

Industrial Technology Design	Years	Subject Code	OP	QCE Credits	VET	Prerequisites
	10	ITD	No	No	No	Yes

Head of Department: Mr Keith Holledge

Subject Outline:

Industrial Technology & Design is fundamentally an engineering course of study that provides an opportunity for students to gain an understanding of modern manufacturing processes across a broad spectrum of cad-cam applications. The course draws upon the fundamental principles of Design, Make, and Appraise. These principles are developed within a range of contextual units from Prototyping to a Formula 1 Car (F1 in Schools) as well as Alternative Energy; Engineering Technology Studies is a challenging subject that promotes teamwork, business management, creative design and problem solving skills.

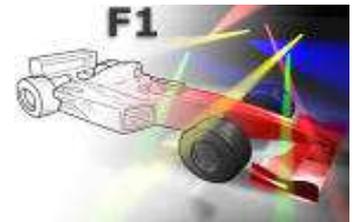
Course Content:

YEAR 10 (SEMESTER 1)	YEAR 10 (SEMESTER 2)
Unit 1 <ul style="list-style-type: none"> • Workplace Health and Safety induction course • Introduction to Design Principles • Introduction to CAD/CAM Manufacturing Technology and processes. (Prototyping). 	Unit 2 <ul style="list-style-type: none"> • Introduction to Schools Innovation Design Challenge. Learning outcomes are achieved in science, technology, engineering and maths (stem) as well as design, with students achieving practical skills in Design process, Motion, Aerodynamics, CAD/CAM/CNC, Material Sciences, Project management, Enterprise & marketing, Industry links & career awareness, Collaboration, Team-work, Public speaking & presentation skills.
Unit 3 <ul style="list-style-type: none"> • 3D printing design and applications. 	

Assessment Outline:

Results are reported as per the school reporting system. Students will be assessed using a variety of instruments, including:

Design Folio's, Research assignments, Classwork, Homework Folio of drawings/processes, Tests and Teacher observations



Career Pathways:

Designer, Aeronautical Engineering, CAD/CAM designer and/or manufacturer, business management, electronics engineer or electrician.

Potential Activities: Visit to local CAD and computer aided manufacturing industries.

Costs:

Students may be expected to purchase or provide some of their own materials depending upon the chosen design brief.

Student Requirements:

It is recommended that students who are wishing to study this course should have completed one of the following subjects in year 9 at competent level: Graphics, STEM, Computer Studies or The Arts. Sound in English, Mathematics and Science is also highly recommended.



Students will need to provide:

A pencil, 1 A4 project book, 1 A4 display folio, normal writing, 8 gb USB