

S3 Broad General Education Plan – Engineering Science

August-October	October - December	January - April	April - June
<p>Learning and Teaching Focus: (Es and Os)</p> <p>Introduction to and types of Engineering Systems TCH 4-12a Pneumatics TCH 4-15a Flowcharts TCH 4-13b, 4-14a, 4-14b</p>	<p>Learning and Teaching Focus (Es and Os)</p> <p>Pneumatics TCH 4-13a Analogue Electronics TCH 4-13a Structural Challenge</p>	<p>Learning and Teaching Focus (Es and Os)</p> <p>Digital Electronics TCH 4-15a Gears TCH 4-10a</p>	<p>Learning and Teaching Focus (Es and Os)</p> <p>Motion TCH 4-15a Energy TCH 4-15a Practical Project – simulation/soldering Emerging Technologies TCH 4-12a Impacts of Engineering TCH 4-12a</p>
<p>Assessment Approach and evidence gathered:</p> <p>Peer – Pneumatics practical Summative – Systems End of Unit Test Formative – Success Criteria</p>	<p>Assessment Approach and evidence gathered:</p> <p>Peer – Pneumatics practical and analogue simulations Summative – Pneumatics End of Unit Test Formative- Success Criteria</p>	<p>Assessment Approach and evidence gathered:</p> <p>Peer – Digital simulations Summative – Electronics End of Unit Test Formative – Success Criteria</p>	<p>Assessment Approach and evidence gathered:</p> <p>S3 End of Year Exam S3 Assignment (similar to National 5)</p>
<p>Key Skills: Literacy/Numeracy/HWB/Digital Literacy</p> <p>Literacy LIT 4-06a, 4-12a, 4-13a Digital Literacy TCH 4-01a Numeracy MNU 4-01a, 4-03a, 4-06a, 4-10b, 4-11a Maths MTH 4-12a, 4-16b Health & Wellbeing HWB 4-14a</p>	<p>Key Skills: Literacy/Numeracy/ HWB/Digital Literacy</p> <p>Numeracy MNU 4-01a, 4-03a, 4-03b, 4-07a, 4-07b, 4-10b Maths MTH 4-11a, 4-14a Digital Literacy TCH 4-01a, 4-02a Literacy LIT 4-12a, 4-15a Health & Wellbeing HWB 4-11a</p>	<p>Key Skills: Literacy/Numeracy/ HWB/Digital Literacy</p> <p>Numeracy MNU 4-01a, 4-03a, 4-06a Digital Literacy TCH 4-01a Literacy LIT 4-02a, 4-21a</p>	<p>Key Skills: Literacy/Numeracy/ HWB/Digital Literacy</p> <p>Literacy LIT 4-13a, 4-28a Digital Literacy TCH 4-01a Numeracy MNU 4-01a, 4-03a, 4-06b Maths MTH 4-14a Health & Wellbeing HWB 4-16a</p>
<p>Skills for learning, work and life</p> <p>Developing an understanding of engineering in industry and the different specialisms available within engineering.</p> <p>Development of communication skills by exploring key roles.</p> <p>Metaskills Sense making Critical thinking Curiosity</p>	<p>Skills for learning, work and life</p> <p>Development of numeracy skills through calculations.</p> <p>Development of problem solving skills through problem-based situations/tasks.</p> <p>Metaskills Collaborating Communicating Focussing</p>	<p>Skills for learning, work and life</p> <p>Development of digital literacy skills through use of programming and simulation.</p> <p>Metaskills Leading Adapting Initiative Critical Thinking</p>	<p>Skills for learning, work and life</p> <p>Gaining an understanding of engineering pathways and job roles Development of fine motor skills/hand-eye co-ordination. Understanding importance of safety in industry.</p> <p>Metaskills Leading Adapting Communicating Creativity</p>
<p>Home Learning</p> <p>Types of engineers System/sub-system diagrams Pneumatic uses Pneumatic symbols</p>	<p>Home Learning</p> <p>Pneumatic calculations Analogue symbols Analogue calculations</p>	<p>Home Learning</p> <p>Digital symbols Digital calculations Types of gears/uses Gears calculations</p>	<p>Home Learning</p> <p>Types of motion Types of energy Energy calculations Efficiency</p>