**Sample Course Outline**

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 | **Course introduction**   * overview of Unit 3 * assessment requirements   **Impacts of technology**   * referencing techniques for digital publications * acknowledgement of the intellectual property (IP) owner   **Hardware**   * 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 (OS) * types of operating systems   + Windows   + Mac OS   + iOS   + Android   + Linux * identification of software compatibility issues, including:   + running older software on current hardware   + running newer software on older hardware * considerations for the purchase of hardware, including:   + cost   + specifications   + user needs * physical maintenance strategies for use of a computer system, including:   + use of an uninterruptible power supply (UPS)   + environmental temperature control | **Impacts of technology**   * apply appropriate referencing techniques for digital publications   **Hardware**   * select hardware and software for a specified purpose, including the minimum hardware requirements to run software * apply problem-solving skills for a range of simple computer problems, including:   + no sound   + frozen screen, keyboard and mouse   + no connection to a data projector |
|
| 4 | **Project management**   * project management considerations, including:   + scope   + time   + resources   + client brief | **Project management**   * 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, design and/or digital solution |
|  | * components of a project design process, including:   + product purpose and design criteria   + target audience characteristics   + project presentation medium * techniques for the representation of a design plan, including:   + annotated digital diagrams/sketches   + storyboards   + annotated notes   + thumbnails (hand/digital) * criteria required to evaluate a digital product and/or digital solution | * apply techniques for representing the design of a digital product and/or digital solution |
| 5–6 | **Managing data**   * purpose of file optimisation for use in print, digital and/or online environments * considerations 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 * strategies for efficient online data management * strategies for efficient document version control   **Application skills**   * purpose of data organisation * common file formats for graphics and audio   + vector graphics   + raster graphics   + audio files * management of software   + installation of software   + update of software * types of software licences   + open and closed source   + proprietary   + shareware   + freeware * composition, layout and design considerations for the construction of spreadsheets * organisation and management of data using sort filters in spreadsheets | **Managing data**   * use compression to optimise transfer and display of data * apply document version control * use digital communications media   **Application skills**   * apply data organisation techniques for user and/or client needs * apply appropriate graphic and audio file types, including:   + raster graphics   + vector graphics   + audio files * apply sort filters in spreadsheets |
| 7 | **Impacts of technology**   * purpose of the *Copyright Act 1968* (Australia), including:   + fair dealing   + private use   + moral rights * 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 * the concept of social networking * the impact of social networking technologies on traditional methods of information publication and distribution, including use of mobile devices |  |
| 8–15 | **Design concepts**   * the elements of design   + line   + shape   + space   + texture   + colour * the principles of design   + balance   + emphasis (contrast and proportion)   + dominance   + unity (proximity and repetition) * relationship between the elements of design and the principles of design * typography   + typeface   + size   + alignment   + format   + spacing * compositional rules   + rule of thirds   + grid and alignment | **Design concepts**   * identify and explain the elements of design and the principles of design in an existing digital product and/or solution * modify a digital product and/or digital solution(s) to meet a design need/consideration * apply the elements of design and principles of design when developing a digital product and/or solution   + create accurate visuals/layouts   + apply principles of layout and composition * develop and apply detailed annotations for digital designs, relevant to a particular design brief * apply the elements of design and the principles of design relevant to a particular design brief |

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

| **Week** | **Syllabus Content** | |
| --- | --- | --- |
| **Knowledge** | **Skills** |
| 1 | **Course introduction**   * overview of Unit 4 * assessment requirements * review of Unit 3   **Managing data**   * the 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, anti-virus, spam filter, spyware | **Managing data**   * use system utility tools and accessories to ensure efficient operation and maintenance of data |
| 2 | **Project management**   * project management techniques, including:   + plan of action   + time management strategies   + resource requirements   + managing resources   + evaluation | **Project management**   * apply project management techniques to meet client requirements or a design brief |
| 3–4 | **Impacts of technology**   * role of the *Privacy Act 1988* (Australia) on:   + collection of personal information   + use of personal information   + access to personal information   + identity theft   + safe disposal of data * the concept of the ‘digital divide’ and associated issues, including:   + availability of digital resources   + dependency of society upon electronic communication   + use of digital technologies   + availability of web based applications * the concept of electronic commerce, including:   + implications of improved digital communications   + 24/7 communications * issues related to the dependency of society upon electronic and visual communication, including:   + requirement for personal development of technology skills   + responsibility for maintaining privacy when using technology |  |
| 5–7 | **Networks**   * the concept and purpose of computer networking * advantages and disadvantages of computer networking * types of transmission media, including:   + optic fibre   + wired   + wireless * the concept of transmission rates * network components for internet connection   + server   + router   + network interface card (NIC)   + switch   + modem * network topologies for local area network (LANs)   + wired star   + wireless   + client server   + peer-to-peer | **Networks**   * design a suitable LAN topology for a home network |
| 8–10 | **Application skills**   * features of animation software   + frame by frame   + tweens   + buttons * features of audio software, including:   + editing   + converting   + exporting | **Application skills**   * use animation software * edit audio files * create a navigation map * use web authoring software * use multimedia applications to edit and create digital product and/or digital solution |
| 11–16 | **Application skills**   * features of web authoring, including:   + hyperlinks   + graphics   + templates   + types of files   + cascading style sheet (.css)   + hypertext markup language file (.htm/.html) * types of online collaboration * the concept of responsive design | **Application skills**   * create a navigation map * use web authoring software * use multimedia applications to edit and create digital product and/or digital solution   **Project management**   * 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   **Design concepts**   * 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 |
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