT. People are typically required to have the ability to work individually with minimal supervision, to work cooperatively and collaboratively and to exercise responsibility, integrity, initiative and diligence. As a minimum, all workers need to use ICT within a problem-solving context to develop solutions that meet current and ongoing needs. Increasingly, it is expected that ICT will be used to maximise efficiency and quality through enterprise (displays of initiative, acceptance of responsibility, flexibility, responsiveness to change, ingenuity, drive, risk taking and innovation) and creativity (imagination, originality, inspiration and experimentation). At higher levels in the course, consideration will be given to how an individual may be involved in the use of ICT for project management.

Course units

Each unit is defined with a particular focus and a selection of learning contexts through which the specific unit content can be taught and learnt. The cognitive difficulty of the content increases with each stage and is referenced to the broad learning described in the outcome progressions. The pitch of the content for each stage is notional and there will be overlap between stages.

Stage P units provide opportunities for practical and well supported learning to help students develop skills required for them to be successful upon leaving school or in the transition to stage 1 units. The content is notionally pitched at Foundation and levels 1 and 2.

Stage 1 units provide bridging support and a practical and applied focus to help students develop skills required to be successful for Stage 2 units. The content is notionally pitched at levels 3 to 4.

Stage 2 units provide opportunities for applied learning but there is a focus more on academic learning. The content is notionally pitched at levels 4 to 6.

Stage 3 units provide opportunities to extend knowledge and understandings in challenging academic learning contexts. The content is notionally pitched at levels 6 to 8.

Unit PAAIT

The focus for this unit is **personal information communication technologies** to meet individual needs. This includes the study of how individuals use information technology in their daily lives. Students investigate and develop an understanding of what is required to be able to successfully communicate to meet their personal needs. Students develop a range of skills that enable them to communicate using appropriate technologies and to gain knowledge that assists in communicating within a personal context.

Unit PBAIT

The focus for this unit is **personal home office**. This includes the study of software and hardware required in the operation of a personal home office environment. Students investigate the technology required for a personal home office to operate effectively. They are aware of the configuration required for a personal home office computing system. They examine, with support, the impact of information and personal technology solutions within the personal office environment.

Unit 1AAIT

The focus for this unit is **personal communication** and using technology to meet personal computing needs. This includes the study of how individuals use information technology in their daily lives. Students investigate and develop an understanding of what is required to be able to successfully communicate to meet their personal needs. They develop a range of skills that enable them to communicate using appropriate technologies and to gain knowledge that assists in communicating within a personal context.

Unit 1BAIT

The focus for this unit is **work readiness** and using technology commonly required in the operation of a small office environment. Students investigate the computing equipment, the common computer applications and the work skills required to effectively operate within a small office environment. They examine the impact of information technology solutions within the small office environment.

Unit 1CAIT

The focus for this unit is **personal information and communication technologies** and using technology to meet personal computing needs. This includes the study of how individuals use, and can be affected by, information technology in their daily lives. Students investigate computer systems and understand the configuration needed to meet their personal needs. They acquire and apply a range of knowledge and skills to create information solutions that inform, persuade, educate or entertain.

Unit 1DAIT

The focus for this unit is **community information and communication technologies** and using ICT commonly required in the operation of a small business or community organisation. Students investigate small business networks and the peripheral devices required to use communication and graphics applications. They understand the configuration required for a small business computing system. They examine the impact of information technology solutions within the community.

Unit 2AAIT

The focus for this unit is **media information and communication technologies**. The emphasis is on the use of information technology to collect, store and manipulate digital media. Students consider the range of products available to create visual and audio communications. They examine trends in digital media transmissions and the social and legal implications in the use of these technologies.

Unit 2BAIT

The focus for this unit is **information and communication technologies in business**. Skills, principles and practices associated with various types of businesses to enhance students' career prospects are emphasised. Students examine the use of ICT in a range of administrative and business environments. They identify and explain the components and configuration of a computer system to meet the needs of the organisation. Students design information solutions for problems encountered in these contexts and understand the social issues inherent in work practices.

Unit 3AAIT

The focus for this unit is **evolving information and communication technologies**. The use of applications to create, modify, manipulate, use and/or manage ICT, particularly for business, training, education, infotainment and edutainment purposes is fundamental to this unit. Students consider the nature and impact of technology change when creating ICT products for a particular purpose and audience. Students develop an understanding of the nature of computer systems and the use of these technologies in society.

Unit 3BAIT

The focus for this unit is **information and communication technologies in industry**. Students focus on the production of an ICT product for a particular industry of interest. Students will combine both practical and creative skills in the use of ICT to produce solutions to challenges commonly found in the industry that may relate to areas such as information management, communications and/or promotion, data or device control and/or monitoring, process control, and work performance support. Students justify the computer systems selected for their product and understand the social and legal implications, and the impact of its use in industry.

Time and completion requirements

The notional hours for each unit are 55 class contact hours. Units can be delivered typically in a semester or in a designated time period up to a year depending on the needs of the students. Pairs of units can also be delivered concurrently over a one year period. Schools are encouraged to be flexible in their timetabling in order to meet the needs of all of their students.

A unit is completed when all assessment requirements for that unit have been met. Only completed units will be recorded on a student's statement of results.

Refer to the WACE Manual for details about unit completion and course completion.

Vocational Education Training information

Vocational Education Training (VET) is nationally recognised training that provides practical work skills and credit towards, or attainment of, a vocational education and training qualification.

When considering VET delivery in courses it is necessary to:

- refer to the WACE Manual, Section 6: Vocational Education Training, and
- contact education sector/systems representatives for information on operational issues concerning VET delivery options in schools.

Australian Quality Training Framework (AQTF)

AQTF is the quality system that underpins the national vocational education and training sector and outlines the regulatory arrangements in states and territories. It provides the basis for a nationally consistent, high-quality VET system.

The AQTF Standards for Registered Training Organisations outline a set of auditable standards that must be met and maintained for registration as a training provider in Australia.

VET delivery

VET can be delivered by schools providing they meet Australian Quality Training Framework (AQTF) requirements. Schools need to become a Registered Training Organisation (RTO) or work in partnership (auspicing arrangement) with an RTO to deliver training within the scope for which they are registered. If a school operates in partnership with an RTO, it will be the responsibility of the RTO to assure the quality of the training delivery and assessment. Qualifications identified in this course must be on the scope of registration of the RTO delivering or auspicing training.

Units of competency from selected training package qualifications have been taken into account during the development of this course.

Schools seeking to link delivery of this course with units of competency or qualification must read the information outlined in the relevant training package/s. This information can be found at the National Training Information Service website: www.ntis.gov.au.

National Training Package

ICA05 Information Technology
BSB01 Business Services Training Package

Qualifications

ICA10105 Certificate I in Information Technology
ICA20105 Certificate II in Information Technology
BSB10101 Certificate I in Business
BSB20101 Certificate II in Business

Note: Any reference to qualifications and units of competency from training packages is correct at the time of accreditation.

Resources

A detailed list of textbooks, teacher references, teacher guides and manuals can be found at www.det.wa.edu.au/education/cmisis/eval/curriculum/courses/

Assessment

Refer to the WACE Manual for policy and principles for both school-based assessment and examinations.

School-based assessment

The three types of assessment in the table below are consistent with the teaching and learning strategies considered to be the most supportive of student achievement of the outcomes in the Applied Information Technology course. The table provides details of the assessment types, including examples of different ways that they can be applied and the weighting range for each assessment type.

Teachers are to use the assessment table to develop their own assessment outlines.

An assessment outline needs to be developed for each class group enrolled in each unit of the course. This outline includes a range of assessment tasks that cover all assessment types and course outcomes with specific weightings. If units are delivered concurrently, assessment requirements must still be met for each unit.

In developing assessment outlines and teaching programs the following guidelines should be taken into account.

- All tasks should take into account teaching, learning and assessment principles from the Curriculum Framework.
- There is flexibility within the assessment framework for teachers to design school-based assessment tasks to meet the learning needs of students.
- Student responses may be communicated in any appropriate form: written, oral, graphical, multimedia or various combinations of these.
- Student work submitted to demonstrate achievement of outcomes should only be accepted if the teacher can attest that, to the best of her/his knowledge, all uncited work is the student's own.
- Evidence collected for each unit should include tasks conducted under test conditions.

Assessment table				
Weightings for types				Types of assessment
P Stage	Stage 1	Stage 2	Stage 3	
0%	10–20%	20–30%	20–30%	<p>Investigation</p> <p>Research work in which students plan, conduct and communicate an investigation.</p> <p>Investigation of ICT-related issues or cultural contexts, exploring a range of primary and secondary sources.</p> <p><i>Best suited to the collection of evidence of student achievement of Outcomes 1, 2 and 4.</i></p>
75–85%	55–75%	50–60%	50–60%	<p>Production/performance</p> <p>Extended production project in which students explore ideas and control the processes required to manage the quality of production. Students engage in an activity or on-the-spot evaluation of a performance. This may be one large production/performance task or it may be two or more smaller tasks.</p> <p>Manage a range of production processes, evaluating and modifying them as necessary. Demonstrate an understanding of styles, structures, codes and conventions and the development of confidence and competence in the use of technologies, skills and processes in a range of contexts.</p> <p>Types of evidence may include: a journal to show evidence of exploration and the development of ideas, reflection on learning processes and critical evaluation and modification of ideas, portfolios and products.</p> <p><i>Best suited to the collection of evidence of student achievement of Outcomes 1 and 3.</i></p>
15–25%	15–20%	20–30%	20–30%	<p>Response</p> <p>Students apply their knowledge and skills in analysing and responding to a series of stimuli or prompts.</p> <p>Response to, analysis and evaluation of own or professional information technology products.</p> <p>Types of evidence may include: observation checklists, journal and evaluation tools (self or peer).</p> <p><i>Best suited to the collection of evidence of student achievement of Outcomes 2 and 4.</i></p>

Grades

Schools assign grades following the completion of the course unit. The following grades may be used:

Grade	Interpretation
A	Excellent achievement
B	High achievement
C	Satisfactory achievement
D	Limited achievement
E	Inadequate achievement

Preliminary Stage units are not graded. Achievement in these units is reported as either Completed or Not Completed.

Each grade is based on the student's overall performance for the course unit as judged by reference to a set of pre-determined standards. These standards are defined by grade descriptors.

Grade descriptors:

- describe the range of performances and achievement characteristics of grades A, B, C, D and E in a given stage of a course
- can be used at all stages of planning, assessment and implementation of courses, but are particularly important as a final point of reference in assigning grades
- are subject to continuing review by the Council.

The grade descriptors for this course can be accessed on the course page at (http://www.curriculum.wa.edu.au/internet/Senior_Secondary/Courses/Applied_Info_Tech)

Examination details

There are separate examinations for Stage 2 pairs of units and Stage 3 pairs of units.

In their final year, students who are studying at least one Stage 2 pair of units (e.g. 2A/2B) or one Stage 3 pair of units (e.g. 3A/3B) will sit an examination in this course, unless they are exempt.

Each examination will assess the specific content, knowledge and skills described in the syllabus for the pair of units studied.

Details of the examinations in this course are prescribed in the examination design briefs (pages 33–35).

UNIT PAAIT

Unit description

The focus for this unit is **personal information communication technologies** to meet individual needs. This includes the study of how and why individuals use information technology in their daily lives. Students investigate and develop an understanding of what is required to be able to successfully communicate to meet their personal needs in a variety of contexts. Students develop a range of skills that enable them to communicate using appropriate technologies and to gain knowledge that assists in communicating within a personal context.

Unit learning contexts

Within the broad area of **personal information communication technologies**, teachers may choose one or more of the following contexts (this list is not exhaustive):

- work readiness
- recreation and entertainment
- communication.

Unit content

This unit includes knowledge, understanding and skill to the degree of complexity described below.

Social implications and trends

The impact of ICT on individuals, communities, and environments

- Occupational Safety and Health issues associated with the use of computers and personal technology e.g. safe use of power, time spent using technology
- brief overview of the appropriate use of digital data e.g. the internet.

Values, ethics and inclusivity

- responsibilities and basic personal safety of ICT users to maintain privacy of information e.g. secure and responsible web use, secure log on.

Past and emerging trends in ICT

- brief overview of new developments in ICT for personal use e.g. mobile phone, Personal Digital Assistant, iPods, digital camera
- brief overview of choices available for personal ICT use and how to access those choices e.g. matching individual ability with technology and resources e.g. establishing mobile phone plans.

Hardware and software

Hardware components and functions

- recognition of the basic components of personal technology systems e.g. iPods, computer, mobile phone, charger, batteries
- identification of peripheral devices such as personal keyboards, trackballs, mouse, camera
- simple techniques for addressing individual ICT needs e.g. larger keyboard, vertical mouse, portable vs. desktop computer.

Applications and systems software

- matching commonly used application software and their appropriateness when targeting a different audience e.g. personal communication software, email and word processing, informal and formal text and genres.

Design and acquisition of hardware and software

- simple physical care of technology systems e.g. closing applications, proximity of liquids
- brief overview of purchasing choices matching software applications and hardware to personal needs.

Digital data and information

The nature, forms and transfer of digital data

- use of simple functions to enhance personal applications e.g. insert personal photos, voice recording
- simple ICT skills and terminology e.g. operation of a mouse, opening and closing relevant software applications, use of email.

Processing and managing data

- simple methods of data organisation using visual representations e.g. files and folders with image icon
- awareness of types of data stored and the reasons for storage e.g. storage and retrieval of documents and photos
- simple search strategies to locate information with assistance e.g. identify search location bar, use key search words.

Creative application of information design principles

- identification of functional information products e.g. shopping lists, forms
- use of simple techniques to assess usability of personal technology e.g. display and keypad size required for mobile phone.

Workplace, practices and careers

ICT requirements of careers, work and jobs

- brief overview of ICT skills required for personal use.

Work environments and legislation concerning the use of ICT

- brief overview of the consequences of relevant regulations that apply to safe use of personal ICT e.g. inappropriate use of websites, email and images, netiquette
- brief overview of correct ergonomic practices e.g. seating, lighting, screen glare.

Technology processes in the workplace

- simple problem-solving techniques for representing ideas.

VET units of competency

Units of competency may be delivered in appropriate learning contexts if all AQTF requirements are met. Some suggested units of competency suitable for integration are:

ICAU1133A Send and retrieve information using web browsers and email

ICAU1128A Operate a personal computer

ICAU2005A Operate computer hardware

Note: Any reference to qualifications and units of competency from training packages is correct at the time of accreditation.

Assessment

The two types of assessment in the table below are consistent with the teaching and learning strategies considered to be the most supportive of student achievement of the outcomes in the Applied Information Technology course. The table provides details of the assessment type, examples of different ways that these assessment types can be applied and the weighting range for each assessment type.

Weighting P Stage	Type of assessment
75–85%	<p>Production/performance</p> <p>This is a project in which students explore ideas and use processes in their production/performance. This may be one large production/performance task or it may be two or more smaller tasks.</p> <p>Students demonstrate some understanding of styles, structures, codes and conventions and begin to develop confidence and competence in the use of technologies, skills and processes in a range of contexts.</p> <p>They may engage in an activity or on-the-spot evaluation of a performance.</p> <p>Types of evidence may include: a journal to show evidence of exploration and the development of ideas, reflection on learning processes and critical evaluation and modification of ideas, portfolios and products.</p> <p><i>Best suited to the collection of evidence of student achievement of Outcomes 1 and 3.</i></p>
15–25%	<p>Response</p> <p>Students apply their knowledge and skills in responding to a series of stimuli or prompts.</p> <p>Response to, analysis and evaluation of own or professional information technology products.</p> <p>Types of evidence may include: observation checklists, journal and evaluation tools (self or peer).</p> <p><i>Best suited to the collection of evidence of student achievement of Outcomes 2 and 4.</i></p>

UNIT PBAIT

Unit description

The focus for this unit is **personal home office**. This includes the study of software and hardware required in the operation of a personal home office environment. Students investigate the technology required for a personal home office to operate effectively. They are aware of the configuration required for a personal home office computing system. They examine, with support, the impact of information and personal technology solutions within the personal office environment.

Unit learning contexts

Within the broad area of **personal home office** teachers may choose one or more of the following contexts (this list is not exhaustive)

- small office/home office business
- personal use
- small volunteer organisations
- not for profit organisations.

Unit content

This unit includes knowledge, understanding and skills to the degree of complexity described below:

Social implications and trends

The impact of ICT on individuals, communities, and environments

- brief overview of the impact of personal ICT use e.g. music downloads, copyright considerations for image use
- brief overview of responsible environmental use of ICT e.g. safe disposal of batteries and personal technologies, storage of software and hardware
- brief overview of consequences for individuals who access inappropriate digital data.

Values, ethics and inclusivity

- responsibilities of maintaining privacy when using technology e.g. storing files in personal folders
- simple methods of responsible and careful use of personal technology e.g. secure passwords, access to a network.

Past and emerging trends in ICT

- brief overview of the universal design features in ICT e.g. text to speech applications, use of accessibility options, graphics.

Hardware and software

Hardware components and functions

- recognition and labelling of basic functions and components of personal office computer hardware systems e.g. necessity of modem for internet access, USB ports and cables for connecting devices, photocopier, scanner
- identification of common peripheral devices for personal home office use
- simple problem-solving techniques e.g. access to power, available support personnel, following troubleshooting checklists.

Applications and systems software

- basic identification of different software used in a personal home office environment
- basic use of software applications for personal technology use in a personal home office environment e.g. email, text messaging, inserting an image, MSN.

Design and acquisition of hardware and software

- basic identification of the components necessary to assemble a personal home office computer system
- brief overview of the choices available when considering hardware and software for personal use in the home office e.g. economic resources.

Digital data and information

The nature, forms and transfer of digital data

- simple techniques for the basic collection and appropriate storage of personal data e.g. document naming and placement for ease of retrieval
- brief overview of regular file formats for storage of personal data
- simple techniques to assess the accuracy of data e.g. stability of source, date last updated, publication date.

Processing and managing data

- simple file and folder organisation e.g. folders with symbols or images to assist with identification
- brief overview of the effect of data manipulation e.g. music and video play lists, image collages.

Creative application of information design principles

- basic use of commonly available applications to present personal information e.g. PowerPoint and Word with images, sound and voice files inserted.

Workplace, practices and careers

ICT requirements of careers, work and jobs

- identification of types of jobs that involve use of computers at home
- identification of technical support available for a personal home office e.g. help line from technology provider, public and private tuition.

Work environments and legislation concerning the use of ICT

- introduction to the consequences of relevant regulations that apply to personal ICT use e.g. copyright acknowledgement, slander, bullying, privacy
- simple methods for safely using ICT
- introduction to some of the potential effects of ICT use on personal health and well being.

Technology processes in the workplace

- basic technology skills and terminology required to use equipment safely e.g. 'kill' switches for personal equipment, safe proximity, on/off.

VET units of competency

Units of competency may be delivered in appropriate learning contexts if all AQTF requirements are met. Some suggested units of competency suitable for integration are:

ICAU1133A Send and retrieve information using web browsers and email

ICAU1128A Operate a personal computer

ICAU2005A Operate computer hardware

Note: Any reference to qualifications and units of competency from training packages is correct at the time of accreditation.

Assessment

The two types of assessment in the table below are consistent with the teaching and learning strategies considered to be the most supportive of student achievement of the outcomes in the Applied Information Technology course. The table provides details of the assessment type, examples of different ways that these assessment types can be applied and the weighting range for each assessment type.

Weighting P Stage	Type of assessment
75–85%	<p>Production/performance</p> <p>This is a project in which students explore ideas and use processes in their production/performance. This may be one large production/performance task or it may be two or more smaller tasks.</p> <p>Students demonstrate some understanding of styles, structures, codes and conventions and begin to develop confidence and competence in the use of technologies, skills and processes in a range of contexts.</p> <p>They may engage in an activity or on-the-spot evaluation of a performance.</p> <p>Types of evidence may include: a journal to show evidence of exploration and the development of ideas, reflection on learning processes and critical evaluation and modification of ideas, portfolios and products.</p> <p><i>Best suited to the collection of evidence of student achievement of Outcomes 1 and 3.</i></p>
15–25%	<p>Response</p> <p>Students apply their knowledge and skills in responding to a series of stimuli or prompts.</p> <p>Response to, analysis and evaluation of own or professional information technology products.</p> <p>Types of evidence may include: observation checklists, journal and evaluation tools (self or peer).</p> <p><i>Best suited to the collection of evidence of student achievement of Outcomes 2 and 4.</i></p>

UNIT 1AAIT

Unit description

The focus for this unit is **personal communication** and using technology to meet personal computing needs. This includes the study of how individuals use information technology in their daily lives. Students investigate and develop an understanding of what is required to be able to successfully communicate to meet their personal needs. They develop a range of skills that enable them to communicate using appropriate technologies and to gain knowledge that assists in communicating within a personal context.

Unit learning contexts

Within the broad area of **personal communication**, teachers may choose one or more of the following contexts (this list is not exhaustive):

- personal correspondence
- personal ICT use.

Unit content

This unit includes knowledge, understanding and skills to the degree of complexity described below:

Social implications and trends

The impact of ICT on individuals, communities, and environments

- Occupational Safety and Health issues relating to the use of computers.

Values, ethics and inclusivity

- responsibilities of ICT users to maintain privacy of information.

Past and emerging trends in ICT

- identification of new developments in ICT for personal use
- impact of new ICT developments on users.

Hardware and software

Hardware components and functions

- basic identification of the components of a computer system
- common peripheral devices.

Applications and systems software

- differentiation between operating and application software
- identification of different types of common applications and their uses.

Design and acquisition of hardware and software

- simple care of a computer system e.g. dust removal
- locate suitable places to purchase computer systems and components for personal use.

Digital data and information

The nature, forms and transfer of digital data

- use of basic formatting functions to enhance the appeal of the design
- common file formats.

Processing and managing data

- simple data organisation methods e.g. files and folders
- location of information using simple search strategies.

Creative application of information design principles

- identification that information products are for a purpose and an intended audience
- introduction to simple information design principles
- use of pre-defined criteria to evaluate the effectiveness of the design and output.

Workplace, practices and careers

Careers, work and jobs

- identification of skill ICT requirements and responsibilities for work
- basic identification of pathways available for ICT careers.

Work environments and legislation

- identification of legislation that impacts on the user in a personal context
- ergonomic practises for ICT users e.g. correct posture
- identification of environmental factors that affect ICT users.

Technology processes in the workplace

- simple techniques for representing design solutions e.g. brainstorming and annotated diagrams
- basic technology skills required to use equipment safely.

VET units of competency

Units of competency may be delivered in appropriate learning contexts if all AQTF requirements are met. Some suggested units of competency suitable for integration are:

ICAU2005A Operate computer hardware

ICAU1129A Operate a word processing application

BSBCM108A Develop keyboard skills

Note: Any reference to qualifications and units of competency from training packages is correct at the time of accreditation.

Assessment

The three types of assessment in the table below are consistent with the teaching and learning strategies considered to be the most supportive of student achievement of the outcomes in the Applied Information Technology course. The table provides details of the assessment type, examples of different ways that these assessment types can be applied and the weighting range for each assessment type.

Weighting Stage 1	Type of assessment
10–20%	<p>Investigation</p> <p>Research work in which students plan, conduct and communicate an investigation.</p> <p>Investigation of ICT-related issues or cultural contexts, exploring a range of primary and secondary sources.</p> <p><i>Best suited to the collection of evidence of student achievement of Outcomes 1, 2 and 4.</i></p>
55–75%	<p>Production/performance</p> <p>Extended production project in which students explore ideas and control the processes required to manage the quality of production. Students engage in an activity or on-the-spot evaluation of a performance. This may be one large production/performance task or it may be two or more smaller tasks.</p> <p>Manage a range of production processes, evaluating and modifying them as necessary. Demonstrate an understanding of styles, structures, codes and conventions and the development of confidence and competence in the use of technologies, skills and processes in a range of contexts.</p> <p>Types of evidence may include: a journal to show evidence of exploration and the development of ideas, reflection on learning processes and critical evaluation and modification of ideas, portfolios and products.</p> <p><i>Best suited to the collection of evidence of student achievement of Outcomes 1 and 3.</i></p>
15–20%	<p>Response</p> <p>Students apply their knowledge and skills in analysing and responding to a series of stimuli or prompts.</p> <p>Response to, analysis and evaluation of own or professional information technology products.</p> <p>Types of evidence may include: observation checklists, journal and evaluation tools (self or peer).</p> <p><i>Best suited to the collection of evidence of student achievement of Outcomes 2 and 4.</i></p>

UNIT 1BAIT

Unit description

The focus for this unit is **work readiness** and using technology commonly required in the operation of a small office environment. Students investigate the computing equipment, the common computer applications and the work skills required to effectively operate within a small office environment. They examine the impact of information technology solutions within the small office environment.

Unit learning contexts

Within the broad area of **work readiness**, teachers may choose one or more of the following contexts (this list is not exhaustive):

- small office/home office
- small volunteer organisations
- not for profit organisations.

Unit content

This unit includes knowledge, understanding and skills to the degree of complexity described below:

Social implications and trends

The impact of ICT on individuals, communities, and environments

- health and safety issues relating to ICT use in the workplace
- impact of ICT use e.g. copyright considerations
- the effect of ICT use on the environment.

Values, ethics and inclusivity

- responsibility for access, availability, privacy and security of information.

Past and emerging trends in ICT

- identification of changes occurring in ICT and the influence on a work environment.

Hardware and software

Hardware components and functions

- basic functions and components of computer hardware systems
- common peripheral devices (e.g. scanner and printer) for work use
- simple networking equipment for work productivity to connect to the internet.

Applications and systems software

- basic exploration of different operating systems software for a work environment
- applications software appropriate to tasks in a work environment.

Design and acquisition of hardware and software

- basic procedures involved in the assembly, operation and maintenance of a simple work computer system
- identification of basic factors to consider when acquiring hardware and software.

Digital data and information

The nature, forms and transfer of digital data

- basic skills and processes required to source, collect and store data appropriately
- common file formats for data used
- introduction to accuracy and reliability of sources of data.

Processing and managing data

- data organisation methods e.g. files, folders version control
- basic skills to manipulate and transform data e.g. image manipulation.

Creative application of information design principles

- use of appropriate application software to design, create, edit and present information products for an intended audience
- common information design elements and principles.

Workplace, practices and careers

Careers, work and jobs

- identification of specific pathways that provide relevant qualifications, experience and skills in ICT
- identification of work readiness skills required for individual work pathways.

Work environments and legislation

- identification of legislation that affects the user of ICT in entering the workplace
- principles, ergonomic practices and Occupational Safety and Health issues in relation to ICT good practice
- common environmental factors that affect ICT users.

Technology processes in workplaces

- use of personnel, visual manuals or basic instructions to solve operational problems and make design decisions
- basic technology skills and terminology required to use equipment safely.

VET units of competency

Units of competency may be delivered in appropriate learning contexts if all AQTF requirements are met. Some suggested units of competency suitable for integration are:

ICAU1130A Operate a spreadsheet application

ICAU1131A Operate a database application

BSBCM101A Prepare for work

BSBCM107A Operate a personal computer

BSBCM108A Develop keyboard skills

Note: Any reference to qualifications and units of competency from training packages is correct at the time of accreditation.

Assessment

The three types of assessment in the table below are consistent with the teaching and learning strategies considered to be the most supportive of student achievement of the outcomes in the Applied Information Technology course. The table provides details of the assessment type, examples of different ways that these assessment types can be applied and the weighting range for each assessment type.

Weighting Stage 1	Type of assessment
10–20%	<p>Investigation</p> <p>Research work in which students plan, conduct and communicate an investigation.</p> <p>Investigation of ICT-related issues or cultural contexts, exploring a range of primary and secondary sources.</p> <p><i>Best suited to the collection of evidence of student achievement of Outcomes 1, 2 and 4.</i></p>
55–75%	<p>Production/performance</p> <p>Extended production project in which students explore ideas and control the processes required to manage the quality of production. Students engage in an activity or on-the-spot evaluation of a performance. This may be one large production/performance task or it may be two or more smaller tasks.</p> <p>Manage a range of production processes, evaluating and modifying them as necessary. Demonstrate an understanding of styles, structures, codes and conventions and the development of confidence and competence in the use of technologies, skills and processes in a range of contexts.</p> <p>Types of evidence may include: a journal to show evidence of exploration and the development of ideas, reflection on learning processes and critical evaluation and modification of ideas, portfolios and products.</p> <p><i>Best suited to the collection of evidence of student achievement of Outcomes 1 and 3.</i></p>
15–20%	<p>Response</p> <p>Students apply their knowledge and skills in analysing and responding to a series of stimuli or prompts.</p> <p>Response to, analysis and evaluation of own or professional information technology products.</p> <p>Types of evidence may include: observation checklists, journal and evaluation tools (self or peer).</p> <p><i>Best suited to the collection of evidence of student achievement of Outcomes 2 and 4.</i></p>

UNIT 1CAIT

Unit description

The focus for this unit is **personal information and communication technologies** and using technology to meet personal computing needs. This includes the study of how individuals use, and can be affected by, information technology in their daily lives. Students investigate computer systems and understand the configuration needed to meet their personal needs. They acquire and apply a range of knowledge and skills to create information solutions that inform, persuade, educate or entertain.

Unit learning contexts

Within the focus area of **personal information and communication technologies**, teachers may choose one or more of the following contexts (this list is not exhaustive):

- personal communication e.g. family event
- school events or projects e.g. sporting carnival
- schools, clubs or local organisations
- home-offices
- independent living.

Unit content

This unit includes knowledge, understanding and skills to the degree of complexity described below:

Social implications and trends

The impact of ICT on individuals, communities, and environments

- changes in ICT and how the rate of change affects personal values, productivity, communication patterns and lifestyles
- influence of ICT use on behaviour, personal opinions or decisions, attitudes and relationships.

Values, ethics and inclusivity

- individual rights for privacy
- responsibility and safeguards required for the access, availability and security of information and potential for misuse within a personal context.

Past and emerging trends in ICT

- introduction to major trends in ICT for personal use
- impact and influence of new trends on decision-making and choices.

Hardware and software

Hardware components and functions

- hardware requirements for personal computer systems including peripheral devices
- input, output, memory/storage, communication and processing components
- interaction of components and their function.

Applications and systems software

- systems software and the operating system used in a personal computer
- commonly used applications software, such as word processing, presentation and desktop publishing, graphics, spreadsheet, graphing, email and internet applications.

Design and acquisition of hardware and software

- selection, configuration and maintenance of hardware and software components to form a suitable personal computer system e.g. preventative maintenance: firewall, trojan removal, antivirus installation
- comparison of the costs and elements of personal systems available in the marketplace
- identification of factors to consider when acquiring hardware and software.

Digital data and information

The nature, forms and transfer of digital data

- skills, techniques and processes used to collect, evaluate and store data from a range of sources e.g. traditional and digital
- data file formats and their impact on the access, transfer or distribution of data
- accuracy, reliability and validity of sources of data.

Processing and managing data

- procedures to manage personal digital resources
- search strategies for sourcing data
- development of specific skills to manipulate and transform data.

Creative application of information design principles

- relationship between the intended audience, the design and the final presentation of information
- application of principles and elements of information design (purpose, audience and client specifications) to the development of information products
- identification of criteria for evaluating the effectiveness of the design and output.

Workplace, practices and careers

Careers, work and jobs

- identification of pathways and opportunities within the personal environment that provide relevant qualifications, experience and skills in ICT
- use of ICT for personal use to support lifelong learning.

Work environments and legislation

- implications of legislation for users of ICT at school and home e.g. cyber bullying
- principles, ergonomic practices and critical factors that affect ICT users and their environment.

Technology processes in the workplace

- application of ICT methodologies used for problem-solving
- simple techniques for representing the design of solutions e.g. design briefs, annotated diagrams and storyboards
- use of ICT to increase personal efficiency and quality of output.

VET units of competency

Units of competency may be delivered in appropriate learning contexts if all AQTF requirements are met. Some suggested units of competency suitable for integration are:

ICAU1128A Operate a personal computer

ICAU1129A Operate a word processing application

ICAU1133A Send and retrieve information using web browsers and email

Note: Any reference to qualifications and units of competency from training packages is correct at the time of accreditation.

Assessment

The three types of assessment in the table below are consistent with the teaching and learning strategies considered to be the most supportive of student achievement of the outcomes in the Applied Information Technology course. The table provides details of the assessment type, examples of different ways that these assessment types can be applied and the weighting range for each assessment type.

Weighting Stage 1	Type of assessment
10–20%	<p>Investigation</p> <p>Research work in which students plan, conduct and communicate an investigation.</p> <p>Investigation of ICT-related issues or cultural contexts, exploring a range of primary and secondary sources.</p> <p><i>Best suited to the collection of evidence of student achievement of Outcomes 1, 2 and 4.</i></p>
55–75%	<p>Production/performance</p> <p>Extended production project in which students explore ideas and control the processes required to manage the quality of production. Students engage in an activity or on-the-spot evaluation of a performance. This may be one large production/performance task or it may be two or more smaller tasks.</p> <p>Manage a range of production processes, evaluating and modifying them as necessary. Demonstrate an understanding of styles, structures, codes and conventions and the development of confidence and competence in the use of technologies, skills and processes in a range of contexts.</p> <p>Types of evidence may include: a journal to show evidence of exploration and the development of ideas, reflection on learning processes and critical evaluation and modification of ideas, portfolios and products.</p> <p><i>Best suited to the collection of evidence of student achievement of Outcomes 1 and 3.</i></p>
15–20%	<p>Response</p> <p>Students apply their knowledge and skills in analysing and responding to a series of stimuli or prompts.</p> <p>Response to, analysis and evaluation of own or professional information technology products.</p> <p>Types of evidence may include: observation checklists, journal and evaluation tools (self or peer).</p> <p><i>Best suited to the collection of evidence of student achievement of Outcomes 2 and 4.</i></p>

UNIT 1DAIT

Unit description

The focus for this unit is **community information and communication technologies** and using ICT commonly required in the operation of a small work or community organisation. Students investigate small work networks and the peripheral devices required to use communication and graphics applications. They understand the configuration required for a small work computing system. They examine the impact of information technology solutions within the community.

Unit learning contexts

Within the focus area of **community information and communication technologies**, teachers may choose one or more of the following contexts (this list is not exhaustive):

- community clubs or organisations
- community service groups
- small businesses in the local community
- small office or home office.

Unit content

This unit includes knowledge, understanding and skills to the degree of complexity described below:

Social implications and trends

The impact of ICT on individuals, communities, and environments

- impact of ICT use on work and communication patterns within the small business or community environment
- impact of ICT use on the lifestyle of the individual, their work values and productivity issues
- advantages and disadvantages of ICT within small business and the community.

Values, ethics and inclusivity

- the use of online solutions e.g. email
- individual and community rights for privacy
- responsibility for access, availability and security of information and their potential misuse.

Past and emerging trends in ICT

- emergence of online solutions e.g. email, wiki, blog
- effects of new trends on information publication.

Hardware and software

Hardware components and functions

- hardware requirements for small business and community computer systems including simple networking and peripheral devices e.g. projectors
- introductory concepts and terminology associated with hardware components
- interaction of the components: role and purpose, characteristics, capabilities and limitations.

Applications and systems software

- operating systems software required for small business or community systems
- applications software appropriate to tasks in a small business or community environment
- email communications and computer control of simple devices and processes e.g. use of calendar.

Design and acquisition of hardware and software

- selection, configuration and maintenance of hardware and software components to form a small business or community computer system e.g. malware spybots
- typical methods of acquisition of hardware and software for small business or community organisation
- licensing requirements of common software applications and the consequences for illegal acquisition.

Digital data and information

The nature, forms and transfer of digital data

- skills, techniques and processes associated with the capture, storage and transfer of digital data from a range of sources
- data file formats and file sizes and their impact on the access, transfer or distribution of data
- accuracy, reliability, validity and stability of sources of data
- introduction to the use of online data and factors or constraints such as size, time, cost, locality, access and availability.

Processing and managing data

- characteristics of information produced for different purposes and the procedures to record, store, search, retrieve, backup and archive data
- specific skills to manipulate and transform data as information e.g. production of reports and charts.

Creative application of information design principles

- use of ICT design principles and elements to create, edit and present information for a specific purpose, audience and client specifications

- introduction to the characteristics of information including common formats, preferred conventions and simple techniques for navigating information
- introduction to publishing options, media and formats
- techniques used for representing the design of solutions and the criteria for evaluating the effectiveness of information output.

Workplace, practices and careers

Careers, work and jobs

- identification of pathways, qualifications, experiences and personal attributes required for working within the ICT industry
- work structure options in the small business or community organisation marketplace e.g. working from home, 'teleworking', contract work.

Work environments and legislation

- identification of relevant legislation and legal, moral and social responsibilities of ICT users e.g. equal opportunity, anti-discrimination and codes of conduct for ICT use
- Occupational Safety and Health requirements, ergonomic practices and critical environmental factors
- economic effects of the implementation of ICT in a small business or community organisation.

Technology processes in the workplace

- application of ICT problem-solving methodologies used in the small business or community organisation
- application of ICT to increase efficiency and quality e.g. organisational/time management skills, cooperative and collaborative teamwork, enterprise and creativity in the small business or community organisation.

VET units of competency

Units of competency may be delivered in appropriate learning contexts if all AQTF requirements are met. Some suggested units of competency suitable for integration are:

ICAU1130A Operate a spreadsheet application

ICAU1131A Operate a database application

ICAU2005A Operate computer hardware

Note: Any reference to qualifications and units of competency from training packages is correct at the time of accreditation.

Assessment

The three types of assessment in the table below are consistent with the teaching and learning strategies considered to be the most supportive of student achievement of the outcomes in the Applied Information Technology course. The table provides details of the assessment type, examples of different ways that these assessment types can be applied and the weighting range for each assessment type.

Weighting Stage 1	Type of assessment
10–20%	<p>Investigation</p> <p>Research work in which students plan, conduct and communicate an investigation.</p> <p>Investigation of ICT-related issues or cultural contexts, exploring a range of primary and secondary sources.</p> <p><i>Best suited to the collection of evidence of student achievement of Outcomes 1, 2 and 4.</i></p>
55–75%	<p>Production/performance</p> <p>Extended production project in which students explore ideas and control the processes required to manage the quality of production. Students engage in an activity or on-the-spot evaluation of a performance. This may be one large production/performance task or it may be two or more smaller tasks.</p> <p>Manage a range of production processes, evaluating and modifying them as necessary. Demonstrate an understanding of styles, structures, codes and conventions and the development of confidence and competence in the use of technologies, skills and processes in a range of contexts.</p> <p>Types of evidence may include: a journal to show evidence of exploration and the development of ideas, reflection on learning processes and critical evaluation and modification of ideas, portfolios and products.</p> <p><i>Best suited to the collection of evidence of student achievement of Outcomes 1 and 3.</i></p>
15–20%	<p>Response</p> <p>Students apply their knowledge and skills in analysing and responding to a series of stimuli or prompts.</p> <p>Response to, analysis and evaluation of own or professional information technology products.</p> <p>Types of evidence may include: observation checklists, journal and evaluation tools (self or peer).</p> <p><i>Best suited to the collection of evidence of student achievement of Outcomes 2 and 4.</i></p>

UNIT 2AAIT

Unit description

The focus for this unit is **media information and communication technologies**. The emphasis is on the use of information technology to collect, store and manipulate digital media. Students consider the range of products available to create visual and audio communications. They examine trends in digital media transmissions and the social and legal implications in the use of these technologies.

Unit learning contexts

Within the focus area of **media information and communication technologies**, teachers may choose one or more of the following contexts (this list is not exhaustive):

- print media e.g. magazines, newspapers, brochures or booklets
- audio and visual media e.g. CDs, DVDs
- online media.

Unit content

This unit includes knowledge, understanding and skills to the degree of complexity described below:

Social implications and trends

The impact of ICT on individuals, communities, and environments

- describe the impact on target audiences while considering inclusivity i.e. sight impaired, disabled, gender, age
- explain the impact of ICT on changing work expectations e.g. longer and flexible hours in the workplace
- discuss environmental concerns:
 - safe disposal of computers
 - benefits of using digital media compared to print media e.g. emails replacing letters, digital photos replacing film photos.

Values, ethics and inclusivity

- basic understanding of ethical issues relating to the production of media products:
 - privacy
 - piracy
 - intellectual property
 - copyright
 - plagiarism
- examines the term digital divide.

Past and emerging trends in ICT

- explore multimedia trends and developments i.e. virtual reality, voice recognition, podcasting

- discuss the convergence of digital media forms:
 - PDAs
 - mobile phones—internet access, GPS and TV access
- describe the dependency of society upon electronic and visual communication:
 - email, online chatting, social networking
 - digital storage of data—music, photos.

Hardware and software

Hardware components and functions

- introduction to networking concepts:
 - file sharing/resource sharing
 - physical and logical connections
- define the following peripheral devices and their functions:
 - scanners
 - printers
 - digital cameras
 - video cameras
- describe the components of a multimedia computer system:
 - processing (central processing unit)
 - input devices e.g. mouse, keyboard
 - output devices i.e. monitor, printer
 - memory/storage
 - primary e.g. RAM, ROM, cache
 - secondary i.e. flash, magnetic
 - communication devices
- describe troubleshooting techniques using support documents and/or online support facilities e.g. faulty monitor, computer not powering on, printers not working.

Applications and systems software

- discuss system software requirements:
 - operating systems i.e. Windows, MacOS, Linux
 - utility software i.e. anti-virus, disk fragmenter, compression, encryption
 - diagnostic software e.g. scan disk
- introduction to the use of common media and ICT software for:
 - animation
 - image manipulation
 - presentation
 - web authoring
 - audio
 - video
- discuss troubleshooting using support documents and/or online support facilities—searching for lost files, repairing applications including reinstallation.

Design and acquisition of hardware and software

- explain the following factors when purchasing/acquiring hardware/software solutions to suit a media rich environment:
 - functions of hardware and software—does the hardware and software meet your requirements?

- fundamental technical capabilities of hardware and software—can the hardware meet the minimum requirements of the software?
- output quality—does the software give the desired output?
- cost of hardware and software—is the cost within budget?
- ease of use of software and hardware—who will use the software/hardware? What skills will they need to learn?

Digital data and information

The nature, forms and transfer of digital data

- discuss the features of and differences between various file types used in a media environment—graphics, audio and video
 - file format and size
 - compression versus quality of data
 - transferability between applications
 - transfer over networks—email, internet, intranet.

Processing and managing data

- demonstrate an awareness and use of the following when creating and storing various media solutions (graphics, audio and video)
 - archiving, file naming (originals and edited)
 - storage and retrieval of digital data i.e. file and folder management practices
 - metadata i.e. html tags as used in web pages
 - referencing and search strategies.

Creative application of information design principles

- define and apply information design principles in the creation of media related technology products considering:
 - a specified target audience including:
 - purpose
 - content
 - navigation structure
 - interface design—aesthetics
 - creative design principles including:
 - balance
 - unity
 - harmony
 - elements of design including:
 - space
 - colour
 - alignment
 - position
 - form.

Workplace, practices and careers

Careers, work and jobs

- investigation of multimedia related
 - careers e.g. web designer, graphic designer, video editor, photographer
 - training pathways e.g. TAFE, university qualifications.

Work environments and legislation

- introduction to and awareness of practices and legislation issues relating to:
 - privacy of information including the Privacy Act (Australian)
 - copyright e.g. Australian Copyright Act 1968.

Technology processes in the workplace

- examine common workplace processes, including use of concept maps, proposals, research and storyboards
- explain the use of project teams i.e. team members working collaboratively in the same or different locations.

VET units of competency

Units of competency may be delivered in appropriate learning contexts if all AQTF requirements are met. Some suggested units of competency suitable for integration are:

ICPMM11BA Identify components of multimedia

ICPMM263B Access and use the internet

ICAU2005B Operate computer hardware

ICPMM321B Capture a digital image

Note: Any reference to qualifications and units of competency from training packages is correct at the time of accreditation.

Assessment

The three types of assessment in the table below are consistent with the teaching and learning strategies considered to be the most supportive of student achievement of the outcomes in the Applied Information Technology course. The table provides details of the assessment type, examples of different ways that these assessment types can be applied and the weighting range for each assessment type.

Weighting Stage 2	Type of assessment
20–30%	<p>Investigation</p> <p>Research work in which students plan, conduct and communicate an investigation.</p> <p>Investigation of ICT-related issues or cultural contexts, exploring a range of primary and secondary sources.</p> <p><i>Best suited to the collection of evidence of student achievement of Outcomes 1, 2 and 4.</i></p>
50–60%	<p>Production/performance</p> <p>Extended production project in which students explore ideas and control the processes required to manage the quality of production. Students engage in an activity or on-the-spot evaluation of a performance. This may be one large production/performance task or it may be two or more smaller tasks.</p> <p>Manage a range of production processes, evaluating and modifying them as necessary. Demonstrate an understanding of styles, structures, codes and conventions and the development of confidence and competence in the use of technologies, skills and processes in a range of contexts.</p> <p><i>Best suited to the collection of evidence of student achievement of Outcomes 1 and 3 and includes using a journal to show evidence of exploration and the development of ideas, reflection on learning processes and critical evaluation and modification of ideas.</i></p>
20–30%	<p>Response</p> <p>Students apply their knowledge and skills in analysing and responding to a series of stimuli or prompts.</p> <p>Response to, analysis and evaluation of own or professional information technology products.</p> <p>Types of evidence may include: observation checklists, journal and evaluation tools (self or peer).</p> <p><i>Best suited to the collection of evidence of student achievement of Outcomes 2 and 4.</i></p>

UNIT 2BAIT

Unit description

The focus for this unit is **information and communication technologies in business**. Skills, principles and practices associated with various types of businesses to enhance students' career prospects are emphasised. Students examine the use of ICT in a range of administrative and business environments. They identify and explain the components and configuration of a computer system to meet the needs of the organisation. Students design information solutions for problems encountered in these contexts and understand the social issues inherent in work practices.

Unit learning contexts

Within the focus area of **information and communication technologies in business**, teachers may choose one or more of the following contexts (this list is not exhaustive):

- small commercial business
- large commercial business
- government organisation
- non-profit organisation.

Unit content

This unit includes knowledge, understanding and skills to the degree of complexity described below:

Social implications and trends

The impact of ICT on individuals, communities, and environments

- describe the impacts of business technologies on work expectations and lifestyles:
 - mobile technology devices on business e.g. notebooks, mobile and smart phones, PDA's
 - 24/7 communication expectations
- analyse the impacts and effects of local and national ICT structures on the flow of information to specific communities and environments:
 - mobile phone networks
 - internet/broadband
 - wireless technologies
 - Internet cafes and libraries.

Values, ethics and inclusivity

- examine ethical issues related to the use of technologies within business:
 - identity theft e.g. phishing, pharming
 - piracy i.e. software
 - breach of intellectual property i.e. unauthorised use of programming code
 - breach of copyright e.g. illegal file sharing, bootleg recordings, screener DVD's, plagiarism
 - security issues i.e. hackers

- discuss the impacts of the global digital divide on business e.g. e-commerce—paying bills online, online shopping.

Past and emerging trends in ICT

- examine the emergence of electronic commerce and global networks:
 - banking—past (counter banking) to current (online banking),
 - paying bills—past (paying by cheque) to current (BPay)
 - business accounts—past (account ledgers and books) to current (accounting software)
- investigate effects of business globalisation design and manufacture of information products in different countries:
 - outsourcing of ICT products—define, examples, advantages/disadvantages.

Hardware and software

Hardware components and functions

- define networking concepts:
 - physical transmission media (network cable and wireless connection)
 - basic network components e.g. server, router, modem, network card
 - security of networks i.e. firewalls, passwords
- describe connection issues relating to the following components:
 - input/output devices e.g. Bluetooth, USB, wireless, infrared
 - communication devices e.g. PDA, mobile phone.

Applications and systems software

- describe the application/use of common ICT business software including descriptions, examples and use of:
 - personal information managers i.e. Outlook, Lotus Notes
 - presentation software for business
 - word processing
 - simple spreadsheets—basic formulas and charting
 - flat file databases
 - business Office Suites i.e. MS Office, Open Office
 - online office applications i.e. Google applications
 - publishing e.g. Adobe suite
 - online forms for data collection.

Design and acquisition of hardware and software

- introduction to the following factors when purchasing/acquiring hardware/software in a business environment:
 - cost versus benefits in a business environment
 - ergonomic requirements e.g. workstations. Does the equipment meet Occupational Health and Safety requirements?

- legal acquisition of hardware/software i.e. license types: freeware, shareware, proprietary—have you purchased a legal copy/licence of the software?
- warranty and technical support.

Digital data and information

The nature, forms and transfer of digital data

- investigate various solutions for business documents used in print and online business environments:
 - transfer of data files between ICT environments using email, CD/DVD ROMS, flash drives
 - file compression, conversion and size e.g. lossy, lossless, zip
 - security of data e.g. pdf and flash documents
 - introduction to encryption including the use of public and private keys.

Processing and managing data

- incorporate input validation rules for text, numerical and image based data into business products
- manipulation of data e.g. saving data in various formats
- introduction to knowledge management systems and their use in business e.g. capture sales data and produce reports
- input and extract data from a data store (database, Information Management system, email system).

Creative application of information design principles

- define and apply information design principles in the creation of business related technology products considering:
 - a specified target audience including:
 - purpose
 - presentation medium e.g. poster, web site, brochure
 - aesthetics
 - creative design principles including:
 - balance
 - proportion
 - dominance
 - unity
 - elements of design including:
 - typography—font types, alignment
 - texture
 - colour—harmony, contrast
 - white spaces
 - shape.

Workplace, practices and careers

Careers, work and jobs

- demonstrate an awareness of training opportunities in relevant business software
- investigation of alternative career pathways for business employment e.g. data entry and operator, digital accounts
- show an understanding of multi-skilling.

Work environments and legislation

- investigate the impact of ICT use within a business organisation:
 - ICT code of conduct i.e. appropriate use of equipment and ethical use of company information, email and internet usage, proxy server logs
- introduction to company liability in terms of:
 - Occupational Safety and Health
 - employee privacy.

Technology processes in the workplace

- analysis of client requirements and needs i.e. requirements analysis
- describe factors influencing teams in a business environment i.e. job security, gender bias, communication.

VET units of competency

Units of competency may be delivered in appropriate learning contexts if all AQTF requirements are met. Some suggested units of competency suitable for integration are:

ICAW2001B Work effectively in an IT environment

ICAW2002B Communicate in the workplace

ICAU2006B Operate computing packages

ICAU2013B Integrate commercial computing packages

BSBCMN 213A Word processing

BSBCMN 214 Create and use simple spreadsheets

Note: Any reference to qualifications and units of competency from training packages is correct at the time of accreditation.

Assessment

The three types of assessment in the table below are consistent with the teaching and learning strategies considered to be the most supportive of student achievement of the outcomes in the Applied Information Technology course. The table provides details of the assessment type, examples of different ways that these assessment types can be applied and the weighting range for each assessment type.

Weighting Stage 2	Type of assessment
20–30%	<p>Investigation</p> <p>Research works in which students plan, conduct and communicate an investigation.</p> <p>Investigation of ICT-related issues or cultural contexts, exploring a range of primary and secondary sources.</p> <p><i>Best suited to the collection of evidence of student achievement of Outcomes 1, 2 and 4.</i></p>
50–60%	<p>Production/performance</p> <p>Extended production project in which students explore ideas and control the processes required to manage the quality of production. Students engage in an activity or on-the-spot evaluation of a performance. This may be one large production/performance task or it may be two or more smaller tasks.</p> <p>Manage a range of production processes, evaluating and modifying them as necessary. Demonstrate an understanding of styles, structures, codes and conventions and the development of confidence and competence in the use of technologies, skills and processes in a range of contexts.</p> <p><i>Best suited to the collection of evidence of student achievement of Outcomes 1 and 3 and includes using a journal to show evidence of exploration and the development of ideas, reflection on learning processes and critical evaluation and modification of ideas.</i></p>
20–30%	<p>Response</p> <p>Students apply their knowledge and skills in analysing and responding to a series of stimuli or prompts.</p> <p>Response to, analysis and evaluation of own or professional information technology products.</p> <p>Types of evidence may include: observation checklists, journal and evaluation tools (self or peer).</p> <p><i>Best suited to the collection of evidence of student achievement of Outcomes 2 and 4.</i></p>

UNIT 3AAIT

Unit description

The focus for this unit is **evolving information and communication technologies**. The use of applications to create, modify, manipulate, use and/or manage ICT, particularly for business, training, education, infotainment and edutainment purposes is fundamental to this unit. Students consider the nature and impact of technology change and the affect on creating ICT products for a particular purpose and audience. Students develop an understanding of the nature of computer systems and the use these technologies have on society.

Unit learning contexts

Within the focus area of **evolving information and communication technologies**, teachers may choose one or more of the following contexts (this list is not exhaustive):

- entertainment
- edutainment
- infotainment
- education and training
- advertising and marketing.

Unit content

This unit includes knowledge, understanding and skills to the degree of complexity described below:

Social implications and trends

The impact of ICT on individuals, communities, and environments

- examine the impacts on developers of new technologies and the choices that users make in relation to:
 - behaviour and relationships of individuals
 - Virtual Worlds e.g. Second Life, the SIMs
 - role playing games e.g. World of Warcraft
 - the physical environment
 - industry disposal of old technology
 - climate change
 - sustainable use of paper based products
 - community
 - satellite technology e.g. Google earth, GPS
 - online applications i.e. Web2/3
 - finance and the economy
 - online auction e.g. e-bay
 - online banking
 - live feeds from stock exchange
 - online retail.

Values, ethics and inclusivity

- investigate changing societal values and ethics in the use of ICT e.g. MySpace, Facebook
- discuss the implications of identity theft
- identify the need for inclusivity in the design of ICT products and services e.g. monitors for sight impaired, use of icons, subtitles for deaf, equipment for the handicapped
- discuss digital divide i.e. the availability of ICT resources to both wealthy and poor sectors of the economy
- analyse the ethics of employer and employee relationships in regards to the appropriate use of ICT technologies in the workplace:
 - appropriate user policies
 - employer's monitoring of work emails, internet access and computer use
 - security of information and protective measures i.e. Net Alert, cyber stalking, cyber bullying
- appropriate legislation e.g. Spam Act, Copyright Act, Privacy Act.

Past and emerging trends in ICT

- explore present and emerging ICT trends e.g. digital video and sound, online services—sport, music, training and education, news and advertising, digital maps
- investigate the convergence of multimedia trends and new developments in technology e.g. haptic technology, human kinetics, robotics.

Hardware and software

Hardware components and functions

- investigate and compare different types of computer platforms i.e. MS Windows and MacOS or Linux
- describe current hardware specifications of typical small-scale multimedia production business computer systems for different purposes:
 - CPU, primary and secondary memory, graphics output, sound input/output, visual output
- explain the function of specialised peripheral devices e.g. graphics tablet, interactive whiteboard, video capture cards
- investigate help procedures and other support facilities to support hardware/software functionality e.g. forums, bulletin boards, on line tutors, live chats, video conferencing.

Applications and systems software

- describe the efficient operation and maintenance of system utility tools and accessories:
 - disk cleanup tools i.e. cleanup temporary files, registry files, internet cache
 - disk backup tools
 - disk fragmentation
 - anti malware/virus/spam/spyware

- use and manipulate application software to combine media to create information products e.g. animation, audio, image manipulation.

Design and acquisition of hardware and software

- explain the role and purpose of benchmarking in relation to the design and acquisition of hardware and software
- describe criteria when selecting hardware and software for a specified purpose including the minimum hardware requirements to run software
- analyse the compatibility issues of running the latest software on current hardware.

Digital data and information

The nature, forms and transfer of digital data

- discuss the impact and use of different file formats on the transfer or distribution of data
- explore the impact that communication connections (wireless, cable, satellite) have on:
 - file types
 - transfer of data i.e. cost, size, interoperability, location, access, availability
- compare network bandwidth requirements for storage and retrieval of various file sizes.

Processing and managing data

- demonstrate techniques and processes relating to data in a multimedia environment:
 - sourcing, organising, processing, managing and storing data
 - ensuring the accuracy, reliability and validity of the data
 - including data validation techniques
 - minimisation of threats to the integrity and security of data by using passwords, firewalls, encryption, anti-virus software.

Creative application of information design principles

- critically evaluate and apply information design principles in the creation of evolving media related technology products considering:
 - a specified target audience including:
 - purpose
 - presentation medium
 - parameters of design
 - content
 - navigation structure
 - interface
 - relevant language and terminology
 - creative design principles including:
 - balance
 - rhythm
 - proportion
 - dominance
 - unity
 - harmony
 - emphasis

- elements of design including:
 - focus point
 - contrast
 - alignment
 - position
 - line
 - texture
 - colour—harmony, spaces
 - typography
 - pattern
 - movement.

Workplace, practices and careers

Careers, work and jobs

- investigate qualifications and training related to evolving technology based employment opportunities
- discuss the impacts of ICT on future career opportunities e.g. job growth areas versus job loss/reductions

Work environments and legislation

- discuss the impact of legislation affecting evolving technologies considering:
 - copyright—fair dealing, moral rights, Copyright Act
 - intellectual property
 - Occupational Safety and Health including the OSH Act.

Technology processes in the workplace

- use and describe common work processes, including use of detailed concept maps, proposals, research and storyboards in product development
- analysis of client requirements and needs i.e. requirements analysis
- explain the requirements of individuals or characteristics for the work environment e.g. working independently, cooperatively and collectively.

Assessment

The three types of assessment in the table below are consistent with the teaching and learning strategies considered to be the most supportive of student achievement of the outcomes in the Applied Information Technology course. The table provides details of the assessment type, examples of different ways that these assessment types can be applied and the weighting range for each assessment type.

Weighting Stage 3	Type of assessment
20–30%	<p>Investigation</p> <p>Research work in which students plan, conduct and communicate an investigation.</p> <p>Investigation of ICT-related issues or cultural contexts, exploring a range of primary and secondary sources.</p> <p><i>Best suited to the collection of evidence of student achievement of Outcomes 1, 2 and 4.</i></p>
50–60%	<p>Production/performance</p> <p>Extended production project in which students explore ideas and control the processes required to manage the quality of production. Students engage in an activity or on-the-spot evaluation of a performance. This may be one large production/performance task or it may be two or more smaller tasks.</p> <p>Manage a range of production processes, evaluating and modifying them as necessary. Demonstrate an understanding of styles, structures, codes and conventions and the development of confidence and competence in the use of technologies, skills and processes in a range of contexts.</p> <p><i>Best suited to the collection of evidence of student achievement of Outcomes 1 and 3 and includes using a journal to show evidence of exploration and the development of ideas, reflection on learning processes and critical evaluation and modification of ideas.</i></p>
20–30%	<p>Response</p> <p>Students apply their knowledge and skills in analysing and responding to a series of stimuli or prompts.</p> <p>Response to, analysis and evaluation of own or professional information technology products.</p> <p>Types of evidence may include: observation checklists, journal and evaluation tools (self or peer).</p> <p><i>Best suited to the collection of evidence of student achievement of Outcomes 2 and 4.</i></p>

UNIT 3BAIT

Unit description

The focus for this unit is **information and communication technologies in industry**. Students focus on the production of an ICT product for a particular industry or business of interest. Students will combine both practical and creative skills in the use of ICT to produce solutions to challenges commonly found in the industry that may relate to areas such as information management, communications and/or promotion, data or device control and/or monitoring. Students justify the computer systems selected for their product and understand the social and legal implications, and impact of its use in industry.

Unit learning contexts

Within the focus area of **information and communication technologies in industry**, teachers may choose one or more of the following contexts (this list is not exhaustive):

- hospitality and tourism
- publishing and printing
- fashion
- building and construction
- retail and wholesale
- manufacturing
- agriculture
- mining.

Unit content

This unit includes knowledge, understanding and skills to the degree of complexity described below:

Social implications and trends

The impact of ICT on individuals, communities, and environments

- discuss the impacts of ICT on industries in the community:
 - improved communications
 - increased productivity
 - efficient production processes
- analyse the impacts of ICT on individuals working within industries:
 - improved work habits and communications
 - wider employment location choices e.g. telecommuting.

Values, ethics and inclusivity

- discuss the impact of access to global markets on the ability to purchase and use of ICT products:
 - worldwide access to products and web sites
 - international news sites
 - online censorship of information

- investigate end user expectations in differing cultures e.g. interpretation and use of language and images in websites
- analyse ethical issues and legislation in industry
 - ethics in ICT in an industry context i.e. code of conduct
 - intellectual property i.e. patents, trade marks, registered designs.

Past and emerging trends in ICT

- analyse the impact of current and emerging trends on:
 - global market forces—international communications via video conferencing
 - lifestyle choices—remote access to work sites, flexible work hours
 - industry shop 'face'—online presentation via web sites, cross web site advertising.

Hardware and software

Hardware components and functions

- identify and describe the components, concepts and terminology for the establishment of a small-scale networked computer hardware system
 - network topologies for LANs (star, wireless)
 - network devices (network interface card, switch, router, modem)
 - protocols (TCP/IP, HTTP, SMTP, WAP)
 - transmission media (coaxial, twisted pair, optical, wireless)
- describe the major factors affecting the functioning of ICT equipment within a networked environment e.g. transmission rates, bandwidth limitations
- knowledge of peripheral devices suited to selected industry requirements e.g. computer aided manufacturing (CAM) lathes and devices, high speed photography for movement analysis.

Applications and systems software

- explore skills and techniques required to use specialised application packages relevant to selected business/industry e.g. movement analysis software, business web sites, 3D modelling, business desktop publishing
- use techniques and skills to ensure smooth operation of software applications.

Design and acquisition of hardware and software

- compare and analyse similar software applications considering:
 - design
 - user interface
 - functions
 - technical capabilities
 - configuration
 - ease of use
- investigate the constraints associated with the acquisition and installation of a range of hardware components—video cards, monitors
- discuss the use of service level agreements and outsourcing to meet business or industry requirements.

Digital data and information

The nature, forms and transfer of digital data

- issues related to rapid transfer of large volumes of data e.g. streaming media, outside broadcasts:
 - consider the intended audience
 - discuss the technologies required to organise, process, download, upload and store the data
 - compare the associated factors and constraints in relation to data transference with reference to size, time, cost, resources, security, locality, access, and availability
- explore industry standard equality assurance processes related to data accuracy, reliability and validity.

Processing and managing data

- investigate how industry manages data including:
 - managing security concerns i.e. disaster recovery plan, biometrics
 - backup techniques and archiving of data
 - storage of data i.e. data warehouses, data mining and data marts
 - online data management e.g. call centres based in overseas countries.
- discuss the processing of industry data while considering:
 - bandwidth limitations of networks
 - compression of data files
 - encryption methods—data encryption keys digital signatures.

Creative application of information design principles

- apply information design principles in the creation and promotion of a corporate identity considering
- ICT solutions across a range of media to suit purpose and intended meaning
- inclusivity
- usability
- currency and accuracy of data
- evaluation of the effectiveness of the ICT solution against the design criteria.

Workplace, practices and careers

Careers, work and jobs

- discuss appropriate industry qualifications e.g. MCP, CCNA, CNE
- discuss the potential development of new skills and qualifications that arise from the rapid expansion of ICT and globalisation e.g. web design skills, database skills.

Work environments and legislation

- investigate changing work environments associated with a global economy e.g. international work opportunities, 'one job for life' theory, qualification recognition

- discuss relevant legislation affecting production in a global market e.g. visa restrictions, international copyright variations.

Technology processes in the workplace

- describe strategies to maintain employees' skill levels i.e. on the job training, short courses in relevant software skilling, power users
- consider project management strategies to encourage flexibility, originality and risk taking in ICT projects.

Assessment

The three types of assessment in the table below are consistent with the teaching and learning strategies considered to be the most supportive of student achievement of the outcomes in the Applied Information Technology course. The table provides details of the assessment type, examples of different ways that these assessment types can be applied and the weighting range for each assessment type.

Weighting Stage 3	Type of assessment
20–30%	<p>Investigation</p> <p>Research work in which students plan, conduct and communicate an investigation.</p> <p>Investigation of ICT-related issues or cultural contexts, exploring a range of primary and secondary sources.</p> <p><i>Best suited to the collection of evidence of student achievement of Outcomes 1, 2 and 4.</i></p>
50–60%	<p>Production/performance</p> <p>Extended production project in which students explore ideas and control the processes required to manage the quality of production. Students engage in an activity or on-the-spot evaluation of a performance. This may be one large production/performance task or it may be two or more smaller tasks.</p> <p>Manage a range of production processes, evaluating and modifying them as necessary. Demonstrate an understanding of styles, structures, codes and conventions and the development of confidence and competence in the use of technologies, skills and processes in a range of contexts.</p> <p><i>Best suited to the collection of evidence of student achievement of Outcomes 1 and 3 and includes using a journal to show evidence of exploration and the development of ideas, reflection on learning processes and critical evaluation and modification of ideas.</i></p>
20–30%	<p>Response</p> <p>Students apply their knowledge and skills in analysing and responding to a series of stimuli or prompts.</p> <p>Response to, analysis and evaluation of own or professional information technology products.</p> <p>Types of evidence may include: observation checklists, journal and evaluation tools (self or peer).</p> <p><i>Best suited to the collection of evidence of student achievement of Outcomes 2 and 4.</i></p>

**Examination details
Stage 2 and Stage 3**

Applied Information Technology

Examination design brief

Stage 2

Time allowed

Reading time before commencing work: ten minutes
 Working time for paper: three hours

Permissible items

Standard items: pens, pencils, eraser, correction fluid, ruler, highlighters
 Special items: nil

Section	Supporting information
<p>Section One Multiple-choice 10% of the examination 20 questions Suggested working time: 20 minutes</p>	<p>The candidate could be required to interpret images, diagrams and identify correct terminology.</p> <p>Questions could be based on stimulus material including diagrams and scenarios.</p>
<p>Section Two Short answer 15% of the examination 6 questions Suggested working time: 35 minutes</p>	<p>The candidate could be assessed on their knowledge and understanding of ICT information systems, the associated skills, techniques, processes, standards and conventions necessary to achieve workable solutions.</p> <p>Stimulus material could be used and could include diagrams, short excerpts from newspaper or journal articles, screen captures, diagrams, graphics or a scenario.</p> <p>Questions could be open or closed and scaffolded or sectionalised. Formats of response could include short paragraphs, dot points and diagrams.</p>
<p>Section Three Extended answer 25% of the examination 2 questions Suggested working time: 50 minutes</p>	<p>The candidate could be required to provide responses in the form of short or long descriptive answers, diagrams or short paragraphs. Questions could focus on the candidate's ability to apply critical thinking or use interpretative skills when responding to stimulus material.</p> <p>Stimulus material could be used and could include diagrams, short excerpts from newspaper or journal articles, screen captures, graphics or a scenario.</p> <p>Questions could be scaffolded or sectionalised and require the candidate to support their written responses.</p>
<p>Section Four Production 50% of the examination 1 question with sub-parts Suggested working time: 75 minutes</p>	<p>The candidate could be required to read and interpret scenarios or apply specific forms, structures and conventions. The candidate could also be required to apply a range of skills and recognised techniques and procedures in creating information solutions.</p> <p>Stimulus material such as images, diagrams, sketches and templates could be used in this section.</p>

Applied Information Technology

Examination design brief

Stage 3

Time allowed

Reading time before commencing work: ten minutes
 Working time for paper: three hours

Permissible items

Standard items: pens, pencils, eraser, correction fluid, ruler, highlighters
 Special items: nil

Section	Supporting information
<p>Section One Multiple-choice 10% of the examination 20 questions Suggested working time: 20 minutes</p>	<p>The candidate could be required to interpret diagrams or images and identify correct terminology.</p> <p>Stimulus material could be used and could include diagrams and scenarios.</p>
<p>Section Two Short answer 15% of the examination 6 questions Suggested working time: 35 minutes</p>	<p>The candidate could be required to provide responses in the form of short paragraphs, dot points or diagrams.</p> <p>Stimulus material could be used and could include diagrams, short excerpts from newspaper or journal articles, screen captures, diagrams, graphics or a scenario.</p> <p>Questions could be open or closed and scaffolded or sectionalised.</p>
<p>Section Three Extended answer 25% of the examination 2 questions Suggested working time: 50 minutes</p>	<p>The candidate could be required to provide detailed extended discussion to support their response, applying an understanding of relationships between the user, the availability of existing and future technological resources and constraints.</p> <p>Stimulus material could be used and could include diagrams, short excerpts from newspaper or journal articles, screen captures, graphics or a scenario.</p> <p>Questions could be open or closed and scaffolded or sectionalised.</p>
<p>Section Four Production 50% of the examination 1 question with sub-parts Suggested working time: 75 minutes</p>	<p>This section provides the candidate with an opportunity to demonstrate application of design skills in a written-paper format, while using theoretical knowledge. The candidate could be required to apply critical thinking skills in the analysis and interpretation between aspects of content or apply their knowledge and skills, techniques, processes, standards and conventions to create or analyse information solutions.</p> <p>Stimulus material could be used and could include diagrams, short excerpts from newspaper or journal articles, screen captures, graphics or a scenario.</p> <p>Questions could be open or closed and scaffolded or sectionalised. The candidate could be required to support their responses using clearly labelled diagrams with annotated notes.</p>

Appendix 1: Outcome Progressions

Outcome progressions

Outcome 1: Technology process Students apply a technology process when creating or modifying information solutions using information communication technologies.				
	Foundation	Level 1	Level 2	Level 3
	Students explore the forms of information products, expressing ideas verbally or with gestures, and expressing feelings about their participation in production processes.	Students identify the use of information products, generate ideas using simple drawings, use a simple production process and evaluate designs with own feelings.	Students identify the uses and effects of information products; generate designs that recognise some constraints and communicate these using simple drawing and modelling tools; and plan a production process comparing to original intentions.	Students identify key design features of information products, communicating these designs using a range of graphical representations, while planning and implementing a process; and evaluate and present an opinion based on identified needs.
Students:				
<ul style="list-style-type: none"> • investigate ideas considering alternatives. • devise, communicate and evaluate proposals and design plans in appropriate forms. • implement and evaluate production processes and strategies to manage resources efficiently. 	<ul style="list-style-type: none"> • explore the forms of information products and their everyday uses. • indicate, suggest or describe their ideas verbally or with gestures. • participate in production processes, expressing feelings about own information products. 	<ul style="list-style-type: none"> • investigate the form and identify the uses of everyday information products. • generate ideas for own designs, using simple models and drawings. • undertake a simple sequence of steps in a process, expressing feelings of own designs and ideas on information products. 	<ul style="list-style-type: none"> • investigate and identify the uses and effects of information products and services. • generate designs and recognise some practical constraints using text drawings or model s with some technical terms. • plan an implementation of own production processes and compare product to original design plan. 	<ul style="list-style-type: none"> • investigate information needs, locate and obtain it from several given sources; and select resources in response to identified needs and research criteria. • develop plans for information solutions, based on investigation and communicate these plans using a range of drawings, diagrams, notes, visual and graphical representations and models, tools and equipment to document design solutions. • implement a product, based on own design briefs and evaluate product against original design, function, form and purpose.

Outcome progressions

Outcome 1: Technology process					
Students apply a technology process when creating or modifying information solutions using information communication technologies.					
	Level 4	Level 5	Level 6	Level 7	Level 8
	Students use an awareness of how the values and beliefs of developers and users influence design, how it is communicated and the production processes used, considering social and environmental effects when evaluating results.	Students apply a variety of technology processes and consider the values and beliefs held by the developers and users when determining the appropriateness of technologies; and apply this understanding throughout the design and production process, using social and environmental criteria when evaluating progress and results.	Students apply an understanding of the relationship between the needs of individuals, communities and environments when assessing the appropriateness of technologies and developing design and production proposals; and control production to achieve specified standards, undertaking ongoing evaluation of the process.	Students apply an understanding of the relationship between needs, availability of resources and existing circumstances to the development and production of technologies and manage and control production tasks, undertaking ongoing evaluation reports based on recognised evaluation methods.	Students apply an understanding of the effect technology has on the development of societies and the development of design and production proposals; manage production, making adjustments when needed, using quantitative and qualitative evaluation strategies to achieve specified standards.
Students:					
<ul style="list-style-type: none"> • investigate ideas considering alternatives. • devise, communicate and evaluate proposals and design plans in appropriate forms. • implement and evaluate production processes and strategies to manage resources efficiently. 	<ul style="list-style-type: none"> • investigate and consider ideas for information solutions and take into account the ideas of others. • develop plans for information solutions, based on own investigation, communicating these plans using a range of drawings, diagrams, notes, visual and graphical representations and models; annotate and complete designs; and use simple technical terms and conventions. • implement and evaluate the product, according to the specific criteria established during the design stage; and use specific criteria to comment on and evaluate product and production methods, working within given constraints. 	<ul style="list-style-type: none"> • investigate ideas for information solutions, considering the appropriateness of existing technologies and the needs of communities and environments. • devise design plans for information solutions, providing problem analysis, options considered, reasons for choices and identification of input/output needed and constraints, communicating these plans using visual imaging techniques. • implement and evaluate production processes, assessing the effectiveness of their given and own specifications, recognising hazards and adopting safe work practices. 	<ul style="list-style-type: none"> • investigate and consider how information solutions are developed, adapted and used by individuals and communities to meet particular needs. • devise design plans that include an examination of a range of options and reasons for choices, communicating these using graphics and technical languages associated with particular fields of ICT. • implement, evaluate and adjust production processes, based on detailed production plans, considering the efficiency and effectiveness of their processes, which are described using suitable technical languages and conventions and which achieve defined standards of quality. 	<ul style="list-style-type: none"> • investigate and consider information solutions, based on an understanding of the relationship between needs, availability of resources, costs and existing and future circumstances and constraints. • devise and justify detailed design and production plans that show how the ideas have been developed, communicating these using symbols, graphics and technical languages adapted to the needs of the audience. • implement, evaluate and adjust production processes, involving the efficient use of time and resources, making comparisons with similar commercial products, while collaborating with others on tasks carried out in specific sequences to achieve specified standards of quality. 	<ul style="list-style-type: none"> • investigate information solutions, considering stakeholder beliefs and values, costs and benefits, and the resultant impacts and affects on societies. • devise design and production plans that justify the merits of different options; describe resource costs and the aesthetic, mathematical and scientific principles on which decisions are based; communicating these using standard graphical, symbolic and linguistic technical language. • implement a range of qualitative and quantitative methods to evaluate and adjust production processes that make optimum use of time, facilities and resources, negotiating with others to overcome difficulties in production and maintaining specified standards.

Outcome progressions

Outcome 2: Understanding information and communication technologies Students understand the nature and use of computer hardware and software to achieve information solutions.				
	Foundation	Level 1	Level 2	Level 3
	Students recognise different forms of information and that a combination of hardware and software is required.	Students recognise that to produce an information solution a combination of hardware and software is required.	Students understand that information can be presented in different forms and that different hardware and software can be used and controlled to produce information solutions.	Students understand that there are elements of an ICT system and select hardware and software, simple techniques and procedures to develop products in a safe manner.
Students:				
<ul style="list-style-type: none"> • understand ICT-related concepts, formats and terminology required to select and use appropriate software and hardware to achieve information solutions. • understand the relationship between forms, structures and conventions of information solutions that influence the selection and use of ICT. • understand management, processes, procedures and techniques required to achieve information solutions. 	<ul style="list-style-type: none"> • recognise that simple hardware and software meet their needs. • recognise different forms of information. • recognise that hardware and software is needed to produce a solution. 	<ul style="list-style-type: none"> • recognise that simple hardware and software produce an information solution. • recognise that information is presented in a form. • recognise that a combination of hardware and software is needed to produce a solution. 	<ul style="list-style-type: none"> • understand that hardware and software need to be used and controlled to produce ICT products. • understand that different forms of information are needed for different solutions. • understand that different hardware and software produce different solutions. 	<ul style="list-style-type: none"> • understand the ICT-related concepts, standards and terminology to select, use and control hardware and software, applying sound ergonomic principles. • understand that there are forms, structures and conventions that are appropriate for solutions. • understand simple techniques and procedures to use hardware and software to develop solutions.

Outcome progressions

Outcome 2: Understanding information and communication technologies Students understand the nature and use of computer hardware and software to achieve information solutions.					
	Level 4	Level 5	Level 6	Level 7	Level 8
	Students understand how the elements of a system interact and select a range of computer hardware and software, together with a range of relevant techniques and procedures to create and modify ICT solutions efficiently and safely.	Students understand the relationship between the components of a system, select hardware, software and recognised techniques, procedures and methods for creating and modifying ICT solutions efficiently and safely.	Students select and justify their choice of hardware, software, communication methods and procedures to achieve particular effects when creating and modifying ICT solutions to accepted standards of quality and safety.	Students select and justify particular hardware, software, communication methods and recognised practices, procedures and methods used to produce complex information solutions to industry standard quality.	Students select and justify specialised ICT techniques, procedures, methods, rules and terminology used to produce information solutions to meet detailed specifications, negotiated with intended users or clients.
Students:					
<ul style="list-style-type: none"> • understand ICT-related concepts, formats and terminology required to select and use appropriate software and hardware to achieve information solutions. • understand the relationship between forms, structures and conventions of information solutions that influence the selection and use of ICT. • understand management, processes, procedures and techniques required to achieve information solutions. 	<ul style="list-style-type: none"> • understand ICT-related concepts, formats and terminology in their selection of hardware and software and explain how the capabilities of the hardware and software components enable the output to be produced. • understand that the forms, structures and conventions appropriate to develop information solutions are related to audience and the characteristics of users. • select relevant techniques and procedures to operate hardware and software to efficiently achieve the requirements of own designs. 	<ul style="list-style-type: none"> • understand ICT-related concepts, formats and terminology in the selection of hardware and software, evaluating the effectiveness of the strategies used by an organisation to manage the storage, communication and disposal of data and information. • understand that specific forms, structures and conventions are applied to and constrain particular information solutions. • understand recognised techniques and procedures, methods and rules to operate hardware and software, considering associated limitations. 	<ul style="list-style-type: none"> • understand ICT-related concepts, formats and terminology to justify the selection of software, hardware, communication methods and processes to achieve accepted standards of quality. • understand that specific forms, structures and conventions affect the creation, use and impact of information solutions. • understand a wider variety of procedures, methods and rules to achieve particular effects and meanings. 	<ul style="list-style-type: none"> • understand that the audience, content, community and client standards relate to the forms, structures and conventions of information solutions and influence their creation, use and impact. • understand that the appearance of information products is affected by the forms, structures and conventions of information and is influenced by the needs of the audience and content of the information product. • understand industry recognised practices, procedures, methods and rules to produce complex information solutions. 	<ul style="list-style-type: none"> • understand ICT-related concepts, standards and terminology to justify the selection of specialised ICT techniques, procedures, methods, rules and terminology when negotiating with intended users or clients. • understand the relationship between the forms, structures and conventions of information solutions, the regulations and statutory controls of communities and standards concerning the requirements of users and clients. • understand industry specialised ICT techniques, procedures, methods and rules to meet detailed specifications.

Outcome progressions

Outcome 3: Quality of information solutions Students explore alternatives and use skills, techniques, processes, standards and conventions to achieve information solutions.				
	Foundation	Level 1	Level 2	Level 3
	Students attend to, respond to and use familiar processes to access, use and present information in personal ways.	Students use trial and error, familiar techniques and recognise that information is presented and used in different ways.	Students use a purposeful approach in the development of information products that use forms, structures and techniques.	Students apply known forms, structures and conventions, using a range of techniques to create information products for a purpose through exploring alternatives.
Students:				
<ul style="list-style-type: none"> • apply appropriate forms, structures and conventions to create or modify information solutions. • apply skills, techniques and processes to develop information solutions. • apply enterprising capabilities, exploring alternatives, in working to achieve information solutions. 	<ul style="list-style-type: none"> • use and present information in personal ways. • use familiar processes to access information. • attend to and respond to the generation of information solutions. 	<ul style="list-style-type: none"> • recognise the different nature of information and how it can be presented and used in different ways. • apply familiar techniques to access, record and present information. • apply a trial and error approach to generate and evaluate ideas communicated orally or through visual information. 	<ul style="list-style-type: none"> • identify different forms and nature of information; and how various forms and structures are used in information products. • apply conventional techniques to create information products. • apply a purposeful approach when developing information solutions. 	<ul style="list-style-type: none"> • apply forms, structures and conventions to communicate ideas. • apply conventional techniques to create information products for a purpose. • explore alternatives, providing reasons for choices when developing products for a purpose.

Outcome progressions

Outcome 3: Quality of information solutions Students explore alternatives and use skills, techniques, processes, standards and conventions to achieve information solutions.					
	Level 4	Level 5	Level 6	Level 7	Level 8
	Students apply forms, structures and conventions to communicate meaning and demonstrate a range of skills, techniques and processes while showing initiative and individuality in creating information solutions to an acceptable standard.	Students apply specific forms, structures and conventions and demonstrate a range of combined skills and recognised techniques and procedures, in creating information solutions using recognised methods.	Students apply forms, structures and conventions to achieve particular effects, using specific styles, forms and techniques and pursue opportunities to create information solutions to meet a particular purpose.	Students apply forms, structures and conventions, demonstrating a repertoire of techniques that highlight the interrelationships between technical competence and expressive qualities to develop innovative information solutions for a variety of audiences and purposes.	Students apply forms, structures and conventions to an industry standard, transform processes, explore, negotiate and problem-solve in creating information solutions to meet detailed specifications negotiated with intended users.
Students:					
<ul style="list-style-type: none"> • apply appropriate forms, structures and conventions to create or modify information solutions. • apply skills, techniques and processes to develop information solutions. • apply enterprising capabilities, exploring alternatives, in working to achieve information solutions. 	<ul style="list-style-type: none"> • apply forms, structures and conventions to communicate meaning according to the audience and users. • apply a range of skills, conventional techniques and processes when creating or modifying information solutions acceptable for the intended audience and purpose. • apply initiative and individuality when formulating ideas and experimenting with designs to achieve information solutions. 	<ul style="list-style-type: none"> • apply specific forms, structures and conventions used in solutions and consider the purpose, audience and users. • apply a range of skills, techniques and procedures to create or modify information solutions for a specific audience and purpose. • explore opportunities and demonstrate creativity and individuality when using a variety of forms, structures, styles and presentations, taking ethical considerations into account. 	<ul style="list-style-type: none"> • apply forms, structures and conventions to achieve particular effects, considering the purpose, audience and client specifications to a range of problems. • use specific styles, forms and techniques to create or modify information to represent the particular effect of the design on the audience and achieve defined standards of quality to a range of problems. • apply creative and innovative attributes by pursuing opportunities to achieve a particular purpose and impact, experimenting with different design options and selecting the most appropriate solution to convey desired meaning and effect to a range of problems. 	<ul style="list-style-type: none"> • apply forms, structures and conventions, considering the values and experiences of the audience or subgroups and client when creating particular solutions. • use a repertoire of techniques that demonstrates the balance between technical competence and expressive qualities when creating or modifying information for different audiences and purposes. • use resources in a constructive and efficient way and demonstrate creative and innovative attributes through the exploration, assessment and monitoring of clear and detailed variations to information products and processes. 	<ul style="list-style-type: none"> • apply forms, structures and conventions to an industry standard when devising, modifying or creating solutions for particular communities and environments. • transform, process and create information to meet detailed specifications, negotiated with intended end users or clients using specialised techniques associated with particular information technologies. • apply creative and enterprising attributes by exploring and negotiating innovative designs and solutions pre-empting problems and determining alternative courses of action taking a strategic approach.

Outcome progressions

Outcome 4: Information and communication technologies in society Students understand how cultural beliefs, values, abilities and ethical positions are interconnected in the development and use of information and communication technologies.				
	Foundation	Level 1	Level 2	Level 3
	Use information products in different ways to suit their needs.	Students are aware that technology is used in a variety of ways by different people.	Students compare the use of technologies and that people may choose alternative solutions to a range of purposes.	Students assess the impact that different technologies have on society and the influence that beliefs and aesthetic qualities have in familiar contexts.
Students:				
<ul style="list-style-type: none"> • understand the cultural beliefs, values, abilities and ethical positions that can impact on the use of ICT. • understand the consequences of ICT use in different contexts and how this relates to beliefs, values, abilities and ethical positions. • understand the consequences of technological developments on structures and environments. 	<ul style="list-style-type: none"> • recognise that individual needs, interests and skills influence the use of information products. • recognise that individuals use information products to communicate their needs and interests. • identify technologies used in their everyday activities. 	<ul style="list-style-type: none"> • understand that some information products are suited to interests and abilities of people in different ways. • are aware that to create products we need information and ideas. • consider the way that they or their families use technology. 	<ul style="list-style-type: none"> • understand that people may choose different information products for different ways for different reasons. • understand that people use ICT to create products for a range of purposes. • compare the use of technology. 	<ul style="list-style-type: none"> • understand that aesthetic qualities and beliefs concerning the impact of technology influence the use of technology. • understand the impact of the use of ICT within familiar contexts and how this relates to them. • assess the impact that different technologies have on society and the environment.

Outcome progressions

Outcome 4: Information and communication technologies in society Students understand how cultural beliefs, values, abilities and ethical positions are interconnected in the development and use of information and communication technologies.					
	Level 4	Level 5	Level 6	Level 7	Level 8
	Students examine how cultural beliefs and values affect the development and use of technologies and apply this understanding when developing and using ICT.	Students recognise that beliefs and values of individuals and communities influence the development and use of appropriate technologies and understand the relationship between the benefits and consequences of using ICT.	Students understand that the development, design and use of a technology are influenced by the needs of individuals, communities and environments and recognise the impacts of these influences and design solutions which reflect individual, community and environmental acceptance.	Students understand that the development and production of appropriate technologies is influenced by a combination of needs, availability of resources, ethical positions and existing circumstances.	Students understand that social, environmental, ethical, economic and political values underpin the development and application of technology and that decisions based on beliefs and values affect the costs and benefits of technologies.
Students:					
<ul style="list-style-type: none"> understand the cultural beliefs, values, abilities and ethical positions that can impact on the use of ICT. understand the consequences of ICT use in different contexts and how this relates to beliefs, values, abilities and ethical positions. understand the consequences of technological developments on structures and environments. 	<ul style="list-style-type: none"> consider current legislation, the cultural beliefs, values and abilities of the members of local communities and the impact on local and related environments when making ICT decisions. understand some of the consequences of ICT use in local contexts and that these relate to the beliefs, values and abilities of developers and users. understand the social and personal consequences of technological developments on individuals in given contexts. 	<ul style="list-style-type: none"> consider the cultural beliefs, values, abilities and ethics of individuals and different communities and the impact on associated environments, ensuring that ICT solutions and processes comply with legislation and ethical positions in a range of contexts. understand the main consequences of ICT use in local community contexts and how these relate to the beliefs, values, abilities and ethics of developers and users in a range of contexts. understand the physical consequences of technological developments on individual users and communities in a range of familiar contexts. 	<ul style="list-style-type: none"> consider the cultural beliefs, values, abilities and ethics of individuals and a range of communities complying with current legislation to ensure ICT solutions and processes are acceptable in a range of familiar and unfamiliar contexts. understand the major factors relating the beliefs, values, abilities and ethics of developers and users to the consequences of ICT development and use in familiar and unfamiliar contexts. understand the economic consequences of technological developments within a range of familiar and unfamiliar contexts. 	<ul style="list-style-type: none"> consider the cultural beliefs, values, abilities and ethics of key stakeholders, and their impact on associated environments by making conscious and ethical decisions about appropriate and lawful use of processes, time, energy and resources. understand how the needs, availability of resources and existing circumstances connected with the beliefs, values, abilities and ethics of key stakeholders relate to the consequences of ICT use within contexts. understand the cultural consequences of technological developments on individuals, industry, communities and environments. 	<ul style="list-style-type: none"> analyse the underlying values of all stakeholders and consider their impact on individuals, families, communities, economies and environments. understand how a wide range of factors, connected with the beliefs, values, abilities and ethics of all stakeholders relate to the consequences of ICT use in a wide range of contexts. understand the consequences of technological developments on structures and environments and make predictions about their future impact.