

Key Stage 5 Engineering

Year 12 Engineering Curriculum Information



	Key Question:	Specification:	Skill Focus: (AO)
Term 1:	<p>Unit 2: How are processes undertaken by teams to create engineered products or to deliver engineering processes.</p> <p>Unit 9: How to explore the benefits of work experience and plan for a personal placement.</p>	<p>Unit 1: Engineering Principles. External Assessment.</p> <p>Unit 2: Delivery of Engineering Processes Safely as a Team. Internal Assessment.</p> <p>Unit 9: Work Experience in the Engineering Sector. Internal Assessment.</p> <p>Unit 10: Computer Aided Design in Engineering. Internal Assessment.</p> <p>Unit 22: Electronic Printed Circuit Board Design and Manufacture. Internal Assessment.</p>	<p>Unit 1 Learning Aim A: Algebraic and trigonometric mathematical methods. B: Static engineering systems C: Dynamic engineering systems</p> <p>Unit 2 learning Aim A: Examine common engineering processes to create products or deliver services and effectively as a team.</p> <p>Unit 9 Learning Aim A: Examine the benefits of work experience in engineering for your own learning and development. B: Develop a work experience plan to support own learning and development.</p> <p>Unit 10 Learning Aim A: Develop a three-dimensional computer aided model of an engineered product that can be used as part of other engineering processes.</p> <p>Unit 22 learning Aim A: Examine the design and manufacture of printed circuit boards that are widely used in industry.</p>
Term 2:	<p>Unit 10: How to develop two-dimensional (2D) detailed drawings and three-dimensional (3D) models using a computer-aided design (CAD).</p> <p>Unit 22: How to explore and develop the design and manufacture of electronic printed circuit boards (PCBs).</p>	<p>Unit 1: Engineering Principles. External Assessment.</p> <p>Unit 2: Delivery of Engineering Processes Safely as a Team. Internal Assessment.</p> <p>Unit 10: Computer Aided Design in Engineering. Internal Assessment.</p> <p>Unit 22: Electronic Printed Circuit Board Design and Manufacture. Internal Assessment.</p>	<p>Unit 1 Learning Aim D: Thermodynamic systems. E: Static and direct current electricity</p> <p>Unit 2 learning Aim B: Develop two-dimensional computer-aided drawings that can be used in engineering processes.</p> <p>Unit 10 Learning Aim B: Develop two-dimensional detailed computer-aided drawings of an engineered product that can be used as part of other engineering processes.</p> <p>Unit 22 learning Aim B: Explore how computer software is used for schematic capture and simulation of an electronic circuit.</p>



Term 3:	Unit 1: How to apply mathematical and physical science principles to solve electrical, electronic and mechanical based engineering problems.	Unit 1: Engineering Principles. External Assessment. Unit 2: Delivery of Engineering Processes Safely as a Team. Internal Assessment. Unit 9: Work Experience in the Engineering Sector. Internal Assessment. Unit 10: Computer Aided Design in Engineering. Internal Assessment. Unit 22: Electronic Printed Circuit Board Design and Manufacture. Internal Assessment.	Unit 1 Learning Aim F: Magnetism and electromagnetic induction. G: Single-phase alternating current. Unit 2 learning Aim B: Carry out engineering processes safely to manufacture a product or to deliver a service effectively as a team. Unit 9 Learning Aim C: Carry out work experience tasks to meet set objectives. D: Reflect on how work experience influences own personal and professional development. Unit 10 Learning Aim C: Develop a three-dimensional computer-aided model for a thin walled product and a fabricated product that can be used as part of other engineering processes. Unit 22 learning Aim C: Develop safely a printed circuit board to solve an engineering problem.
----------------	--	--	---

Year 12 Engineering Assessment Information

Assessment	Time/Venue	What will be assessed?
Assessment 1:	1 Hour- Classroom	Y12 baseline test on unit 1 learning aim A content.
Assessment 2:	20 Guided learning hours per Unit, per Learning Aim- Classroom. (80 guided learning hours total assessment time)	Full formal assessment of official internal assignment briefs for Units 2, 9, 10 and 22 (Assessment will be based on learning aim A, assignment brief 1).
Assessment 3: Mock Examination	2 Hours – Exam Venue	A mock paper based exam on the external unit 1 exam.

