

Engineering Principles and Systems (TES) – Year 10

Subject Outline:

Graphics engages students in presenting their ideas and solutions as prototypes. Students explore sketching, produce technical graphical representations in both two-dimensional and three-dimensional formats and use existing and emerging technologies to present drawing solutions. Students will also engage in the use of Computer Aided Manufacture (CAM) and 3D Print & CNC Router to produce prototypes.

Course Content:

Unit	Description
Projects (all year)	A wide variety of projects will be manufactured in this course. This may include items from the following list:- night light, dream/wind catcher, drink coaster, name plaques.
Industrial Graphics	Industrial graphics focuses on the underpinning industry practices and drafting processes required to produce the technical drawing used in a variety of industries, including engineering and furnishing.
Built Environment Graphics	Built Environment includes the areas of architecture, landscape architecture and interior design. It refers to indoor and outdoor spaces that have been structurally changed by human action.
Business Graphics	Business graphics include identity (logos and branding), publications (magazines, webpages, newspapers and books), advertisements, product packaging, maps and charts.

Assessment Outline:

Students are required to complete folios of drawings, one Exam and at least one CNC project (3D print, computer controlled router/lath) each semester of study.

Learning Pathways:

Year 11/12 Subject	General/Applied /Other	Potential QCE Points	Recommended
Engineering Skills	Applied	4	No prerequisite
Building and Construction Skills	Applied	4	No prerequisite
Industrial Graphics Skills	Applied	4	No prerequisite
Furnishing Skills	Applied	4	No prerequisite
Design	General	4	C or better in Year 10 English and Mathematics

Career Pathways:

Graphics contributes to the development of technological literacy and develops the communication, analytical and problem-solving skills required for a large number of educational and vocational aspirations. The fields of graphic include architecture, landscape architecture and interior design, urban and regional planning, surveying and trade options.

Specific Requirements:

Students should enjoy visualize, draw and sketch objects in 2 and 3 dimensional representations and then be able to electronically generate their ideas using CAD software. Students will also require access to a computer outside of school to complete folios.

Approximate Cost: \$25