



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



# APPLIED INFORMATION TECHNOLOGY

ATAR COURSE

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Year 11 syllabus

## **IMPORTANT INFORMATION**

This syllabus is effective from 1 January 2015.

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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## 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. It also encourages students to use 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 11 syllabus is divided into two units, each of one semester duration, which are typically delivered as a pair. The notional time for each unit is 55 class contact hours.

#### Unit 1 – Media information and communication technologies

This unit focuses on the use of digital technologies to create and manipulate digital media. Students use a range of applications to create visual and audio communications. They examine trends in digital media transmissions and implications arising from the use of these technologies.

#### Unit 2 – Digital technologies in business

This unit focuses on the skills, principles and practices associated with various types of documents and communications. Students identify the components and configuration of networks to meet the needs of a business. They design digital solutions for clients, being mindful of the various impacts of technologies within legal, ethical and social boundaries.

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 1)
- Managing data (Unit 2)
- Hardware (Unit 1)
- Networks (Unit 2)
- Impacts of technology (Unit 1 and Unit 2)
- Applications skills (Unit 1 and Unit 2)
- Project management (Unit 1 and Unit 2)

#### 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

## Progression from the Year 7–10 curriculum

This syllabus continues to develop student learning around the knowledge, understandings and skills within the Year 7–10 Digital Technologies curriculum and focuses on the components of digital systems: software, hardware and networks and their use.

The syllabus also continues to develop the skills associated with the production of digital solutions through: collecting, managing and analysing data; defining problems; designing, implementing and evaluating solutions; and communicating, collaborating and managing projects.

## 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 ICT 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 capability involves 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 the 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 students 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. They also could 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 1 – Media information and communication technologies

## Unit description

This unit focuses on the use of digital technologies to create and manipulate digital media. Students use a range of applications to create visual and audio communications. They examine trends in digital media transmissions and implications arising from the use of these technologies.

## Unit content

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

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

- the elements of design
  - line
  - shape
  - space
  - texture
  - colour
  - 3D form
  - tone
- the principles of design
  - balance
  - emphasis (contrast and proportion)
  - dominance
  - unity (proximity and repetition)
  - pattern
  - movement
- relationship between the elements of design and the principles of design
- typography
  - typeface
  - size

- alignment
- format
- spacing
- compositional rules
  - reading gravity
  - rule of thirds
  - form of content
  - grid and alignment

## **Skills**

- identify and explain the elements of design and the principles of design in an existing digital product and/or digital solution
- modify a digital product and/or digital solution to meet a design need/consideration
- apply the elements of design and the principles of design developing a digital product and/or digital solution
  - create accurate visuals/layouts
  - apply principles of layout and composition
- apply the elements of design and the principles of design relevant to a particular design brief
- develop and apply detailed annotations for digital designs relevant to a design brief demonstrating the following considerations:
  - elements of design and the principles of design
  - use of appropriate typography
  - visual composition
  - rule of thirds
  - form of content
  - grid and alignment

## **Hardware**

### **Knowledge**

- hardware components of a computer system
- purpose of the central processing unit (CPU)
- purpose of memory/storage
- types of memory/storage
  - primary
  - secondary
- types of peripheral devices
- types of computer systems
  - desktop systems
  - mobile devices
  - server
- purpose of an operating system

- types of operating systems
  - Windows
  - Mac OS
  - iOS
  - Android
  - Linux
- functions of an operating system (OS)
  - user interface
  - managing system resources
  - managing security and access rights
  - running applications
- identification of software compatibility issues
  - running older software on current hardware
  - newer software running on older hardware

#### **Skills**

- describe criteria when selecting hardware and software for a specified purpose, including the minimum hardware requirements to run software

### **Impacts of technology**

#### **Knowledge**

- intent and purpose of the *Copyright Act 1968* (Australia), including:
  - fair dealing
  - private use
  - moral rights
- appropriate referencing techniques for digital publications
- acknowledgement of the intellectual property (IP) owner
- concept of digital citizenship
  - responsible use of social networking
  - forms of cyber bullying
  - strategies to manage/limit cyber bullying
- the impact of digital technologies on work-life balance
- concept of social networking
- types of social networking and their features
- types of virtual communities, including:
  - online chat rooms
  - virtual worlds

#### **Skills**

- apply appropriate referencing techniques for digital publications

## Application skills

### Knowledge

- purpose of data organisation
- common file formats for graphics and audio
  - vector graphics
    - computer graphics metafile (.cgm)
    - scalable vector graphic (.svg)
  - raster graphics
    - bitmap (.bmp) image file
    - graphical interchange format (.gif) file
    - joint photographic expert group (JPEG) image file (.jpg/.jpeg)
    - tagged image file (.tif)
    - portable network graphics (.png)
  - audio files
    - moving pictures experts group (.mp3 )
    - waveform audio file format (.wav)
    - Windows media audio file (.wma)
- management of software
  - installation of software
  - update of software
- types of software licences
  - open and closed source
  - proprietary
  - shareware
  - freeware
- considerations for the construction and design of lookup tables in spreadsheets, including:
  - hlookup
  - vlookup
- organisation and management of data, using sort filters in spreadsheets

### Skills

- apply data organisation techniques for user and/or client needs
- apply appropriate graphic and audio file types
  - vector graphics
  - raster graphics
  - audio files
- use lookup tables in spreadsheets, including:
  - hlookup
  - vlookup
- composition, layout and design considerations for the construction of spreadsheets
- apply sort filters in spreadsheets



## Project management

### Knowledge

- components of a project design process
  - product purpose and design criteria
  - target audience characteristics
  - project presentation medium
  - situation analysis
  - style guide
- components of a design plan
  - storyboard
  - thumbnails (hand/digital)
  - wireframes/sketches (hand/digital)
- criteria required to evaluate a digital product and/or digital solution

### Skills

- apply the elements of design and the principles of design relevant to a particular design brief
- apply a design process to create a digital product and/or digital solution
- apply techniques for representing the design of a digital product and/or digital solution

## Unit 2 – Digital technologies in business

### Unit description

This unit focuses on the skills, principles and practices associated with various types of documents and communications. Students identify the components and configuration of networks to meet the needs of a business. Students design digital solutions for clients being, mindful of the various impacts of technologies within legal, ethical and social boundaries.

### Unit content

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

The content of this unit encompasses theoretical aspects (Knowledge) and practical aspects (Skills) of the Applied Information Technology ATAR course. It is divided into five content areas:

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

### Managing data

#### Knowledge

- consideration for the compression of files for the transfer and display of data
  - purpose
  - lossy compression
  - lossless compression
  - file sizes
- techniques for file size minimisation
  - cropping
  - resampling
- optimisation of files for
  - digital or online
  - print
- strategies for efficient online data management
- strategies for efficient document version control
- concept of cloud computing
- system utility tools and accessories for the efficient operation and maintenance of data, including:
  - disk clean-up tools
  - deletion of temporary files/internet cache
  - disk fragmentation
  - anti-malware, virus, SPAM and spyware

**Skills**

- use compression to optimise transfer and display of data
- use system utility tools and accessories to ensure efficient operation and maintenance of data
- apply document version control

**Networks****Knowledge**

- concept of computer networking
  - purpose
  - advantages
  - disadvantages
- types of transmission media
  - optic fibre
  - wired
  - wireless
- the concept transmission rates
- network topologies for local area network (LAN)
  - wired star
  - wireless
  - client server
  - peer-to-peer
- network components for internet connection for a small business
  - server
  - router
  - network interface card (NIC)
  - switch
  - modem

**Skills**

- design a suitable LAN topology

**Impacts of technology****Knowledge**

- impact of the *Privacy Act 1988* (Australia) on:
  - the collection of personal information
  - how personal information is used
  - access to personal information
  - implications of identity theft
  - safe disposal of data
- concept of the 'digital divide' and associated issues, including:
  - availability of digital resources
  - use of digital technologies
  - availability of web-based applications

- concept of electronic commerce, including:
  - implications of improved digital communications
  - 24/7 communications
  - online retail opportunities
- issues related to the dependency of society upon electronic and visual communication in business

## Application skills

### Knowledge

- features of animation software
  - frame by frame
  - tweens
  - buttons
  - simple actions
    - stop
    - start
    - move object
- features of audio software
  - editing
  - converting
  - exporting
- features of web authoring
  - hyper-links
  - graphics
  - templates
  - types of files
    - cascading style sheet (.css)
    - hypertext markup language file (.htm/.html)
- types of online collaboration
- concept of responsive design

### Skills

- use animation software
- edit audio files
- create a navigation map
- use web-authoring software
- use multimedia applications to edit and create a digital product and/or digital solution

## Project management

### Knowledge

- project management techniques
  - user/client requirements
  - plan of action
  - time management strategies
  - resources requirements
  - evaluation

### Skills

- apply project management techniques to meet client requirements or a design brief
- apply a design process to create a digital product and/or digital solution
- ensure the digital product and/or digital solution meets identified user requirements

## 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 11 syllabus and the weighting for each assessment type.

**Assessment table – Year 11**

Type of assessment	Weighting
<p><b>Project</b></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. 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><b>Short answer</b></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>	15%
<p><b>Extended answer</b></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 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.</p>	15%
<p><b>Examination</b></p> <p>Typically conducted at the end of each semester and/or unit. In preparation for Unit 3 and Unit 4, the examination should reflect the examination design brief included in the ATAR Year 12 syllabus for this course.</p>	30%

Teachers are required to use the assessment table to develop an assessment outline for the pair of units (or for a single unit where only one is being studied).

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 the assessment outline where a single unit is being studied, each assessment type must be included at least once.

The set of assessment tasks must provide a representative sampling of the content for Unit 1 and Unit 2.

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 (or for a unit where only one unit is being studied). 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 11 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](http://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.

## Appendix 1 – Grade descriptions Year 11

<b>A</b>	Provides detailed annotated planning and written documentation which explores a range of alternative options and reflects a clear and accurate understanding of relevant legislation, ethical and social issues.
	Provides extensive evidence of analysis using a range of correctly acknowledged sources, and uses detailed and generally consistent technical language that informs the development of digital solutions.
	Clearly and correctly identifies and evaluates the needs of the target audience, purpose of the project and system requirements and applies these results to digital solutions.
	Consistently interprets and analyse of client requirements in the design of digital solutions, and recommends detailed changes in relation to client requirements.
	Applies skills and processes in collecting, transforming, organising and storing data from a range of sources, and demonstrates an ability to compare and contrast the currency, accuracy and authenticity of sources.
	Demonstrates highly developed skills in creating digital solutions through aesthetic application of design principles, and incorporates some original insights and demonstrates creative application.
<b>B</b>	Provides suitably annotated planning and written documentation, as prescribed by the task, which explores some alternative options and reflects a sound understanding of relevant legislation, ethical and social issues.
	Provides detailed evidence of analysis using acknowledged sources and consistently uses simple accurate technical language that informs the development of digital solutions.
	Identifies and evaluates the needs of the target audience, purpose of the project, system requirements and generally applies these results to digital solutions.
	Addresses the key requirements of client requirements with some interpretation and analysis in the design of digital solutions, and recommends changes in relation to client requirements.
	With minimal guidance is able to apply skills and processes in transforming, organising and storing data from a range of sources and demonstrates an ability to investigate currency, accuracy and authenticity of sources.
	Demonstrates skills in creating digital solutions using aesthetic application of design principles, and incorporates some capacity for creative application.
<b>C</b>	Provides adequate planning and written documentation, meeting most task requirements, exploring limited options, and reflects a satisfactory understanding of relevant legislation, ethical and social issues.
	Provides minimal evidence, some analysis and uses provided sources with occasional acknowledgement, while using simple technical language that informs the development of digital solutions.
	Adequately identifies and partially evaluates some of the needs of the target audience, purpose of the project and system requirements and applies some of the results to digital solutions.
	Partially addresses the key requirements of clients in the design of digital solutions and recommends some changes in relation to client requirements.
	With guidance is able to demonstrate skills and processes in transforming, organising and storing data from a range of sources and occasionally demonstrates an ability to investigate the currency, accuracy and authenticity of sources.
	Demonstrates adequate skills in the creation of digital solutions, applying some design principles, and with some creative application.



D	Provides limited planning and written documentation, meeting basic task requirements which reflect minimal understanding of relevant legislation, ethical and social issues.
	Provides limited evidence of using suggested sources with little to no acknowledgement, and inconsistent use of technical language with occasional inaccuracies related to digital solutions.
	Limited identification of the needs of the target audience, purpose of the project and system requirements, and minimally applies this information in the creation of digital solutions.
	Addresses the minimum requirements of clients with limited interpretation and analysis in the design of a digital solution and product and makes minimal recommendations for change in relation to client requirements.
	With guidance and direction demonstrates limited skill and processes in transforming, organising, and storing data from several sources, and demonstrates no clear understanding of the need to investigate the currency, accuracy, and authenticity of sources.
	Demonstrates limited skills in the creation of digital solutions, applying little to no design principles.
E	Planning and written documentation is often incomplete and is not consistent with relevant legislation, ethical and social issues.
	Little or no research shown and little to no use of technical language relating to specific digital solutions.
	Little or no understanding of the target audience, purpose of project and system requirements in the creation of digital solutions.
	Little or no awareness of the requirements of clients in the design of digital solutions.
	With guidance and direction, applies little to no skill or processes in sourcing and organising data; unable to reliably transform and manage digital data and identify the currency, accuracy and authenticity of sources.
	Demonstrates little to no skills in the creation of digital solutions, applying little to no design principles.

## Appendix 2 – Glossary

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

<b>Compositional rules</b>	<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"> <li>• <b>Focal point/Centre of interest</b> – refers to the central point of attention or interest within a design.</li> <li>• <b>Framing</b> – is a technique used to present an image so that it immediately captures the viewer’s attention.</li> <li>• <b>Leading lines</b> – 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.</li> <li>• <b>Reading gravity</b> – the manner in which Western audiences read from left to right and top to bottom.</li> <li>• <b>Rule of thirds</b> – 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.</li> <li>• <b>Underlying geometric framework, eye-flow</b> – the way a designer plans their design to ensure that the viewer moves their eye around the page.</li> </ul>
<b>Digital citizenship</b>	<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"> <li>• <b>Digital access</b> – the ability to access electronic technologies</li> <li>• <b>Digital commerce</b> – the electronic sale and/or purchase of goods</li> <li>• <b>Digital communication</b> – the exchange of information via electronic devices</li> <li>• <b>Digital etiquette</b> – acceptable codes of conduct when communicating online</li> <li>• <b>Digital health and wellness</b> – the physical and mental well-being of those operating in the digital world, including ergonomics, and Internet addiction</li> <li>• <b>Digital law</b> – the laws that govern acceptable behaviours in the online environment; including copyright, spam</li> <li>• <b>Digital literacy</b> – the process of teaching and learning about technology and how it can be used</li> <li>• <b>Digital rights and responsibilities</b> – the rights and responsibilities of anyone operating within the digital world</li> <li>• <b>Digital security</b> – ensuring electronic safety of digital content from external threat.</li> </ul>
<b>Elements of design</b>	<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>
<b>Evaluation criteria</b>	<p>The criteria employed to provide a consistent, standardised evaluation of products performance against an established benchmark or set of standards.</p>
<b>Layout</b>	<p>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.</p>

<b>Principles of design</b>	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.
<b>Project</b>	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.
<b>Project management</b>	The discipline of planning, organising, securing and managing resources to bring about the successful completion of a project efficiently and effectively.
<b>Production process</b>	The production process refers to the stages required to complete a product, from the idea to the completion of the final product.
<b>Responsive design</b>	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.
<b>Style guide</b>	The set of rules, conventions, procedures or standards used for the designing and development of documents for publication, either electronic or print.