



KEPNOCK

STATE HIGH SCHOOL

learning • responsibility • respect



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Engineering Principles and Systems (TES) – Year 10

Subject Outline:

The TES course is designed to introduce students to a variety of design concepts and related theory, aimed at students interested in studying Design (General) and Industrial Graphics (Applied) in senior. Students will investigate design aspects on industry and the environment, presenting ideas and solutions as prototypes. Student will explore sketching, graphic representations in both 2D & 3D formats using existing and emerging technologies to present as drawing solutions.

Students will also engage in the use of Computer Aided Manufacture (CAM), Computer Aided Design (CAD) and 3D printing, resin printing, laser cutting and printing & CNC routers to produce prototypes.

This is NOT a workshop based Industrial Technology course.

Course Content:

Unit	Description
Projects	A wide variety of projects/prototypes will be manufactured in this course. This may include items from the following list (but not limited to): night light, dream/wind catcher, drink coaster, name plaques using 3D Printers / CNC Routers and Resin Printers.

Assessment Outline:

Students are required to complete online theory modules provided by the external RTO (student iPad is essential for this course). Show competency in performing practical components of the course.

Learning Pathways:

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

Career Pathways:

TES 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. These include architecture, landscape architecture and interior design, urban and regional planning, surveying and trade options.

Specific Requirements:

Students who enjoy visual drawing and sketching objects in 2D & 3D will enjoy this subject. IT is also suited to students who have an interest in computer aided design and drawing.

Student will require access to an iPad with specific apps (eg Procreate etc) and be able to access school computers to complete in class and assessment tasks.

Approximate Cost: \$20