

Curriculum Summary – BTEC Engineering (Year 12)

Autumn	Spring	Summer
<p>Unit 1: Engineering Principles- Learners apply mathematical and physical science principles to solve electrical, electronic, and mechanical-based engineering problems.</p> <p>Modern life depends on engineers to develop, support, and control the products and systems that are all around us. For example, cars, heart rate monitors and manufacturing and transport systems. To contribute as an engineer, you must be able to draw on an important range of principles developed by early engineering scientists, such as Newton, Young, Faraday and Ohm.</p> <p>Unit 2: Delivery of Engineering processes safely as a team - Learners explore how processes are undertaken by teams to create engineered products or to deliver engineering services safely.</p> <p>Unit 3: Engineering Product Design and Manufacture- Learners will explore engineering product design and manufacturing processes and will complete activities that consider function, sustainability, materials, form and other factors.</p> <p>Unit 13: Welding Technology- Learners examine the principles and technology used in common welding processes and produce welded joints in differing materials and welding positions.</p> <p>Unit 44: Fabrication Manufacturing Processes - Learners explore and carry out fabrication processes to safely manufacture products from sheet metal.</p>	<p>Unit 1: Engineering Principles- Learners apply mathematical and physical science principles to solve electrical-, electronic- and mechanical-based engineering problems.</p> <p>Modern life depends on engineers to develop, support and control the products and systems that are all around us. For example, cars, heart rate monitors and manufacturing and transport systems. To contribute as an engineer, you must be able to draw on an important range of principles developed by early engineering scientists, such as Newton, Young, Faraday and Ohm.</p> <p>Unit 2: Delivery of Engineering processes safely as a team - Learners explore how processes are undertaken by teams to create engineered products or to deliver engineering services safely.</p> <p>Unit 3: Engineering Product Design and Manufacture- Learners will explore engineering product design and manufacturing processes and will complete activities that consider function, sustainability, materials, form and other factors.</p> <p>Unit 13: Welding Technology- Learners examine the principles and technology used in common welding processes and produce welded joints in differing materials and welding positions.</p> <p>Unit 44: Fabrication Manufacturing Processes - Learners explore and carry out fabrication processes to safely manufacture products from sheet metal.</p> <p>Unit 24: Maintenance of Mechanical Systems -Learners will explore the processes and components associated with the maintenance of mechanical systems and undertake maintenance tasks on a mechanical system.</p>	<p>Unit 1: Engineering Principles- Learners apply mathematical and physical science principles to solve electrical-, electronic- and mechanical-based engineering problems.</p> <p>Modern life depends on engineers to develop, support and control the products and systems that are all around us. For example, cars, heart rate monitors and manufacturing and transport systems. To contribute as an engineer, you must be able to draw on an important range of principles developed by early engineering scientists, such as Newton, Young, Faraday and Ohm.</p> <p>Unit 3: Engineering Product Design and Manufacture- Learners will explore engineering product design and manufacturing processes and will complete activities that consider function, sustainability, materials, form and other factors.</p> <p>Unit 9: Work Experience in the Engineering Sector- Learners explore the benefits of work experience. They carry out and reflect on a period of work experience, and plan for their personal and professional development.</p> <p>Unit 22: Electronic Printed Circuit Board Design and Manufacture- Learners will explore and develop the design and manufacture of electronic printed circuit boards (PCBs). This unit does not cover the design of circuits.</p>