



Government of **Western Australia**
School Curriculum and Standards Authority

APPLIED INFORMATION TECHNOLOGY

ATAR COURSE

Year 12 syllabus

IMPORTANT INFORMATION

This syllabus is effective from 1 January 2017.

Users of this syllabus are responsible for checking its currency.

Syllabuses are formally reviewed by the School Curriculum and Standards Authority on a cyclical basis, typically every five years.

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Content

Rationale	1
Course outcomes	2
Organisation	3
Structure of the syllabus	3
Organisation of content	3
Representation of the general capabilities	5
Representation of the cross-curriculum priorities	7
Unit 3 – Evolving digital technologies	9
Unit description	9
Unit content	9
Unit 4 – Digital technologies within a global society	13
Unit description	13
Unit content	13
School-based assessment	17
Grading	18
ATAR course examination	19
Examination design brief – Year 12	19
Appendix 1 – Grade descriptions Year 12	20
Appendix 2 – Glossary	22

Rationale

The development and application of digital technologies impacts most aspects of living and working in our society. Digital technologies have changed how people interact and exchange information. These developments have created new challenges and opportunities in lifestyle, entertainment, education and commerce.

Throughout the Applied Information Technology ATAR course, students investigate client-driven issues and challenges, devise solutions, produce models or prototypes and then evaluate and refine the design solution in collaboration with the client. Students are provided with the opportunity to experience, albeit in a school environment, developing digital solutions for real situations.

The practical application of skills, techniques and strategies to solve information problems is a key focus of the course. Students also gain an understanding of computer systems and networks. In undertaking projects and designing solutions the legal, ethical and social issues associated with each solution are also considered and evaluated.

This course provides students with the opportunity to develop the knowledge and skills of digital technologies in order to use them in a responsible and informed manner.

The Applied Information Technology ATAR course provides a sound theoretical and practical foundation, offering pathways to further studies and a wide range of technology based careers.

Course outcomes

The Applied Information Technology ATAR course is designed to facilitate achievement of the following outcomes.

Outcome 1 – Design process

Students apply a design process when creating or modifying information solutions using digital technologies in response to a client brief.

In achieving this outcome, students:

- research ideas considering alternatives
- analyse, design, produce, communicate and evaluate proposals in an efficient and appropriate manner.

Outcome 2 – Understanding digital communication technologies

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

In achieving this outcome, students:

- understand the digital concepts, formats and terminology required to select and use appropriate software and hardware to achieve client-driven digital solutions
- understand procedures, techniques and management skills relevant to the client's needs
- produce a quality solution that adheres to the accepted standards and conventions associated with the content relevant to the client brief.

Outcome 3 – Impacts of technology

Students understand how legal, ethical and social considerations are interconnected in the development of digital solutions.

In achieving this outcome, students:

- understand the legal, ethical and social consequences that digital developments have in effectively securing data
- understand the legal, ethical and social implications of data distribution.

Organisation

This course is organised into a Year 11 syllabus and a Year 12 syllabus. The cognitive complexity of the syllabus content increases from Year 11 to Year 12.

Structure of the syllabus

The Year 12 syllabus is divided into two units which are delivered as a pair. The notional time for the pair of units is 110 class contact hours.

Unit 3 – Evolving digital technologies

This unit focuses on the use of applications to create, modify, manipulate, use and/or manage technologies. Students consider the nature and impact of technological change and the effect this has when creating products for a particular purpose and audience.

Unit 4 – Digital technologies within a global society

This unit focuses on the production of a digital solution for a particular client. Students undertake the management of data and develop an appreciation of the social, ethical and legal impacts of digital technologies within a global community.

Each unit includes:

- a unit description – a short description of the focus of the unit
- unit content – the content to be taught and learned.

Organisation of content

The course content is divided into the following content areas:

- Design concepts (Unit 3)
- Managing data (Unit 4)
- Hardware (Unit 3)
- Networks (Unit 4)
- Impacts of technology (Unit 3 and Unit 4)
- Applications skills (Unit 3 and Unit 4)
- Project management (Unit 3 and Unit 4)

Design concepts

When designing quality solutions, it is necessary to consider the intended audience and use the appropriate elements of design and the principles of design. Students develop strategies for applying digital technologies in creative and original ways for different purposes.

Managing data

Students acquire an understanding of how to source, organise, process, transform, store and manage a range of digital data types. They apply efficient search strategies for research purposes. An understanding of security and statutory requirements in relation to information processing and management is developed.

Hardware

Students develop an understanding of common computer hardware system components, their compatibility and connectivity. Functions such as processing, input, output, memory/storage and communication are considered. Students use appropriate terminology, technical references/manuals, help procedures and other support facilities.

Networks

The components of a network, including the communication media used to connect them, are examined. Content includes the types, purpose and use of protocols, servers, operating systems in communications and network security.

Impacts of technology

The rights of individuals, groups and communities regarding privacy, including responsibility for the access, availability and security of information and their potential misuse, are explored. Students examine the role of relevant government and regulatory bodies in protecting these rights.

Applications skills

Students learn, select and apply appropriate software application skills in the development of digital solutions. Students need to be aware of the purpose and desired output in order to integrate the various applications and associated skills.

Project management

Students use problem-solving skills to develop digital solutions that meet client needs. Individuals use project management skills to produce digital solutions according to a design brief.

Resource requirements

It is recommended that for delivery of the Applied Information Technology ATAR course, students have access to the following resources.

- computers with access to the internet
- peripheral devices, including:
 - scanner/photocopier/printer (multi-function device)
 - printers
 - digital still and video cameras
 - microphones and speakers
 - mobile devices
- applications software

- spreadsheet software
- word processing software
- presentation software
- multimedia software
- personal communication software
- collaborative management software
- browser software
- web authoring software

Representation of the general capabilities

The general capabilities encompass the knowledge, skills, behaviours and dispositions that will assist students to live and work successfully in the twenty-first century. Teachers may find opportunities to incorporate the capabilities into the teaching and learning program for the Applied Information Technology ATAR course. The general capabilities are not assessed unless they are identified within the specified unit content.

Literacy

Students become literate as they develop the knowledge, skills and dispositions to use and interpret language confidently for learning and communicating in and out of school and for participating effectively in society. Literacy involves students in listening to, reading, viewing, speaking, writing and creating oral, print, visual and digital texts, and using and modifying language for different purposes in a range of contexts.

In the Applied Information Technology ATAR course, students develop literacy capability as they learn how to communicate ideas, concepts and detailed proposals to a variety of audiences; recognise how language can be used to manipulate meaning; and read and interpret detailed written instructions. They learn to understand and use language to discuss and communicate information, concepts and ideas related to the course.

In the Applied Information Technology ATAR course, students understand that language varies according to context and they increase their ability to use language flexibly. The vocabulary of the Applied Information Technology ATAR course is often technical and includes specific terms for concepts, processes and production. Students learn to understand that much technological information is presented in the form of drawings, diagrams and digitally. They also learn the importance of listening and talking when learning about technologies processes, especially in articulating, questioning and evaluating ideas.

Numeracy

Students become numerate as they develop the knowledge and skills to use mathematics confidently across other learning areas at school and in their lives more broadly. Numeracy involves students in recognising and understanding the role of mathematics in the world, and having the dispositions and capacities to use mathematical knowledge and skills purposefully.

In the Applied Information Technology ATAR course, students work with the concepts of scale and proportion. The Applied Information Technology ATAR course provides opportunities for students to interpret and use mathematical knowledge and skills in a range of real life situations.

Students develop and apply mathematical knowledge and skills to analyse, interpret and present information in numerical and graphical form and to make sense of data presented.

Information and communication technology capability

Students develop information and communication technology (ICT) capability as they learn to use ICT effectively and appropriately to access, create and communicate information and ideas, solve problems and work collaboratively, and in their lives beyond school. The capability involves students in learning to make the most of the digital technologies available to them. They adapt to new ways of doing things as technologies evolve, and limit the risks to themselves and others in a digital environment.

In the Applied Information Technology ATAR course, students create solutions that consider social and environmental factors when operating digital systems with digital information. They develop an understanding of the characteristics of data, digital systems, audiences and procedures. They apply this when they investigate, communicate and create purpose-designed digital solutions. Students learn to formulate problems, logically organise and analyse data and represent it in abstract forms. Students decide the best combinations of data, procedures and human and physical resources to generate efficient and effective digital solutions.

Critical and creative thinking

Students develop capability in critical and creative thinking as they learn to generate and evaluate knowledge, clarify concepts and ideas, seek possibilities, consider alternatives and solve problems. Critical and creative thinking are integral to activities that require students to think broadly and deeply using skills, behaviours and dispositions such as reason, logic, resourcefulness, imagination and innovation in all learning areas at school and in their lives beyond school.

In the Applied Information Technology ATAR course, students develop capability in critical and creative thinking as they imagine, generate, develop, produce and critically evaluate ideas. They develop reasoning and the capacity for abstraction through challenging problems that do not have straightforward solutions. They identify, explore and clarify technologies, information and use the knowledge gained in a range of situations. In the Applied Information Technology ATAR course, students think critically and creatively, they consider how data, information, and systems, impact our lives, and how these elements might be better designed and managed.

Personal and social capability

Students develop personal and social capability as they learn to understand themselves and others and manage their relationships, lives, work and learning more effectively. The personal and social capabilities involve students in a range of practices, including: recognising and regulating emotions; developing empathy for others and understanding relationships; establishing and building positive relationships; making responsible decisions; working effectively in teams; handling challenging situations constructively; and developing leadership skills.

In the Applied Information Technology ATAR course, students develop personal and social capability as they engage in project management and development in a collaborative workspace. They direct their own learning, plan and carry out investigations, and become independent learners who can apply design thinking, technologies, understanding and skills when making decisions.

Students develop social and employability skills through working cooperatively in teams, sharing resources, tools, equipment and processes, making group decisions, resolving conflict and showing leadership. Design and innovation involve a degree of risk taking, and as students work with the uncertainty of sharing new ideas, they develop resilience.

The Applied Information Technology ATAR course enhances students' personal and social capability by developing their social awareness. Students develop understanding of diversity by researching and identifying user needs. They develop social responsibility through the understanding of empathy with, and respect for, others.

Ethical understanding

Students develop ethical understanding as they identify and investigate concepts, values, character traits and principles, and understand how reasoning can help ethical judgement. Ethical understanding involves students in building a strong personal, socially oriented, and ethical outlook that helps them to manage context, conflict and uncertainty, and to develop an awareness of the influence that their values and behaviour have on others.

In the Applied Information Technology ATAR course, students develop the capacity to understand and apply ethical and socially responsible principles when collaborating with others and when creating, sharing and using technologies, data, processes, tools and equipment. In the Applied Information Technology ATAR course, students consider their own roles and responsibilities as discerning citizens, and learn to detect bias and inaccuracies. Understanding the protection of data, intellectual property and individual privacy in the school environment helps students to be ethical digital citizens.

Intercultural understanding

Students develop intercultural understanding as they learn to value their own cultures, languages and beliefs, and those of others. They come to understand how personal, group and national identities are shaped, and the variable and changing nature of culture. The capability involves students in learning about, and engaging with, diverse cultures in ways that recognise commonalities and differences, create connections with others and cultivate mutual respect.

In the Applied Information Technology ATAR course, students consider how technologies are used in diverse communities at local, national, regional and global levels, including their impact and potential to transform people's lives. They explore ways in which past and present practices enable people to use technologies to interact with one another across cultural boundaries.

Representation of the cross-curriculum priorities

The cross-curriculum priorities address contemporary issues which students face in a globalised world. Teachers may find opportunities to incorporate the priorities into the teaching and learning program for the Applied Information Technology ATAR course. The cross-curriculum priorities are not assessed unless they are identified within the specified unit content.

Aboriginal and Torres Strait Islander histories and cultures

The Applied Information Technology ATAR course may provide opportunities for students to learn about Aboriginal and Torres Strait Islander histories and cultures.

Students could explore the creative, engaging and diverse learning contexts so they can value and appreciate the contribution by the world's oldest continuous living cultures to past, present and emerging technologies.

Asia and Australia's engagement with Asia

The Applied Information Technology ATAR course may provide opportunities for students to explore contemporary and emerging technological achievements that the Asia region and Pacific region have made and continue to make, to global technological advances, including: innovation in hardware and software design and development; the regions' role in outsourcing of information technology and communication (ICT) services; and globalisation. Students could also consider the contribution of Australia's contemporary and emerging technological achievements to the Asian and Pacific regions.

Sustainability

The Applied Information Technology ATAR course may provide an opportunity for students, within authentic contexts, to choose and evaluate digital technologies and information systems with regard to the risks and opportunities they present. Students could also evaluate the extent to which information systems solutions can embrace sustainability. They reflect on past and current practices, and assess new and emerging technologies from a sustainability perspective.

Unit 3 – Evolving digital technologies

Unit description

This unit focuses on the use of applications to create, modify, manipulate, use and/or manage technologies. Students consider the nature and impact of technological change and the effect this has when creating products for a particular purpose and audience.

Unit content

An understanding of the Year 11 content is assumed knowledge for students in Year 12. It is recommended that students studying Unit 3 and Unit 4 have completed Unit 1 and Unit 2.

This unit includes the knowledge, understandings and skills described below. This is the examinable content.

The content of this unit encompasses theoretical aspects (Knowledge) and practical aspects (Skills). It is divided into five content areas:

- Design concepts
- Hardware
- Impacts of technology
- Application skills
- Project management

Design concepts

Knowledge

- relationship(s) between the elements of design and the principles of design
- features of a user interface
 - logical and hierarchical organisation of content
 - graphical user interface (GUI) suitable for target audience
 - relevant help features of a graphical user interface
 - usability
 - inclusivity
 - accessibility

Skills

- annotate designs when working on a digital product and/or digital solution
- use appropriate elements of design and the principles of design for a chosen digital medium
- create logical and hierarchical organisation of content
- develop navigation controls suitable to the chosen digital medium
- critically analyse the relationship(s) between the elements of design and the principles of design

Hardware

Knowledge

- specifications of digital devices and their impact upon usability
- characteristics of development trends in emerging mobile devices
- suitability of emerging mobile devices to meet client (user) needs
- usability of digital devices for specified client requirements

Skills

- evaluate computer system specifications for usability
- compare various mobile devices with other computer systems

Impacts of technology

Knowledge

- the concept of intellectual property (IP)
- intention and purpose of IP in Australia in relation to copyright and/or design of digital products
- the concept of online defamation in Australia
- legal action available in Australia to counteract online defamation
- the concept of freedom of information (FOI) in Australia
- key provisions of FOI in Australia in relation to digital products
- advantages, disadvantages and implications of virtual and physical collaboration
- impact of convergence trends in contemporary digital technologies

Application skills

Knowledge

- online software tools
- video application features
 - multi-layer track editing
 - titles
 - transitions
 - effects
- sound application features, including sound effects
- publishing features
 - colour schemes
 - layers
 - frames
 - typography

- templates
- print/display option
- types of digital publications
- advantages and disadvantages of different types of digital publications

Skills

- use appropriate application software
- create templates suitable for use in appropriate application software
- use video and/or sound application for multi-layer track editing
- use multimedia software to create interactive digital products and/or digital solutions
- use of the specific standards and conventions for a chosen digital medium
 - colour profiles
 - layers
 - frames
 - typography
 - print/display options
- create digital publications

Project management

Knowledge

- project management approaches
 - prototype
 - structured
- project planning tools
 - storyboards
 - site maps
 - flow charts
 - Gantt charts
 - project management software
- appearance considerations for a digital product and/or digital solution
 - structure
 - usability
 - accessibility
 - user experience (UX)
 - user interface (UI)

Skills

- choose an appropriate project management approach for the development of the chosen digital solution
- develop processes and documentation to build a project brief(s)
- plan a digital solution project in detail

- apply project management techniques to meet client requirements when creating a digital solution
- produce draft design plans/drawings to represent concepts
- use appropriate functionality tools to create visual layouts

Unit 4 – Digital technologies within a global society

Unit description

This unit focuses on the production of a digital solution for a particular client. Students undertake the management of data and develop an appreciation of the social, ethical and legal impacts of digital technologies within a global community.

Unit content

This unit builds on the content covered in Unit 3.

This unit includes the knowledge, understandings and skills described below. This is the examinable content.

The content of this unit encompasses theoretical aspects (Knowledge) and practical aspects (Skills) and it is divided into five content areas:

- Managing data
- Networks
- Impacts of technology
- Application skills
- Project management

Managing data

Knowledge

- security techniques for the management of data, including:
 - disaster recovery plan
 - audit trail
- types of backup techniques and archiving of data
 - full
 - differential
 - incremental
 - daily
- online data storage methods
 - data warehouses
 - data marts
 - data in the cloud
- purpose of data mining
- processing of data considering security of data through the use of
 - passwords
 - firewalls
 - biometrics
 - anti-virus software
 - digital signatures

- digital certificates
- encryption
- concept of user-generated content
- advantages and disadvantages of user generated content
- concept of hypertext markup language (.htm/.html)
- concept of Web 2.0 and Web 3.0
- purpose and features of content management systems (CMS)
- purpose of world wide web consortium (W3C)
- purpose of W3C conventions
- purpose of the Web Design and Applications standard from the W3C standards, including:
 - HTML and CSS
 - Graphics
 - Audio and video
 - Accessibility
 - Internationalization
 - Mobile web
- validation techniques for online forms

Skills

- analyse sources of information for verifiability, accuracy and currency
- test and evaluate online applications for browser compatibility
- apply the Web Design and Applications standard from the W3C standards as relevant

Networks

Knowledge

- types and characteristics of communication protocols, including:
 - transmission control protocol/internet protocol (TCP/IP)
 - hypertext transfer protocol (HTTP)
 - hypertext transfer protocol over secure socket layer (HTTPS)
 - wireless application protocol (WAP)
- types and characteristics of communication standards, including:
 - 802.11x (wireless)
 - 802.3 (ethernet)
- types of network security measures
 - firewalls
 - passwords
 - physical security

Skills

- design a LAN
- justify the design of a LAN

Impacts of technology**Knowledge**

- data and information security related to personal or sensitive information
- purpose of a code of conduct
- elements of a code of conduct, including:
 - work hours
 - employee email use
 - employee internet use
 - employee privacy
 - employer's monitoring of work emails, internet access and computer use
- online censorship of information in a global context
- issues with the use of cloud computing
 - confidentiality of data
 - sensitivity of documents
 - level of accessibility
 - availability of online applications
- impact of digital technologies and global markets on:
 - productivity
 - access to knowledge or resources
 - outsourcing
- impact of Web 2.0/Web 3.0 on the use of digital technologies

Application skills**Knowledge**

- how digital communication is used for educational purposes

Skills

- use available functions of online software
- use online tools for tutorials/learning
- use forms for online data collection

Project management**Knowledge**

- concept of service level agreements
- features of service level agreements, including:

- availability of service
- type of services
- advantages of local and global outsourcing compared with in-house production
- purpose of outsourcing data management
- evaluation of software, including usability

Skills

- apply project management techniques to meet client requirements
- apply a design process to create a digital solution
- use appropriate tools to evaluate the effectiveness of a digital solution in accordance with the design brief
 - surveys
 - client feedback
 - self-reflection

School-based assessment

The Western Australian Certificate of Education (WACE) Manual contains essential information on principles, policies and procedures for school-based assessment that needs to be read in conjunction with this syllabus.

Teachers design school-based assessment tasks to meet the needs of students. The table below provides details of the assessment types for the Applied Information Technology ATAR Year 12 syllabus and the weighting for each assessment type.

Assessment table – Year 12

Type of assessment	Weighting
<p>Project</p> <p>Students' research information technology based ideas and processes to create digital solutions. This involves the application of project management approaches/techniques to a design process.</p> <p>The project can require students to refer to stimulus material. Questions can require students to refer to stimulus material. Stimulus material can include: extracts from newspapers or journal articles; screen captures of online media; diagrams; multimedia and/or graphics; and/or a scenario.</p>	40%
<p>Short answer</p> <p>Short answer questions typically require students to respond to specific questions and/or analyse digital technology products and/or trends.</p> <p>Formats can include multiple-choice, and open and closed questions that can be scaffolded or sectionalised. Scaffolded or sectionalised questions may increase in difficulty.</p> <p>Questions can require students to refer to stimulus material. Stimulus material can include: extracts from newspapers or journal articles; screen captures of online media; diagrams; multimedia and/or graphics; and/or a scenario.</p>	10%
<p>Extended answer</p> <p>Extended answer questions can be scaffolded or sectionalised. Questions are connected by a theme, idea and/or concept.</p> <p>Questions can require students to refer to stimulus material and use interpretative skills, and/or apply critical thinking and analysis. Stimulus material can include: extracts from newspapers or journal articles; screen captures of online media; diagrams; multimedia and/or graphics; and/or a scenario.</p>	10%
<p>Examination</p> <p>Typically conducted at the end of each semester and/or unit and reflecting the examination design brief for this syllabus.</p>	40%

Teachers are required to use the assessment table to develop an assessment outline for the pair of units.

The assessment outline must:

- include a set of assessment tasks
- include a general description of each task
- indicate the unit content to be assessed
- indicate a weighting for each task and each assessment type
- include the approximate timing of each task (for example, the week the task is conducted, or the issue and submission dates for an extended task).

In the assessment outline for the pair of units, each assessment type must be included at least twice. In each unit, at least one short answer and one extended answer task should be conducted under test conditions.

The set of assessment tasks must provide a representative sampling of the content for Unit 3 and Unit 4.

Assessment tasks not administered under test/controlled conditions require appropriate validation/authentication processes.

Grading

Schools report student achievement in terms of the following grades:

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

The teacher prepares a ranked list and assigns the student a grade for the pair of units. The grade is based on the student's overall performance as judged by reference to a set of pre-determined standards. These standards are defined by grade descriptions and annotated work samples. The grade descriptions for the Applied Information Technology ATAR Year 12 syllabus are provided in Appendix 1. They can also be accessed, together with annotated work samples, through the Guide to Grades link on the course page of the Authority website at www.scsa.wa.edu.au.

To be assigned a grade, a student must have had the opportunity to complete the education program, including the assessment program (unless the school accepts that there are exceptional and justifiable circumstances).

Refer to the WACE Manual for further information about the use of a ranked list in the process of assigning grades.

ATAR course examination

All students enrolled in the Applied Information Technology ATAR Year 12 course are required to sit the ATAR course examination. The examination is based on a representative sampling of the content for Unit 3 and Unit 4. Details of the ATAR course examination are prescribed in the examination design brief on the following page.

Refer to the WACE Manual for further information.

Examination design brief – Year 12

Time allowed

Reading time before commencing work: ten minutes

Working time for paper: three hours

Permissible items

Standard items: pens (blue/black preferred), pencils (including coloured), sharpener, correction fluid/tape, eraser, ruler, highlighters

Special items: nil

SECTION	SUPPORTING INFORMATION
Section One Multiple-choice 15% of the total examination 15 questions Suggested working time: 20 minutes	Questions can require the candidate to refer to stimulus material. Stimulus material can include: extracts from newspapers or journal articles; screen captures of online media; diagrams; multimedia and/or graphics; and/or a scenario.
Section Two Short answer 25% of the total examination 6–8 short answer questions Suggested working time: 40 minutes	Short answer questions are a combination of open and closed items that can be scaffolded or sectionalised. The candidate can be required to refer to stimulus material. Stimulus material can include: extracts from newspapers or journal articles; screen captures of online media; diagrams; multimedia and/or graphics; and/or a scenario.
Section Three Extended answer 20% of the total examination One extended answer question Suggested working time: 50 minutes	The question can be scaffolded or sectionalised. The question is connected by a theme, idea and/or concept. The question can require students to refer to stimulus material and use interpretative skills, and/or the application of critical thinking and analysis. Stimulus material can include: extracts from newspapers or journal articles; screen captures of online media; diagrams; multimedia and/or graphics; and/or a scenario.
Section Four Scenario 40% of the total examination One question Suggested working time: 70 minutes	The candidate is required to interpret and critically analyse a scenario related to the creation and management of an information solution. The question is divided into parts which can require the candidate to refer to stimulus material. Stimulus material can include: extracts from newspapers or journal articles; screen captures of online media; diagrams; multimedia and/or graphics; and/or a scenario.

Appendix 1 – Grade descriptions Year 12

A	<p>Knowledge and understanding</p> <p>Accurately uses digital technology terminology, to discuss processes and concepts in context with justification.</p> <p>Evaluates client requirements, considering the specifications of digital technologies and a design brief, to inform the creation of digital solutions, demonstrating an accurate understanding of relevant legislation, and ethical and social issues.</p>
	<p>Design concepts</p> <p>Applies and explains the use of the elements and principles of design, to modify/create a digital product and/or solution relevant to a design brief.</p> <p>Consistently analyses the relationships between the elements and principles of design in context and relevant to a digital medium.</p> <p>Consistently applies a logical and hierarchical organisation of content with appropriate help features, navigation controls, and graphical user interface, using correct standards and conventions, appropriate to a design brief, with detailed and relevant annotations, providing reasons for their use.</p>
	<p>Application skills</p> <p>Efficiently and accurately demonstrates skills and processes in collecting, transforming, organising and storing data from a range of sources, and is able to evaluate the currency, accuracy and authenticity of sources.</p> <p>Independently selects and efficiently uses appropriate application(s), using a range of relevant and complex features, consistently creating sophisticated and original digital products and/or solutions.</p>
	<p>Project management</p> <p>Applies and justifies relevant project management techniques and tools, to efficiently create a digital product and/or solution to meet client requirements or a design brief.</p> <p>Applies a design process/plan and/or techniques, successfully creating digital products and/or solutions, to meet client requirements or a design brief and proposes alternatives and improvements.</p>
	<p>Knowledge and understanding</p> <p>Accurately uses digital technology terminology, to describe processes and concepts in context.</p> <p>Discusses client requirements, considering the specifications of digital technologies and a design brief, to inform the creation of digital solutions, demonstrating an awareness of relevant legislation, and ethical and social issues.</p>
B	<p>Design concepts</p> <p>Applies and discusses the use of the elements and principles of design, to modify/create a digital product and/or solution relevant to a design brief.</p> <p>Analyses the relationships between the elements and principles of design in context and relevant to a digital medium.</p> <p>Applies a logical and hierarchical organisation of content with appropriate help features, navigation controls, and graphical user interface using standards and conventions, appropriate to a design brief, with annotations, providing limited reasons for their use.</p>
	<p>Application skills</p> <p>Consistently demonstrates skills and processes in collecting, transforming, organising and storing data from a range of sources and identifies the currency, accuracy and authenticity of sources.</p> <p>Selects and efficiently uses appropriate application(s), using a range of appropriate features, consistently creating original digital products and/or solutions.</p>
	<p>Project management</p> <p>Applies and explains appropriate project management techniques and tools, to effectively create a digital product and/or solution to meet client requirements or a design brief.</p> <p>Applies a design process/plan and/or techniques, to successfully create digital products and/or solutions, to meet client requirements or a design brief.</p>

C	<p>Knowledge and understanding</p> <p>Uses digital technology terminology, to describe processes and concepts.</p> <p>Describes client requirements, considering the specifications of digital technologies and a design brief, to inform the creation of digital solutions, demonstrating an awareness of relevant legislation, and ethical and/or social issues.</p>
	<p>Design concepts</p> <p>Applies and describes the elements and principles of design, to modify/create a digital product and/or solution relevant to a design brief.</p> <p>Describes the relationships between the elements and principles of design in context and relevant to a digital medium.</p> <p>Applies a logical and hierarchical organisation of content with help features, navigation controls, and graphical user interface, using standards and conventions, relevant to a design brief, with annotations.</p>
	<p>Application skills</p> <p>Demonstrates skills and processes in collecting, transforming, organising and storing data from a limited range of sources and outline the currency, accuracy and authenticity of sources.</p> <p>Uses application(s) to edit and/or create digital products and/or solutions using a range application features.</p>
	<p>Project management</p> <p>Applies and describes project management techniques to create a digital product and/or solution to meet client requirements or a design brief.</p> <p>Applies a design process/plan and/or techniques, creating digital products and/or solutions, considering client requirements or a design brief.</p>
D	<p>Knowledge and understanding</p> <p>Attempts to use digital technology terminology, and inconsistently describes processes and concepts.</p> <p>Identifies client requirements, considering the specifications of digital technologies and/or a design brief, to inform the creation of digital solutions, demonstrating a limited awareness of legislation, and/or social issues.</p>
	<p>Design concepts</p> <p>Lists and attempts to apply the elements and principles of design, to modify/create a digital product and/or solution.</p> <p>Identifies the relationships between the elements and principles of design in context and relevant to a digital medium.</p> <p>Attempts to apply a logical and/or hierarchical organisation of content with inappropriate help features and/or navigation controls and a graphical user interface, with incomplete annotations.</p>
	<p>Application skills</p> <p>Demonstrates limited skill in transforming, organising, and storing data, and limited understanding of the need to investigate the currency, accuracy and authenticity of sources.</p> <p>Attempts to use application(s) to edit and/or create digital products and/or solutions, using a limited and/or inappropriate range of application features.</p>
	<p>Project management</p> <p>Attempts to apply project management techniques to create incomplete digital products and/or solutions.</p> <p>Attempts to apply a design process/plan and/or techniques, to create an incomplete digital product and/or solution.</p>
E	<p>Does not meet the requirements of a D grade and/or has completed insufficient assessment tasks to be assigned a higher grade</p>

Appendix 2 – Glossary

This glossary is provided to enable a common understanding of the key terms in this syllabus.

Compositional rules	<p>Provide the rules that include focal point/centre of interest, framing, leading lines, reading gravity, rule of thirds, underlying geometric framework, eye-flow.</p> <ul style="list-style-type: none"> • Focal point/Centre of interest – refers to the central point of attention or interest within a design. • Framing – is a technique used to present an image so that it immediately captures the viewer’s attention. • Leading lines – used to draw the viewer into an image so that it is seen in the way intended. The designer uses leading lines so the image is viewed in a prescribed sequence. • Reading gravity – the manner in which Western audiences read from left to right and top to bottom. • Rule of thirds – an image can be divided into thirds, both horizontally and vertically, creating nine parts. The eye is naturally drawn to the intersection points of these thirds. This provides a grid for the designer to employ to direct attention. • Underlying geometric framework, eye-flow – the way a designer plans their design to ensure that the viewer moves their eye around the page.
Digital citizenship	<p>The manner in which a user accesses and interacts using digital technologies. Responsible digital citizenship refers to the major considerations of responsible digital behaviour, including:</p> <ul style="list-style-type: none"> • Digital access – the ability to access electronic technologies • Digital commerce – the electronic sale and/or purchase of goods • Digital communication – the exchange of information via electronic devices • Digital etiquette – acceptable codes of conduct when communicating online • Digital health and wellness – the physical and mental well-being of those operating in the digital world, including ergonomics, and Internet addiction • Digital law – the laws that govern acceptable behaviours in the online environment; including, copyright, spam • Digital literacy – the process of teaching and learning about technology and how it can be used • Digital rights and responsibilities – the rights and responsibilities of anyone operating within the digital world • Digital security – ensuring electronic safety of digital content from external threat.
Elements of design	<p>The parts or components within a design that can be individually defined. Together, the elements of design constructs the principles of design. They provide the basic structure for the product and are responsible for communicating the design intentions. The placement of the elements of design can alter the message communicated.</p>
Evaluation criteria	<p>The criteria employed to provide a consistent, standardised evaluation of products performance against an established benchmark or set of standards.</p>

Layout	The process of planning and arranging, in detail, how the design will be reproduced. The process of planning and arranging of the design enables the various elements of the design to produce an aesthetically pleasing and harmonious product.
Principles of design	Specific concepts utilised to organise or arrange the structural aspects of a design. Designers choose principles to ensure that the intention of their message is clear to the target audience.
Project	A process or enterprise that is planned, designed and developed to achieve an aim. In the context of the Applied Information Technology ATAR course, students research information technology based ideas and processes that will require the application of project management approaches/techniques to a design process to create quality digital solutions.
Project management	The discipline of planning, organising, securing and managing resources to bring about the successful completion of a project efficiently and effectively.
Production process	The production process refers to the stages required to complete a product, from the idea to the completion of the final product.
Responsive design	A web design approach aimed at producing sites to provide an optimal viewing experience. This includes easy reading and navigation, requiring minimal resizing, panning, and scrolling. Designs should also be suitable across a wide range of devices including smart phones, tablets, laptops and desktop monitors.
Style guide	The set of rules, conventions, procedures or standards used for the designing and development of documents for publication, either electronic or print.