

Module Information for 2021

Module information	
Workplace	
Name of module	Electronics Workplace Rotation
Short description and aims of module	<p>This rotation introduces undergraduates to the application of engineering theory in relation to electronics design or testing, the development of core skills and the development of workplace behaviours to design consumer products.</p> <p>Undergraduates may work in a different teams such as power electronics, motors, electronics design and test. While these various teams have different electronics specialisms, the core knowledge gained will meet the same overall learning outcomes.</p> <p>One of the core disciplines (Mechanical, Software, and Electronics) will be fulfilled from within a Research Team. The other two will be in a Global Engineering team.</p>
Learning outcomes of the module What will a student have learnt and what skills will they acquire on completion	<ul style="list-style-type: none"> • Understand and modify/design circuits using schematics. • Simulate simple circuits • Analyse datasheets to understand component behaviour • Interpret circuit specifications and select appropriate parts • Design and build circuits. • Conduct testing on circuits to known test method, interpret results and iterate the design. <p>Where the Electronics rotation is carried out within a Research Team the student will also gain the following learning outcomes:</p> <ul style="list-style-type: none"> • Develop knowledge and problem-solving skills to understand the research question that needs to be asked and to build a hypothesis. • Develop research aligned with the TRL process, contributing to TRL reviews. Understand how the TRL process feeds into the milestone process. • Conduct literature review as part of research project
Method of assessment and weighting attributed to each area of assessment	<p>End of rotation poster assessed to check work meets Learning Outcomes</p> <p>Logbook of learning maintained by student and collated at end of rotation</p>

Name of module	Mechanical Workplace Rotation
<p>Short description and aims of module</p>	<p>This rotation introduces undergraduates to the application of mechanical engineering theory, the development of core skills and the development of workplace behaviours to design consumer products.</p> <p>Undergraduates may work in a different teams such as acoustics, fluid dynamics, structures, motors and test where they will apply their knowledge in different mechanical disciplines but will meet the same overall learning outcomes.</p> <p>One of the core disciplines (Mechanical, Software, and Electronics) will be fulfilled from within a Research Team. The other two will be in a Global Engineering team.</p>
<p>Learning outcomes of the module</p> <p><i>What will a student have learnt and what skills will they acquire on completion</i></p>	<ul style="list-style-type: none"> • Prototype parts using the resources available in RDD • Apply or develop current test methods to test prototypes or production products • Acquire data from testing using a range of data acquisition tools • Analyse and Interpret results to inform developments to the design or test methods • Summarise results and findings to senior stakeholder either verbally or in written format <p>Where the Mechanical rotation is carried out within a Research Team the student will also gain the following learning outcomes.</p> <ul style="list-style-type: none"> • Develop knowledge and problem-solving skills to understand the research question that needs to be asked and to build a hypothesis. • Develop research aligned with the TRL process, contributing to TRL reviews. Understand how the TRL process feeds into the milestone process. • Conduct literature review as part of research project
<p>Method of assessment and weighting attributed to each area of assessment</p>	<p>End of rotation poster assessed to check work meets Learning Outcomes</p> <p>Logbook of learning maintained by student and collated at end of rotation</p>

Name of module	Software Workplace Rotation
<p>Short description and aims of module</p>	<p>This rotation introduces undergraduates to the application of software engineering theory, the development of core skills and the development of workplace behaviours to design consumer products. They will also be introduced to the processes involved in software development.</p> <p>Undergraduates may work in a different teams such as App design, Cloud, embedded software and Algorithms where they will apply their knowledge in different software disciplines but will meet the same overall learning outcomes.</p> <p>One of the core disciplines (Mechanical, Software, and Electronics) will be fulfilled from within a Research Team. The other two will be in a Global Engineering team.</p>
<p>Learning outcomes of the module</p> <p><i>What will a student have learnt and what skills will they acquire on completion</i></p>	<ul style="list-style-type: none"> • Understand and work in an agile development framework to develop and deliver software. • Software development as a team - understand and apply tools and methods to collaborate as a team in the generation of code. • Learn and apply the basics of a programming language • Structure code appropriately for the application. <p>Where the Software rotation is carried out within a Research Team the student will also gain the following learning outcomes.</p> <ul style="list-style-type: none"> • Develop knowledge and problem-solving skills to understand the research question that needs to be asked and to build a hypothesis. • Develop research aligned with the TRL process, contributing to TRL reviews. Understand how the TRL process feeds into the milestone process. • Conduct literature review as part of research project •
<p>Method of assessment and weighting attributed to each area of assessment</p>	<p>End of rotation poster assessed to check work meets Learning Outcomes</p> <p>Logbook of learning maintained by student and collated at end of rotation</p>

Name of module	New Product Innovation (NPI) Workplace Rotation
<p>Short description and aims of module</p>	<p>This rotation introduces undergraduates to the new product innovation process. It will allow them to apply their engineering theory (across various disciplines), develop their core skills and continue to develop workplace behaviours in the application of consumer product design.</p> <p>Undergraduates may work in different category teams such as floorcare or personal care but will meet the same overall learning outcomes.</p>
<p>Learning outcomes of the module</p> <p><i>What will a student have learnt and what skills will they acquire on completion</i></p>	<ul style="list-style-type: none"> • Understand the NPI development process and how this integrates with the wider milestone process. • Modify, redesign or design parts/ assemblies/ or fixtures using Computer Aided Design (CAD) • Prototype parts using the resources available in RDD • Develop new test methods to test prototypes or production products • Acquire data from testing using a range of data acquisition tools, analyse and interpret results. • Summarise results and findings to senior stakeholders at design reviews. •
<p>Method of assessment and weighting attributed to each area of assessment</p>	<p>End of rotation poster assessed to check work meets Learning Outcomes</p> <p>Logbook of learning maintained by student and collated at end of rotation</p>

Name of module	Y3& Y4 Workplace
<p>Short description and aims of module</p>	<p>In year 3 and 4 the undergraduates are supported to choose the workplace team where they will apply the knowledge generated through the degree stream.</p> <p>During this placement the undergraduates are treated like graduates that have joined the team, but that work part time. They work on current engineering challenges across multidisciplinary project teams. They will own the performance of parts or systems.</p>
<p>Learning outcomes of the module</p> <p><i>What will a student have learnt and what skills will they acquire on completion</i></p>	<ul style="list-style-type: none"> • Understand and generate requirements and specification taking account of any safety or compliance requirements. • Design and develop systems to meet a specification • Design and develop test methods to evaluate the performance of a system or process, against a defined specification or requirement. • Assess how different systems within an engineering product or process interact and affect performance. • Manage the delivery of a project/system including the management of tasks and resources. •
<p>Method of assessment and weighting attributed to each area of assessment</p>	<p>End of rotation poster assessed to check work meets Learning Outcomes</p> <p>Logbook of learning maintained by student and collated at end of rotation</p>