



## SAMPLE COURSE OUTLINE

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### APPLIED INFORMATION TECHNOLOGY GENERAL YEAR 12

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## Sample course outline

### Applied Information Technology – General Year 12

#### Unit 3 – Semester 1 – Media information and communications technologies

Week	Syllabus Content	
	Knowledge	Skills
1–3	<p><b>Course introduction</b></p> <ul style="list-style-type: none"> <li>overview of Unit 3</li> <li>assessment requirements</li> </ul> <p><b>Impacts of technology</b></p> <ul style="list-style-type: none"> <li>referencing techniques for digital publications</li> <li>acknowledgement of the intellectual property (IP) owner</li> </ul> <p><b>Hardware</b></p> <ul style="list-style-type: none"> <li>purpose of the central processing unit (CPU)</li> <li>purpose of memory/storage</li> <li>types of memory/storage <ul style="list-style-type: none"> <li>primary</li> <li>secondary</li> </ul> </li> <li>types of peripheral devices</li> <li>types of computer systems <ul style="list-style-type: none"> <li>desktop systems</li> <li>mobile devices</li> <li>server</li> </ul> </li> <li>purpose of an operating system (OS)</li> <li>types of operating systems <ul style="list-style-type: none"> <li>Windows</li> <li>Mac OS</li> <li>iOS</li> <li>Android</li> <li>Linux</li> </ul> </li> <li>identification of software compatibility issues, including: <ul style="list-style-type: none"> <li>running older software on current hardware</li> <li>running newer software on older hardware</li> </ul> </li> <li>considerations for the purchase of hardware, including: <ul style="list-style-type: none"> <li>cost</li> <li>specifications</li> <li>user needs</li> </ul> </li> <li>physical maintenance strategies for use of a computer system, including: <ul style="list-style-type: none"> <li>use of an uninterruptible power supply (UPS)</li> <li>environmental temperature control</li> </ul> </li> </ul>	<p><b>Impacts of technology</b></p> <ul style="list-style-type: none"> <li>apply appropriate referencing techniques for digital publications</li> </ul> <p><b>Hardware</b></p> <ul style="list-style-type: none"> <li>select hardware and software for a specified purpose, including the minimum hardware requirements to run software</li> <li>apply problem-solving skills for a range of simple computer problems, including: <ul style="list-style-type: none"> <li>no sound</li> <li>frozen screen, keyboard and mouse</li> <li>no connection to a data projector</li> </ul> </li> </ul>
4	<p><b>Project management</b></p> <ul style="list-style-type: none"> <li>project management considerations, including: <ul style="list-style-type: none"> <li>scope</li> <li>time</li> <li>resources</li> <li>client brief</li> </ul> </li> </ul>	<p><b>Project management</b></p> <ul style="list-style-type: none"> <li>apply the elements of design and the principles of design relevant to a particular design brief</li> <li>apply a design process to create a digital product, design and/or digital solution</li> </ul>

Week	Syllabus Content	
	Knowledge	Skills
	<ul style="list-style-type: none"> <li>components of a project design process, including: <ul style="list-style-type: none"> <li>product purpose and design criteria</li> <li>target audience characteristics</li> <li>project presentation medium</li> </ul> </li> <li>techniques for the representation of a design plan, including: <ul style="list-style-type: none"> <li>annotated digital diagrams/sketches</li> <li>storyboards</li> <li>annotated notes</li> <li>thumbnails (hand/digital)</li> </ul> </li> <li>criteria required to evaluate a digital product and/or digital solution</li> </ul>	<ul style="list-style-type: none"> <li>apply techniques for representing the design of a digital product and/or digital solution</li> </ul>
5–6	<p><b>Managing data</b></p> <ul style="list-style-type: none"> <li>purpose of file optimisation for use in print, digital and/or online environments</li> <li>considerations for the compression of files for the transfer and display of data <ul style="list-style-type: none"> <li>purpose</li> <li>lossy compression</li> <li>lossless compression</li> <li>file sizes</li> </ul> </li> <li>techniques for file size minimisation <ul style="list-style-type: none"> <li>cropping</li> <li>resampling</li> </ul> </li> <li>strategies for efficient online data management</li> <li>strategies for efficient document version control</li> </ul> <p><b>Application skills</b></p> <ul style="list-style-type: none"> <li>purpose of data organisation</li> <li>common file formats for graphics and audio <ul style="list-style-type: none"> <li>vector graphics</li> <li>raster graphics</li> <li>audio files</li> </ul> </li> <li>management of software <ul style="list-style-type: none"> <li>installation of software</li> <li>update of software</li> </ul> </li> <li>types of software licences <ul style="list-style-type: none"> <li>open and closed source</li> <li>proprietary</li> <li>shareware</li> <li>freeware</li> </ul> </li> <li>composition, layout and design considerations for the construction of spreadsheets</li> <li>organisation and management of data using sort filters in spreadsheets</li> </ul>	<p><b>Managing data</b></p> <ul style="list-style-type: none"> <li>use compression to optimise transfer and display of data</li> <li>apply document version control</li> <li>use digital communications media</li> </ul> <p><b>Application skills</b></p> <ul style="list-style-type: none"> <li>apply data organisation techniques for user and/or client needs</li> <li>apply appropriate graphic and audio file types, including: <ul style="list-style-type: none"> <li>raster graphics</li> <li>vector graphics</li> <li>audio files</li> </ul> </li> <li>apply sort filters in spreadsheets</li> </ul>

Week	Syllabus Content	
	Knowledge	Skills
7	<p><b>Impacts of technology</b></p> <ul style="list-style-type: none"> <li>• purpose of the <i>Copyright Act 1968</i> (Australia), including: <ul style="list-style-type: none"> <li>▪ fair dealing</li> <li>▪ private use</li> <li>▪ moral rights</li> </ul> </li> <li>• concept of digital citizenship <ul style="list-style-type: none"> <li>▪ responsible use of social networking</li> <li>▪ forms of cyber bullying</li> <li>▪ strategies to manage/limit cyber bullying</li> </ul> </li> <li>• the impact of digital technologies on work-life balance</li> <li>• the concept of social networking</li> <li>• the impact of social networking technologies on traditional methods of information publication and distribution, including use of mobile devices</li> </ul>	
8–15	<p><b>Design concepts</b></p> <ul style="list-style-type: none"> <li>• the elements of design <ul style="list-style-type: none"> <li>▪ line</li> <li>▪ shape</li> <li>▪ space</li> <li>▪ texture</li> <li>▪ colour</li> </ul> </li> <li>• the principles of design <ul style="list-style-type: none"> <li>▪ balance</li> <li>▪ emphasis (contrast and proportion)</li> <li>▪ dominance</li> <li>▪ unity (proximity and repetition)</li> </ul> </li> <li>• relationship between the elements of design and the principles of design</li> <li>• typography <ul style="list-style-type: none"> <li>▪ typeface</li> <li>▪ size</li> <li>▪ alignment</li> <li>▪ format</li> <li>▪ spacing</li> </ul> </li> <li>• compositional rules <ul style="list-style-type: none"> <li>▪ rule of thirds</li> <li>▪ grid and alignment</li> </ul> </li> </ul>	<p><b>Design concepts</b></p> <ul style="list-style-type: none"> <li>• identify and explain the elements of design and the principles of design in an existing digital product and/or solution</li> <li>• modify a digital product and/or digital solution(s) to meet a design need/consideration</li> <li>• apply the elements of design and principles of design when developing a digital product and/or solution <ul style="list-style-type: none"> <li>▪ create accurate visuals/layouts</li> <li>▪ apply principles of layout and composition</li> </ul> </li> <li>• develop and apply detailed annotations for digital designs, relevant to a particular design brief</li> <li>• apply the elements of design and the principles of design relevant to a particular design brief</li> </ul>

## Unit 4 – Semester 2 – Digital technologies in business

Week	Syllabus Content	
	Knowledge	Skills
1	<p><b>Course introduction</b></p> <ul style="list-style-type: none"> <li>overview of Unit 4</li> <li>assessment requirements</li> <li>review of Unit 3</li> </ul> <p><b>Managing data</b></p> <ul style="list-style-type: none"> <li>the concept of cloud computing</li> <li>system utility tools and accessories for the efficient operation and maintenance of data, including: <ul style="list-style-type: none"> <li>disk clean-up tools</li> <li>deletion of temporary files/internet cache</li> <li>disk fragmentation</li> <li>anti-malware, anti-virus, spam filter, spyware</li> </ul> </li> </ul>	<p><b>Managing data</b></p> <ul style="list-style-type: none"> <li>use system utility tools and accessories to ensure efficient operation and maintenance of data</li> </ul>
2	<p><b>Project management</b></p> <ul style="list-style-type: none"> <li>project management techniques, including: <ul style="list-style-type: none"> <li>plan of action</li> <li>time management strategies</li> <li>resource requirements</li> <li>managing resources</li> <li>evaluation</li> </ul> </li> </ul>	<p><b>Project management</b></p> <ul style="list-style-type: none"> <li>apply project management techniques to meet client requirements or a design brief</li> </ul>
3–4	<p><b>Impacts of technology</b></p> <ul style="list-style-type: none"> <li>role of the <i>Privacy Act 1988</i> (Australia) on: <ul style="list-style-type: none"> <li>collection of personal information</li> <li>use of personal information</li> <li>access to personal information</li> <li>identity theft</li> <li>safe disposal of data</li> </ul> </li> <li>the concept of the 'digital divide' and associated issues, including: <ul style="list-style-type: none"> <li>availability of digital resources</li> <li>dependency of society upon electronic communication</li> <li>use of digital technologies</li> <li>availability of web based applications</li> </ul> </li> <li>the concept of electronic commerce, including: <ul style="list-style-type: none"> <li>implications of improved digital communications</li> <li>24/7 communications</li> </ul> </li> <li>issues related to the dependency of society upon electronic and visual communication, including: <ul style="list-style-type: none"> <li>requirement for personal development of technology skills</li> <li>responsibility for maintaining privacy when using technology</li> </ul> </li> </ul>	

Week	Syllabus Content	
	Knowledge	Skills
5–7	<p><b>Networks</b></p> <ul style="list-style-type: none"> <li>the concept and purpose of computer networking</li> <li>advantages and disadvantages of computer networking</li> <li>types of transmission media, including: <ul style="list-style-type: none"> <li>optic fibre</li> <li>wired</li> <li>wireless</li> </ul> </li> <li>the concept of transmission rates</li> <li>network components for internet connection <ul style="list-style-type: none"> <li>server</li> <li>router</li> <li>network interface card (NIC)</li> <li>switch</li> <li>modem</li> </ul> </li> <li>network topologies for local area network (LANs) <ul style="list-style-type: none"> <li>wired star</li> <li>wireless</li> <li>client server</li> <li>peer-to-peer</li> </ul> </li> </ul>	<p><b>Networks</b></p> <ul style="list-style-type: none"> <li>design a suitable LAN topology for a home network</li> </ul>
8–10	<p><b>Application skills</b></p> <ul style="list-style-type: none"> <li>features of animation software <ul style="list-style-type: none"> <li>frame by frame</li> <li>tweens</li> <li>buttons</li> </ul> </li> <li>features of audio software, including: <ul style="list-style-type: none"> <li>editing</li> <li>converting</li> <li>exporting</li> </ul> </li> </ul>	<p><b>Application skills</b></p> <ul style="list-style-type: none"> <li>use animation software</li> <li>edit audio files</li> <li>create a navigation map</li> <li>use web authoring software</li> <li>use multimedia applications to edit and create digital product and/or digital solution</li> </ul>
11–16	<p><b>Application skills</b></p> <ul style="list-style-type: none"> <li>features of web authoring, including: <ul style="list-style-type: none"> <li>hyperlinks</li> <li>graphics</li> <li>templates</li> <li>types of files <ul style="list-style-type: none"> <li>cascading style sheet (.css)</li> <li>hypertext markup language file (.htm/.html)</li> </ul> </li> </ul> </li> <li>types of online collaboration</li> <li>the concept of responsive design</li> </ul>	<p><b>Application skills</b></p> <ul style="list-style-type: none"> <li>create a navigation map</li> <li>use web authoring software</li> <li>use multimedia applications to edit and create digital product and/or digital solution</li> </ul> <p><b>Project management</b></p> <ul style="list-style-type: none"> <li>apply project management techniques to meet client requirements or a design brief</li> <li>apply a design process to create a digital product and/or digital solution</li> </ul> <p><b>Design concepts</b></p> <ul style="list-style-type: none"> <li>modify a digital product and/or digital solution to meet a design need/consideration</li> <li>apply the elements of design and the</li> </ul>

Week	Syllabus Content	
	Knowledge	Skills
		<p>principles of design developing a digital product and/or digital solution</p> <ul style="list-style-type: none"><li>▪ create accurate visuals/layouts</li><li>▪ apply principles of layout and composition</li><li>• apply the elements of design and the principles of design relevant to a particular design brief</li></ul>