



Applied Information Technology General Course Year 12

Selected Unit 3 syllabus content for the

Externally set task 2017

This document is an extract from the *Applied Information Technology General Course Year 12 syllabus*, featuring all of the content for Unit 3. The content that has been highlighted in the document is the content on which the Externally set task (EST) for 2017 will be based.

All students enrolled in the course are required to complete an EST. The EST is an assessment task which is set by the Authority and distributed to schools for administering to students. The EST will be administered in schools during Term 2, 2017 under standard test conditions. The EST will take 50 minutes.

The EST will be marked by teachers in each school using a marking key provided by the Authority. The EST is included in the assessment table in the syllabus as a separate assessment type with a weighting of 15% for the pair of units.

Unit 3 – Media information and communication technologies

Unit description

The emphasis is on the use of digital technologies to create and manipulate digital media. Students use a range of applications to create visual and audio communications. They examine trends in digital media transmissions and implications arising from the use of these technologies.

Unit content

An understanding of the Year 11 content is assumed knowledge for students in Year 12. It is recommended that students studying Unit 3 and Unit 4 have completed Unit 1 and Unit 2.

This unit includes the knowledge, understandings and skills described below.

The content of this unit encompasses theoretical aspects (Knowledge) and practical aspects (Skills). It is divided into the following areas:

- Design concepts
- Hardware
- Impacts of technology
- Application skills
- Project management.

Design concepts

Knowledge

- 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

Skills

- 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

Hardware

Knowledge

- 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

Skills

- 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

Impacts of technology

Knowledge

- purpose of the *Copyright Act 1968* (Australia), including:
 - fair dealing
 - private use
 - moral rights
- referencing techniques for digital publications
- acknowledgement of the intellectual property (IP) owner
- 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

Skills

- apply appropriate referencing techniques for digital publications

Application skills

Knowledge

- 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

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

Project management

Knowledge

- project management considerations, including:
 - scope
 - time
 - resources
 - client brief
- 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

Skills

- 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
- apply techniques for representing the design of a digital product and/or digital solution