

KALAMUNDA SENIOR HIGH SCHOOL

COURSE OUTLINE 2016

APPLIED INFORMATION TECHNOLOGY
GENERAL YEAR 12

Course Outline 2016

Applied Information Technology – General Year 12

Unit 3 – Semester 1 – Media information and communications technologies

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

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

Week	Key teaching points	
	Knowledge	Skills
7	<p>Impacts of technology</p> <ul style="list-style-type: none"> • purpose of the <i>Copyright Act 1968</i> (Australia), including: <ul style="list-style-type: none"> § fair dealing § private use § moral rights • concept of digital citizenship <ul style="list-style-type: none"> § 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	<p>Design concepts</p> <ul style="list-style-type: none"> • the elements of design <ul style="list-style-type: none"> § line § shape § space § texture § colour • the principles of design <ul style="list-style-type: none"> § balance § emphasis (contrast and proportion) § dominance § unity (proximity and repetition) • relationship between the elements of design and the principles of design • typography <ul style="list-style-type: none"> § typeface § size § alignment § format § spacing • compositional rules <ul style="list-style-type: none"> § rule of thirds § grid and alignment 	<p>Design concepts</p> <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> § 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 1&2 – Digital technologies in business

Week	Key teaching points	
	Knowledge	Skills
18 (Semester 1)	<p>Course introduction</p> <ul style="list-style-type: none"> • overview of Unit 4 • assessment requirements • review of Unit 3 <p>Managing data</p> <ul style="list-style-type: none"> • the concept of cloud computing • system utility tools and accessories for the efficient operation and maintenance of data, including: <ul style="list-style-type: none"> § disk clean-up tools § deletion of temporary files/internet cache § disk fragmentation § anti-malware, anti-virus, SPAM filter, spyware 	<p>Managing data</p> <ul style="list-style-type: none"> • use system utility tools and accessories to ensure efficient operation and maintenance of data
19 (Semester 1)	<p>Project management</p> <ul style="list-style-type: none"> • project management techniques, including: <ul style="list-style-type: none"> § plan of action § time management strategies § resource requirements § managing resources § evaluation 	<p>Project management</p> <ul style="list-style-type: none"> • apply project management techniques to meet client requirements or a design brief
20 (Semester 1) & 1 (Semester 2)	<p>Impact of technology</p> <ul style="list-style-type: none"> • role of the <i>Privacy Act 1988</i> (Australia) on: <ul style="list-style-type: none"> § 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: <ul style="list-style-type: none"> § 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: <ul style="list-style-type: none"> § implications of improved digital communications § 24/7 communications • issues related to the dependency of society upon electronic and visual communication, including: <ul style="list-style-type: none"> § requirement for personal development of technology skills § responsibility for maintaining privacy when using technology 	

Week	Key teaching points	
	Knowledge	Skills
2–4	<p>Networks</p> <ul style="list-style-type: none"> the concept and purpose of computer networking advantages and disadvantages of computer networking types of transmission media, including: <ul style="list-style-type: none"> § optic fibre § wired § wireless the concept of transmission rates network components for internet connection <ul style="list-style-type: none"> § server § router § network interface card (NIC) § switch § modem network topologies for local area network (LANs) <ul style="list-style-type: none"> § wired star § wireless § client server § peer-to-peer 	<p>Networks</p> <ul style="list-style-type: none"> design a suitable LAN topology for a home network
5–7	<p>Revision of design concepts</p> <ul style="list-style-type: none"> the elements of design the principles of design relationship between the elements of design and the principles of design typography compositional rules <p>Application skills</p> <ul style="list-style-type: none"> features of animation software <ul style="list-style-type: none"> § frame by frame § tweens § buttons § simple actions <ul style="list-style-type: none"> o stop o start o move object features of audio software, including: <ul style="list-style-type: none"> § editing § converting § exporting 	<p>Application skills</p> <ul style="list-style-type: none"> 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
8–14	<p>Application skills</p> <ul style="list-style-type: none"> features of web authoring, including: <ul style="list-style-type: none"> § hyperlinks § graphics § templates § types of files <ul style="list-style-type: none"> o cascading style sheet (.css) o hypertext markup language file (.htm/.html) types of online collaboration 	<p>Application skills</p> <ul style="list-style-type: none"> create a navigation map use web authoring software use multimedia applications to edit and create digital product and or digital solution <p>Project management</p> <ul style="list-style-type: none"> apply project management techniques to meet client requirements for a design brief

Week	Key teaching points	
	Knowledge	Skills
	<ul style="list-style-type: none">the concept of responsive design	<p>Design concepts</p> <ul style="list-style-type: none">apply a design process to create a digital product and/or digital solutionidentify and explain the elements of design and the principles of design in an existing digital product and/or digital solutionmodify a digital product and/or digital solution to meet a design need/considerationapply the elements of design and the principles of design developing a digital product and/or digital solution<ul style="list-style-type: none">§ create accurate visuals/layouts§ apply principles of layout and compositionapply the elements of design and the principles of design relevant to a particular design brief