**Sample Course Outline**

Applied Information Technology

ATAR Year 11

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Sample course outline

Applied Information Technology – ATAR Year 11

#### Semester 1

| **Week** | **Syllabus Points** | |
| --- | --- | --- |
| **Knowledge** | **Skills** |
| 1 | Introduction  * overview * assessment requirements |  |
| Impacts of technology  * appropriate referencing techniques for digital publications * acknowledgement of the intellectual property (IP) owner * intent and purpose of the *Copyright Act 1968* (Australia), including:   + fair dealing   + private use   + moral rights  Hardware  * 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 | **Impacts of technology**   * apply appropriate referencing techniques for digital publications |
| 2 | Hardware  * 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 | **Hardware**   * describe criteria when selecting hardware and software for a specified purpose, including the minimum hardware requirements to run software |
| 3–5 | Application skills  * management of software   + installation of software   + update of software * types of software licences   + open and closed source   + proprietary   + shareware   + freeware * 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) * considerations for the construction and design of lookup tables in spreadsheets, including:   + hlookup   + vlookup * organisation and management of data, using sort filters in spreadsheets | Application 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 |
| 6 | Design concepts  * the elements of design   + line   + shape   + space   + texture   + colour   + 3D form   + tone | Design concepts  * 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 |
| 7–8 | * 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   + grid and alignment | * 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   + grid and alignment |
| 9–11 | Project management  * 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 | 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 and/or digital solution * apply techniques for representing the design of a digital product and/or digital solution |
| 12–14 | Impacts of technology  * 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 * 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 |  |
| 15 | Revision | |
| 16 | Semester 1 examination | |

#### Semester 2

| **Week** | **Syllabus Points** | |
| --- | --- | --- |
| **Knowledge** | **Skills** |
| 1–3 | **Introduction**   * overview * assessment requirements |  |
| **Managing data**   * 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 * 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   **Impacts of technology**   * 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 * 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 | **Managing data**   * use system utility tools and accessories to ensure efficient operation and maintenance of data * use compression to optimise transfer and display of data * apply document version control * apply appropriate referencing techniques for digital publications |
| 4–5 | **Application skills**   * features of animation software   + frame by frame   + tweens   + buttons * features of audio software   + editing   + converting   + exporting | **Application skills**   * use animation software * edit audio files * create a navigation map * use multimedia applications to edit and create a digital product and/or digital solution |
| 6 | **Networks**   * 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 | **Networks**   * design a suitable LAN topology |
| 7 | **Project management**   * project management techniques   + user/client requirements   + plan of action   + time management strategies   + resources requirements   + evaluation   **Design concepts**   * the elements of design * the principles of design * relationship between the elements of design and the principles of design * typography * compositional rules |  |
| 8–14 | **Application skills**   * 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 | **Application skills**   * create a navigation map * use web-authoring software * use multimedia applications to edit and create a 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**   * 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 * ensure the digital product and/or digital solution meets identified user requirements * 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   + grid and alignment |
| 15 | Revision | |
| 16 | Semester 2 examination | |