**Sample Course Outline**

Applied Information technology

ATAR Year 12

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Sample course outline

Applied Information Technology – ATAR Year 12

## Unit 3 – Evolving digital technologies

| **Week** | **Syllabus Content** | |
| --- | --- | --- |
| **Knowledge** | **Skills** |
| 1–3 | **Introduction**  * overview of Unit 3 * assessment requirements |  |
| **Hardware**  * 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 | **Hardware**  * evaluate computer system specifications for usability * compare various mobile devices with other computer systems |
| 4–5 | **Design concepts**  * 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 |  |
| 6–9 | **Application skills**  * 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 | **Application 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 publishing features for a chosen digital medium   + colour profiles   + layers   + frames   + typography   + print/display options * create digital publications |
| **Design concepts**  * 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 |
| 10 | **Impacts of technology**   * 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 * the rights and responsibilities of the *Freedom of Information Act 1982* (Australia) in regards to digital products * 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 |  |
| 11–14 | **Project management**   * project management approaches   + prototype   + structured * project planning tools   + storyboards   + site maps   + flow charts   + Gantt charts   + project management software * considerations for a digital product and/or digital solution   + structure   + usability   + accessibility   + user experience (UX)   + user interface (UI) | **Project management**   * 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 |
| 15 | Revision | |
| 16 | Semester 1 Examination | |

## Unit 4 – Digital technologies within a global society

| **Week** | **Syllabus Content** | |
| --- | --- | --- |
| **Knowledge** | **Skills** |
| 1–2 | **Introduction**   * overview of Unit 4 * assessment requirements |  |
| **Networks**   * 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) * types and characteristics of communication standards, including:   + 802.11x (wireless)   + 802.3 (ethernet) * types of network security measures   + firewalls   + passwords   + physical security | **Networks**   * design a LAN * justify the design of a LAN |
| 3 | **Project management**   * 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 | **Project management**   * 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 |
| 4–5 | **Impacts of technology**   * 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 |  |
| 6–8 | **Managing data**   * security techniques for the management of data, including:   + disaster recovery plan   + audit trail * types of backup techniques and archiving of data   + full   + differential   + incremental * 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 | **Managing data**   * 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 |
| 9–14 | **Managing data**   * 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 |  |
|  |
| **Application skills**   * how digital communication is used for educational purposes | **Application skills**   * use available functions of online software * use online tools for tutorials/learning * use forms for online data collection |
| 15 | Revision | |
| 16 | Semester 2 Examination | |