Information Technology

Information Technology

Course Framework

2011 Edition

For courses accredited from 2012

INFORMATION TECHNOLOGY

COURSE FRAMEWORK

B S S S
AUSTRALIAN CAPITAL TERRITORY

INTRODUCTION

All programs of study for the ACT Year 12 Certificate should enable students to become:

- creative and critical thinkers
- enterprising problem-solvers
- skilled and empathetic communicators
- informed and ethical decision-makers
- environmentally and culturally aware citizens
- confident and capable users of technologies
- independent and self-managing learners
- collaborative team members

and provide students with:

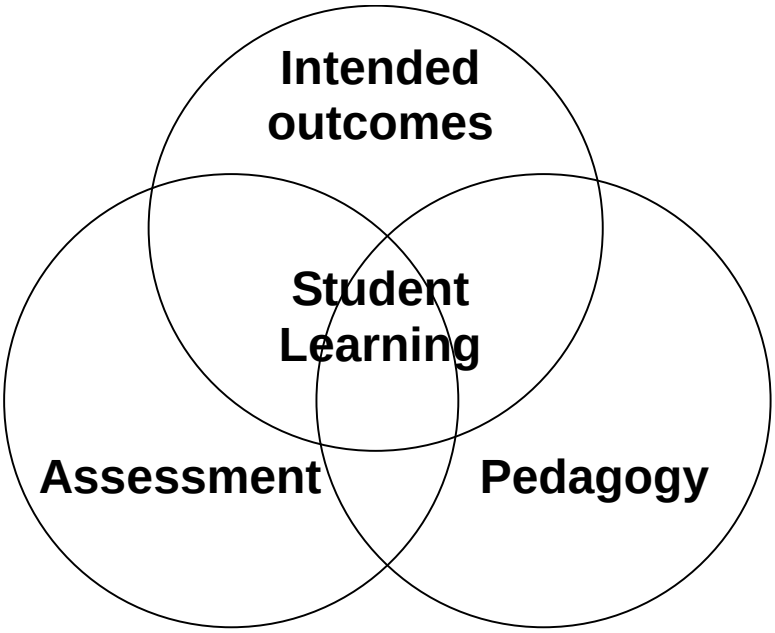
- a comprehensive body of specific knowledge, principles and concepts
- a basis for self-directed and lifelong learning
- personal attributes enabling effective participation in society.

*Examples of these student capabilities are provided at **Appendix B**.*

COURSE FRAMEWORKS

Course Frameworks provide the basis for the development and accreditation of any course within a broad subject area and provide a common basis for the assessment, moderation and reporting of student outcomes in courses based on the Framework.

Course Frameworks support a model of learning that integrates intended student outcomes, pedagogy and assessment. This model is underpinned by a set of beliefs and a set of learning principles.



Underpinning beliefs

- All students are able to learn
- Learning is a partnership between students and teachers
- Teachers are responsible for advancing student learning

Learning principles

1. Learning builds on existing knowledge, understandings and skills.
   (*Prior knowledge*)
2. When learning is organised around major concepts, principles and significant real world issues, within and across disciplines, it helps students make connections and build knowledge structures.
   (Deep knowledge and connectedness)
3. Learning is facilitated when students actively monitor their own learning and consciously develop ways of organising and applying knowledge within and across contexts.
   (Metacognition)
4. Learners' sense of self and motivation to learn affects learning.
   (Self-concept)
5. Learning needs to take place in a context of high expectations.
   (High expectations)
6. Learners learn in different ways and at different rates.
   (Individual differences)
7. Different cultural environments, including the use of language, shape learners' understandings and the way they learn.
   (Socio-cultural effects)
8. Learning is a social and collaborative function as well as an individual one.
   (Collaborative learning)
9. Learning is strengthened when learning outcomes and criteria for judging learning are made explicit and when students receive frequent feedback on their progress.
   (Explicit expectations and feedback)

THE INFORMATION TECHNOLOGY FRAMEWORK

This framework emphasises processes and content, which will enable all students to develop skills in and deep understanding of Information Technology (IT). The responsibility for the development of content lies more appropriately with course writers. Courses should provide for a diverse range of students with the opportunity to study IT relevant to their lives and futures.

A, T, V, M and C courses may be developed under this framework. Eligibility to study an M course is determined by BSSS Modified course policy. Modified courses/units are designed for students:

- who satisfy the Education and Training Directorate Disability Criteria accepted as a common definition for census and other system processes by all sectors, public and non-government
- where the principal has deemed exceptional circumstances due to the students' significant needs and previous levels of support.

Provisions for students with special needs are outlined in the BSSS *Equitable Assessment and Special Consideration in Assessment in Years 11 and 12* guidelines.

RATIONALE

Information Technology is the study of information and intelligent systems, software development and application, hardware implementation, human computer interface/interaction and social, ethical and environmental issues. IT is integral to all aspects of contemporary society. Rapid and continuing advances in IT are changing the ways people share, use, develop and process information. The study of IT empowers individuals to participate in a rapidly changing technological world.

Courses developed under the IT Course Framework will enable students to:

- develop essential skills in literacy and numeracy, and be creative and productive users of technology, as a foundation for success in all learning areas
- develop confidence and capabilities to pursue university or post-secondary vocational qualifications leading to rewarding and productive employment
- work for the common good, in particular sustaining and improving natural and social environments[1]

The focus of senior studies is to broaden students' understanding of IT in its many forms. The courses developed under this framework will provide students with the tools/skills required to actively engage in a technologically diverse world; enabling them to be more effective in their chosen career paths. Courses will also empower students to make informed, social and ethical decisions when using technology. In addition, this framework accommodates the rapidly changing nature of IT and will promote the engagement of new and emerging technologies.

To encourage students to think innovatively, this framework promotes the use of a problem solving methodology, including critical analysis, design, development and evaluation. Successful learners will be able to think deeply and engage in a range of practical skills, as well as be able to adapt their learning to future technologies. Students will be able to use a variety of communication methods to share their ideas and solutions.

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[1] *Melbourne Declaration on Educational Goals for Young Australians*, December 2008

LITERACY IN INFORMATION TECHNOLOGY

Students have opportunities to develop and refine the following literacy skills when studying IT, through:

- the use of problem solving methodology including critical analysis, design, development and evaluation
- analysing print, speech and digital texts, including multimedia presentations, animation and software applications
- producing appropriate written, oral, visual, and multimedia communications
- using IT specific language and texts to communicate a range of views on IT issues
- communicating with other members of a group to explore IT related issues
- understanding and using graphs, flow charts, diagrams, and statistics related to IT.

NUMERACY IN INFORMATION TECHNOLOGY

Students have opportunities to develop and refine the following numeracy skills in IT, through:

- accessing, understanding, critically analysing, and using numerical data
- understanding and explaining trends from numerical or statistical data
- critically analysing ways in which numerical data are used in discussing IT issues
- testing hypotheses through fieldwork and data generation and analysis.[2]

GOALS

Course Framework Goals focus on the essential skills and knowledge that students should know and be able to demonstrate as a result of studying a course in this subject area. They are the **intended student outcomes**. All courses based on this Course Framework should enable students to:

- understand and apply IT concepts and principles
- adapt to the changing ways people share, use, develop and process IT in a rapidly evolving technological world
- communicate with a clear understanding of purpose and audience, using suitable terminology and appropriate mediums
- demonstrate an understanding of the appropriate ethical uses of IT and the implications for social, personal and ethical participation in the wider community and as members of a global society
- apply a range of project management methodologies to systematically plan, develop, implement, critically analyse and evaluate innovative solutions to problems
- use current industry practices to work safely and efficiently in a work environment
- work effectively as a member of a team by showing an understanding of individual role responsibilities and respecting the needs of group members
- think critically and demonstrate research and analytical skills.

[2] The developers acknowledge the SACE Information Technology curriculum document in the development of literacy and numeracy skills.

GUIDE TO THE SELECTION OF CONTENT

Courses developed under this framework will provide details of course content through the component units of the course. While this content will differ according to the particular course classification (A, T, V, M and C, including vocational programs), all content will be chosen to enable students to work towards the achievement of the common and agreed goals of the framework.

ESSENTIAL CONCEPTS AND SKILLS

All courses developed under this Framework will be based on the essential concepts and skills of the subject area, as outlined below.

Concepts:

The essential concepts developed in all IT courses include:

- changing nature of IT
- problem solving methodology
- advanced features, functions and applications of software, hardware and integrated systems

Skills:

The essential skills developed in all IT courses include:

- selecting appropriate tools/methods to achieve desired outcomes
- collecting, analysing and organising data and information
- thinking critically
- solving problems
- communicating ideas and information
- planning and organising activities
- working individually and with others
- applying and using technology and software packages
- evaluating evolving technologies

VOCATIONAL COURSES

Colleges with Registered Training Organization status (RTO) are eligible to deliver units of competence from Training Packages, or alternatively, they may develop vocational courses based on the Training Packages and consistent with the goals of this framework.

Delivery using Vendor Programs

In order to meet the assessment requirements of this framework, courses must include the following restrictions on vendor units:

Minor	Maximum of one standard unit delivered using a vendor program
Major	Maximum of two standard units delivered using a vendor program
Major/Minor	Must contain at least 2 non-vendor delivered units
Double Major	Must contain at least 3 non-vendor delivered units

PEDAGOGY

Teaching Strategies

Course developers are encouraged to outline teaching strategies that are grounded in the Learning Principles and encompass quality teaching. Pedagogical techniques and assessment tasks should promote intellectual quality, establish a rich learning environment and generate relevant connections between learning and life experiences.

Teaching strategies that are particularly relevant and effective in IT include, but are not limited to:

Review prior learning

- brainstorming ideas
- using mind maps to understand concepts

Introduce new material

- examining/researching case studies, journal articles and the media, including newspaper articles, in order to investigate and apply theoretical understandings to particular situations
- guest speakers

Provide demonstration, guided practice and application

- excursions and field work
- questioning, short discussions and talks
- teacher demonstrations, modelling and scaffolding

Promote independent practice and application

- establishing links, partnerships, networks and/or exchanges with relevant individuals or groups
- peer tutoring, student presentations, student as teacher approaches
- revision of learning e.g. worksheets, tests and practical activities
- inquiry based learning

Link to next task or skill area

- designing surveys or questionnaires
- using the problem solving methodology

For Modified (M) courses, teaching strategies should be underpinned by the principles of the Disability Discrimination Act and reflect contemporary pedagogical practices in meeting the needs of students with specific learning deficits or disabilities.

ASSESSMENT

The purpose of including assessment task types (with examples of tasks) and assessment criteria in Course Frameworks is to provide a common and agreed basis for the collection of evidence of student achievement. This collection of evidence enables a comparison of achievement within and across colleges, through moderation processes. This enables valid, fair and equitable reporting of student achievement on the Year 12 Certificate.

Assessment Tasks elicit responses that demonstrate the degree to which students have achieved the goals of a unit (and the course as a whole).

Assessment Tasks in T courses require students to utilise higher order thinking skills that are the basis of the ACT Scaling Test.

Assessment Task Types (with **weightings**) group assessment tasks in ways that reflect agreed shared practice in the subject area and facilitate the comparison of student work across different assessment tasks.

Assessment Criteria (the dimensions of quality that teachers look for in evaluating student work) provide a common and agreed basis for judgement of performance against unit and course goals, within and across colleges. Over a course, teachers use all of these criteria to assess students' performance, but do not necessarily use all criteria on each task. Assessment criteria are to be used holistically on a given task and in determining the unit grade.

Assessment Rubrics are used to develop criteria for a task type and a continuum that indicates levels of student achievement against each criterion.

General Assessment Criteria (A, T, V and M)

Students will be assessed on the degree to which they demonstrate:

- knowledge, understanding, application, analysis and evaluation
- planning, designing, creating and implementing
- communication and interpersonal skills
- flexible, adaptive and creative thinking

ASSESSMENT GUIDE TO TASK TYPES (A, T, V AND M COURSES)

Board Recommendations

The Board recommends 3 – 5 assessment tasks per standard unit (1.0) and 2 – 3 per half standard unit (0.5).

Assessment is to be differentiated for A, T, V and M courses. Assessment tasks in all courses need to be appropriate to the classification and cater for the needs of students. Creative, open-ended and rich learning tasks are recommended.

Assessment in **A** courses should typically reflect tasks that allow students to apply their understanding through identifying, explaining, describing, exploring, using, applying, examining, recommending and justifying.
Assessment in **T** courses should typically reflect tasks that allow students to apply their understanding through demonstrating, applying, exploring, examining, analysing, hypothesising, synthesising and evaluating.
Assessment in **M** courses should typically reflect tasks that allow students to demonstrate their understanding through defining, selecting, using, recalling, classifying, outlining, identifying, describing, demonstrating, recounting, distinguishing, applying, practising and predicting.

Approaches to Assessment

- Refer to the Quality Teacher model when developing tasks.
- Use a variety of practical and theoretical tasks that recognise different learning styles and utilise a range of technologies.
- For M courses consider:
    - students' strengths, interests and ability
    - alternative formats e.g. audio/visual text
    - changing the conditions of assessment e.g. time, scribes etc
    - providing guidance, supervision and scaffolding.

Assessment Requirements

- Assessment tasks should reflect authentic scenarios.
- Projects should consist of a theoretical and practical component.
- Assignments and projects should include a reflective response.
- Group projects should include some individual assessment.

Assessment Task Types (A Courses)

<table>
<tr><td colspan="4">To demonstrate knowledge and understanding in A courses, students will:
Demonstrate, examine and recommend: application of IT and skills and principles
Identify, explain and apply: identify the requirements of a problem and design a basic solution
Describe, explore and use: implement and test a basic solution
Apply and justify: appraise the effectiveness of the solution</td></tr>
<tr><th>Task Type</th><th>Practical</th><th>Theoretical</th><th>Weightings
1.0 & 0.5 units</th></tr>
<tr><td>Assignments and Projects</td><td>• Portfolio of work that includes a range of practical elements and some documentation
• Basic algorithm design and programming tasks</td><td>• Specification documents, training manuals, other user documentation, etc
• Conceptual design documents, e.g. Flow chart
• Research report/short answer responses</td><td>30% - 80%</td></tr>
<tr><td>Tests</td><td colspan="2">• Open and closed computer/book practical and theory tests</td><td>20% - 70%</td></tr>
</table>

Assessment Task Types (T Courses)

To demonstrate knowledge and understanding in T courses, students will:

Demonstrate, apply, explore, examine: high level application of IT and skills and principles

Think critically and analyse: extract requirements, define the problem and assess the most effective solution

Hypothesise and Problem solve: design and implement the solution to the problem

Evaluate: test, evaluate and document the solutions

Synthesis: able to transfer skills and understanding to new situations. Delivering a complete solution that incorporates all aspects of the problem solving methodology

Task Type	Practical	Theoretical	Weightings 1.0 & 0.5 units
Assignments and Projects	• Portfolio of work that includes a range of practical elements and comprehensive documentation • Algorithm design and programming tasks	• Comprehensive specification documents, training manuals, other user documentation, etc • Conceptual design documents, e.g. ER diagrams • Research report/essay	30% - 80%
Tests	• Open and closed computer/book practical and theory tests		20% - 70%

Assessment Task Types (M Courses)

To demonstrate knowledge and understanding in M courses, students will:

Demonstrate, distinguish and classify: basic application of IT and skills and principles

Recall, outline: simple IT concepts

Identify, describe, predict and apply: with support, identifies the problem and creates a basic solution

Define, select and use: with direction uses software to create a simple solution

State, recount and practise: complete scaffolded software application exercises

Task Type	Practical	Theoretical	Weightings 1.0 & 0.5 units
Assignments and Projects	• Portfolio of work • Flowchart of discrete steps required to solve a problem	• Basic user documentation • Conceptual design documents, e.g. Inspiration picture mind-map • Research poster/collage	10% - 90%
Tests	• Open computer/book practical and theory tests		10% - 90%

ACHIEVEMENT STANDARDS

Grade descriptors provide a guide for teacher judgement of students' achievement, based on the assessment criteria, over a unit of work in this subject. Grades are organized on an A - E basis and represent standards of achievement.

Grades are awarded on the proviso that the assessment requirements have been met. Teachers will consider, when allocating grades, the degree to which students demonstrate their ability to complete and submit tasks within a specified time frame.

The following descriptors are consistent with the **system grade descriptors** which describe generic standards of student achievement across all courses.

Unit Grade Descriptors for A course

	*A student who achieves an **A** grade typically*	*A student who achieves a **B** grade typically*	*A student who achieves a **C** grade typically*	*A student who achieves a **D** grade typically*	*A student who achieves an **E** grade typically*
Knowledge, understanding, application, analysis & evaluation	• analyses, explains and applies knowledge, concepts and skills with accuracy in a wide range of scenarios • demonstrates comprehensive knowledge of systems composition and application	• explains and applies knowledge, concepts and skills with accuracy in a range of scenarios • demonstrates detailed knowledge of systems composition or application	• recalls, describes and applies knowledge, concepts and skills with some accuracy in a range of scenarios • demonstrates general knowledge of systems composition or application	• identifies and applies some knowledge, concepts and skills with occasional accuracy in a narrow range of scenarios • demonstrates basic knowledge of systems composition or application	• recalls minimal knowledge, concepts and skills with little accuracy in limited scenarios • demonstrates minimal knowledge of systems composition or application
Planning, designing, creating & implementing	• develops solutions using highly effective problem solving methodology, tools, knowledge, skills and processes to achieve an outcome • demonstrates refined skills in planning, time management and designing	• develops solutions using effective problem solving methodology, tools, knowledge, skills and processes to achieve an outcome • demonstrates competent skills in planning, time management and designing	• develops solutions using appropriate problem solving methodology, tools, knowledge, skills and processes to achieve an outcome • demonstrates satisfactory skills in planning, time management and designing	• develops solutions using occasional problem solving methodology, tools, knowledge, skills and processes to achieve an outcome • demonstrates basic skills in planning, time management and designing	• develops solutions using minimal problem solving methodology, tools, knowledge, skills and processes to achieve an outcome • demonstrates minimal skills in planning, time management and designing
Communication, Interpersonal skills	• presents challenging concepts accurately and coherently using a range of written and non-written formats • communicates with a strong sense of purpose and audience • demonstrates an ethical use of information using accepted referencing and uses appropriate terminology accurately and with confidence • demonstrates highly effective interpersonal skills • works productively in both team and group situations with a thorough understanding of individual responsibilities and the rights of others	• mostly presents concepts accurately and coherently using written and non-written formats • communicates with a sense of purpose and audience • mostly demonstrates an ethical use of information using accepted referencing and uses terminology accurately • demonstrates mostly effective interpersonal skills • works in team and group situations with a proficient understanding of individual responsibilities and the rights of others	• presents concepts with some accuracy using written and non-written formats • mostly communicates with a sense of purpose and audience • demonstrates some ethical use of information mostly using accepted referencing and accurate terminology • demonstrates some effective interpersonal skills • works in team and group situations with an understanding of individual responsibilities and the rights of others	• presents basic concepts with some accuracy using written and non-written formats • demonstrates some communication with a sense of purpose and audience • demonstrates some ethical use of information and referencing and some accurate use of terminology • demonstrates basic interpersonal skills • works in team and group situations with some understanding of individual responsibilities and the rights of others	• presents some basic concepts using a limited range of written and non-written formats • demonstrates a basic level of communication with limited sense of purpose or audience • demonstrates little or no ethical use of information, referencing or accurate use of terminology • demonstrates some basic interpersonal skills • works in team and group situations with minimal understanding of individual responsibilities and the rights of others
Flexible, adaptive, critical and creative thinking	• demonstrates a broad awareness of the impact of social, ethical, and legal issues • demonstrates creativity and confidence in applying processes and techniques to familiar and unfamiliar scenarios	• demonstrates a general awareness of the impact of social, ethical, and legal issues • demonstrates appropriate processes and techniques to familiar and unfamiliar scenarios	• demonstrates a basic awareness of the impact of social, ethical, and legal issues • demonstrates routine application of processes and techniques to familiar and unfamiliar scenarios	• demonstrates occasional awareness of the impact of social, ethical, and legal issues • demonstrates occasional application of processes and techniques to familiar scenarios	• demonstrates little or no awareness of the impact of social, ethical, and legal issues • demonstrates limited application of processes and techniques to familiar scenarios

Unit Grade Descriptors for T course

	*A student who achieves an **A** grade typically*	*A student who achieves a **B** grade typically*	*A student who achieves a **C** grade typically*	*A student who achieves a **D** grade typically*	*A student who achieves an **E** grade typically*
Knowledge, understanding, application, analysis & evaluation	• evaluates and analyses complex problems with insight and devises innovative solutions • synthesises knowledge of the composition of a system/ application displaying a sophisticated understanding of the interconnected nature of its components	• analyses and explains complex problems with insight and devises creative and effective solutions • demonstrates knowledge of the composition of a system or application in a comprehensive and clear manner	• explains and describes problems and devises effective solutions • demonstrates knowledge of a system or application in a satisfactory manner	• identifies and describes problems and devises solutions to problems inconsistently • demonstrates basic knowledge of the composition of a system or application	• identifies problems and presents minimal understanding on developing a solution to a problem • demonstrates minimal knowledge of the composition or application
Planning, designing, creating & implementing	• creates sophisticated and proficient solutions using highly effective problem solving methodology, design techniques, tools, skills and processes • demonstrates refined skills in planning, time management and designing, satisfying all requirements to a very high level	• creates proficient solutions using effective problem solving methodology, design techniques, tools, skills and processes • demonstrates competent skills in planning, time management and designing, satisfying all requirements to a high level	• creates effective solutions using adequate problem solving methodology, design techniques, tools, skills and processes • demonstrates satisfactory skills in planning, time management and designing, satisfying many requirements to a satisfactory level	• creates basic solutions to problems, inconsistency uses methodology, techniques, tools, skills and processes • demonstrates basic skills in planning, time management and designing, satisfying few requirements	• demonstrates minimal application of methodology, techniques, tools, skills and processes to develop solutions to problems • demonstrates minimal skills in planning, time management and designing, satisfying few requirements
Communication, interpersonal skills	• presents highly complex concepts accurately and coherently using a wide range of written and non-written formats • communicates with a strong sense of purpose and audience • demonstrates through awareness of ethical use of information using accepted referencing and uses appropriate terminology accurately and with confidence • demonstrates highly effective interpersonal skills working productively in both team and group situations with a thorough understanding of individual responsibilities and the rights of others	• presents complex concepts accurately and coherently using a range of written and non-written formats • communicates proficiently with a sense of purpose and audience • demonstrates a broad awareness of ethical use of information using accepted referencing and uses terminology accurately • demonstrates mostly effective interpersonal skills working in team and group situations with a proficient understanding of individual responsibilities and the rights of others	• presents concepts with some accuracy and coherence using written and non-written formats • communicates satisfactorily with a sense of purpose and audience • demonstrates general awareness of ethical use of information mostly using accepted referencing and accurate terminology • demonstrates some effective interpersonal skills working in team and group situations with an understanding of individual responsibilities and the rights of others	• presents basic concepts with some accuracy using written and non-written formats • communicates with some sense of purpose and audience • demonstrates some awareness of ethical use of information and referencing and some accurate use of terminology • demonstrates basic interpersonal skills working in team and group situations with some understanding of individual responsibilities and the rights of others	• presents concepts using a limited range of written and non-written formats • demonstrates basic level of communication with limited sense of purpose or audience • demonstrates little or no awareness of ethical use of information, referencing or accurate use of terminology • demonstrates some basic interpersonal skills working in team and group situations with minimal understanding of individual responsibilities and the rights of others
Flexible, adaptive, critical and creative thinking	• demonstrates a thorough awareness of the impact of social, ethical, and legal issues • demonstrates creativity and agility in applying processes and techniques to familiar and unfamiliar scenarios	• demonstrates a broad awareness of the impact of social, ethical, and legal issues • demonstrates agility and confidence in applying processes and techniques to familiar and unfamiliar scenarios	• demonstrates a general awareness of the impact of social, ethical, and legal issues • demonstrates appropriate processes and techniques to familiar and unfamiliar scenarios	• demonstrates a basic awareness of the impact of social, ethical, and legal issues • demonstrates occasional application of processes and techniques to familiar scenarios	• demonstrates little or no awareness of the impact of social, ethical, and legal issues • demonstrates limited application of processes and techniques to familiar scenarios

Unit Grade Descriptors for M course

	*A student who achieves the grade **A** typically*	*A student who achieves the grade **B** typically*	*A student who achieves the grade **C** typically*	*A student who achieves the grade **D** typically*	*A student who achieves the grade **E** typically*
Knowledge, Understanding, Application, Analysis and Evaluation	• demonstrates a strong understanding of software applications and ICT processes • demonstrates strong understanding and use relevant ICT terminology • demonstrates a strong understanding of the requirements of the task	• demonstrates a sound understanding of software applications and ICT processes • shows sound understanding and use relevant ICT terminology • demonstrates a sound understanding of the requirements of the task	• demonstrates developing understanding of software applications and ICT processes • shows developing understanding and use relevant ICT terminology • demonstrates developing understanding of the requirements of the task	• demonstrates some understanding of software applications and ICT processes • demonstrates some understanding of relevant ICT terminology • demonstrates some understanding of the requirements of the task	• demonstrates minimal understanding of software applications and ICT processes • demonstrates minimal understanding of relevant ICT terminology • demonstrates minimal understanding of requirements of the task
Planning, Designing, Creating & Implementing	• demonstrates strong planning tools such as story boards, mind maps, flow charts, etc.	• demonstrates sound planning tools such as story boards, mind maps, flow charts, etc.	• demonstrates developing planning tools such as story boards, mind maps, flow charts, etc.	• demonstrates some planning tools such as story boards, mind maps, flow charts, etc.	• demonstrates minimal use of planning tools
Communication &Interpersonal skills	• shows strong skills in sharing and responding to ideas and opinions through appropriate mediums	• shows sound skills in ability to share and respond to ideas and opinions through appropriate mediums	• shows developing ability to share and respond to ideas and opinions through appropriate mediums	• shows some skills in sharing and responding to ideas and opinions through appropriate mediums	• meets the minimal requirement to share and respond to ideas and opinions through appropriate mediums
Flexible, adaptive, critical and creative thinking	• demonstrates strong skills in adapting existing concepts to a satisfactory standard	• demonstrates sound skills in adapting existing concepts to a satisfactory standard	• demonstrates developing skills in adapting existing concepts to a satisfactory standard	• demonstrates some skills in adapting existing concepts to a satisfactory standard	• demonstrates minimal skill in adapting an existing concept to a satisfactory standard

MODERATION

Moderation is a system designed and implemented to:

- provide comparability in the system of school-based assessment
- form the basis for valid and reliable assessment in senior secondary schools
- involve the ACT Board of Senior Secondary Studies and colleges in cooperation and partnership
- maintain the quality of school-based assessment and the credibility, validity and acceptability of Board certificates.

Moderation commences within individual colleges. Teachers develop assessment programs and instruments, apply assessment criteria, and allocate Unit Grades, according to the relevant Course Framework. Teachers within course teaching groups conduct consensus discussions to moderate marking or grading of individual assessment instruments and unit grade decisions.

The Moderation Model

Moderation within the ACT encompasses structured, consensus-based peer review of Unit Grades for all accredited courses, as well as statistical moderation of course scores, including small group procedures, for 'T' courses.

Moderation by Structured, Consensus-based Peer Review

Review is a subcategory of moderation, comprising the review of standards and the validation of Unit Grades. In the review process, Unit Grades, determined for Year 11 and Year 12 student assessment portfolios that have been assessed in schools by teachers under accredited courses, are moderated by peer review against system wide criteria and standards. This is done by matching student performance with the criteria and standards outlined in the unit grade descriptors as stated in the Course Framework. Advice is then given to colleges to assist teachers with, and/or reassure them on, their judgments.

Preparation for Structured, Consensus-based Peer Review

Each year, teachers teaching a Year 11 class are asked to retain originals or copies of student work completed in Semester 2. Similarly, teachers teaching a Year 12 class should retain originals or copies of student work completed in Semester 1. Assessment and other documentation required by the Office of the Board of Senior Secondary Studies should also be kept. Year 11 work from Semester 2 of the previous year is presented for review at Moderation Day 1 in March, and Year 12 work from Semester 1 is presented for review at Moderation Day 2 in August.

In the lead up to Moderation Day, a College Course Presentation (comprised of a document folder and a set of student portfolios) is prepared for each A and T course and any M units offered by the school, and is sent in to the Office of the Board of Senior Secondary Studies.

The College Course Presentation

The package of materials (College Course Presentation) presented by a college for review on moderation days in each course area will comprise the following:

- a folder containing supporting documentation as requested by the Office of the Board through memoranda to colleges
- a set of student portfolios containing marked and/or graded written and non-written assessment responses and completed criteria and standards feedback forms. Evidence of all assessment responses on which the unit grade decision has been made is to be included in the student review portfolios

Specific requirements for subject areas and types of evidence to be presented for each moderation day will be outlined by the Board Secretariat through memoranda and Information Papers.

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COURSE FRAMEWORK DEVELOPMENT GROUP

Name	College
Andrew Moss	Dickson College
Margaret Maher	Trinity Christian School
Ryan Cather	Lake Tuggeranong College
Sam Kairouz	Canberra Institute of Technology
Sanjay Sharma	Canberra Girls' Grammar School

The group gratefully acknowledges the work of previous groups who developed and revised the Information Studies Course Framework 2006 Edition.

Assignment and Project Sample Rubric:

	*A student who achieves an **A** grade typically*	*A student who achieves a **B** grade typically*	*A student who achieves a **C** grade typically*	*A student who achieves a **D** grade typically*	*A student who achieves an **E** grade typically*
Knowledge, Understanding, Application, Analysis and Evaluation	• demonstrates and applies knowledge of HTML, CSS and JavaScript in a comprehensive and sophisticated manner • analyses and evaluates complex problems, information, resources and issues to formulate highly effective and innovative solutions • creates a sophisticated and highly proficient solution using effective design techniques and tools, knowledge, skills, and processes to achieve outcomes or solve a problem • accurately validates the elements of the solution to ensure that it achieves the intended outcomes • demonstrates excellent time management and organisational skills	• demonstrates knowledge of the composition of a system or application in a comprehensive manner • analyses and explains complex problems, information, resouces and issues to formulate effective solutions • creates a proficient solution using effective design techniques and tools, and knowledge, skills, and processes to achieve outcomes or solve a problem • validates the elements of the solution to ensure that it achieves the intended outcomes • demonstrates good time management and organisational skills	• demonstrates knowledge of the composition of a system or application in a satisfactory manner • describes and explains problems, information, resources and issues to formulate satisfactory solutions • creates a satisfactory solution using effective design techniques and tools, and knowledge, skills, and processes to achieve outcomes or solve a problem • validates many of the elements of the solution to ensure that it achieves the intended outcomes • demonstrates satisfactory time management and organisational skills	• demonstrates basic knowledge of the composition of a system or application • identifies basic problems, information and issues to formulate simple solutions • creates a simple solution using some design techniques and tools • validates few of the elements of the solution to ensure that it achieves the intended outcomes • demonstrates limited time management and organisational skills	• demonstrates limited knowledge of the composition of a system or application • identifies basic problems, information, resources and issues with little evidence of developing solutions • creates simple solution using limited design techniques and tools • demonstrates little validation of the elements of the solution • demonstrates minimal time management and organisational skills
Communication & Interpersonal skills	• explains and justifies concepts using a range of highly effective communication methods and tools and shows a sophisticated understanding of language conventions, purpose and audience • synthesises appropriate and reliable material from a wide range of sources, uses citations correctly, and produces a complete bibliography including Internet references	• explains and justifies concepts using a range of effective communication methods and tools and shows a proficient understanding of language conventions, purpose and audience • synthesises appropriate and reliable material from a range of sources, uses citations correctly, and produces a complete bibliography including Internet references	• identifies concepts using a range of communication methods and tools and shows a satisfactory understanding of language conventions, purpose and audience • applies appropriate and reliable material from a range of sources, uses citations correctly, and produces a bibliography including Internet references	• uses a limited range of communication methods and tools to convey information showing a basic understanding of language conventions, purpose and audience • applies material from a limited range of sources, simple use of citations and produces a bibliography narrow range of references	• uses minimal communication methods and tools to convey information showing a limited understanding of language conventions, purpose and audience • applies material from a limited range of sources, minimal uses of citations and produces a limited bibliography
Flexible, adaptive and creative thinking	• demonstrates a thorough understanding of the impact of social, ethical, and/or legal issues • shows considerable agility in applying processes and techniques to unfamiliar scenarios	• demonstrates a broad understanding of the impact of social, ethical, and/or legal issues • shows agility in applying processes and techniques to unfamiliar scenarios	• demonstrates a general understanding of the impact of social, ethical, and/or legal issues • shows sound skills in applying processes and techniques to unfamiliar scenarios but requires some direction	• demonstrates a basic understanding of the impact of social, ethical, and/or legal issues • shows basic skills in applying processes and techniques to unfamiliar scenarios but requires some direction	• demonstrates minimal understanding of the impact of social, ethical, and/or legal issues • shows minimal skills in applying processes and techniques to unfamiliar scenarios but requires some direction

All programs of study for the ACT Year 12 Certificate should enable students to become:

	The examples are indicative and not exhaustive. Those in **bold** relate particularly to the Employability Skills; those in *italics* to the Across Curriculum Perspectives.
• creative and critical thinkers	exploring, imagining, observing, predicting**, thinking laterally**, **generating ideas**, **inquiring and researching**, interrogating, conceptualising, collecting and **analysing data and information**, **classifying**, interpreting, formulating hypotheses, generalising, synthesising, **reflecting**, justifying conclusions, understanding different perspectives, **understanding and application of different thinking strategies, understanding of scientific and mathematical language**, **using scientific and mathematical techniques** (e.g. estimating, reading and interpreting data, interpolation and extrapolation)
• enterprising problem-solvers	showing **initiative**, **resourcefulness**, resilience, persistence, assessing and taking risks, **recognising and seizing opportunities**, **problem-posing**, **problem-identification**, **problem clarification**, being practical, **being innovative**, using mathematical techniques, **using appropriate technologies**, **working independently** and/or **collaboratively** to achieve a solution, testing assumptions and solutions, modifying approaches
• skilled and empathetic communicators	**oral and written skills in Standard Australian English**, **matching communication to audience and purpose**, using terminology and style appropriate to particular disciplines, **using mathematical language**, creating and **communicating meaning** using multi-modal forms, **imagining the feelings and views of others**, respecting and valuing diversity
• informed and ethical decision-makers	**finding information** and using evidence as the basis for judgements and decisions, **developing awareness of differing perspectives**, having integrity, taking action, **exploring and critically reflecting on own values, attitudes and beliefs**
• environmentally and culturally aware citizens	understanding *the interconnectedness of the natural and constructed world*; the *multicultural nature of Australian society*; *Indigenous perspectives*; and global economic, social and *environmental* issues; *respecting difference*, exercising rights and responsibilities, **acting in the public sphere**, understanding consequences of choices and decisions
• confident and capable users of technologies	**having a range of IT skills**, accessing and evaluating *information*, **designing** and making, **communicating using technologies**, **choosing most appropriate technologies for the task**, refining processes, **willingness to learn new skills**
• independent and self-managing learners	e.g. **understanding self (***including gender***)**, **having personal goals**, **evaluating and monitoring own performance**, **taking responsibility**, flexibility in adapting course of action, **openness to new ideas**, **managing time and resources**, **planning and organising**
• collaborative team members	e.g. **contributing to group effectiveness**, **building trust**, **capacity to take different roles within a team**, **respecting differing strengths (***including contributions of boys and girls***)**, **skills in negotiation and compromise**, **sustaining commitment to achieve group goals**

and provide students with

• a comprehensive body of specific knowledge, principles and concepts	through subjects, cross-disciplinary courses and/or projects, **work experience**
• a basis for self-directed and lifelong learning	**through understanding and managing self, developing capabilities and modelling an approach ('taking stock, taking steps') that prepares for a social and economic environment of greater individual responsibility**
• personal attributes enabling effective participation in society	**through developing social skills** and capabilities for citizenship, **work experience and recognition of outside learning;** through understanding of a globalised knowledge society