

## Module Specification

### Module Summary Information

<b>1</b>	<b>Module Title</b>	
<b>2</b>	<b>Module Credits</b>	20
<b>3</b>	<b>Module Level</b>	4
<b>4</b>	<b>Module Code</b>	ENG4096

<b>5</b>	<b>Module Overview</b>
<p>The module aims to provide the practical and professional skills to enable you to progress on to the second year of an engineering degree. As the theoretical aspects of physical science and maths are delivered in other themes of the first year, the Practical Skills modules concentrate on the practical aspects.</p> <p>The subject material will be delivered in three coherent streams one of which contains predominantly mechanical and electrical laboratory exercises, a second PC-based stream will include use of software to support project planning, design, communication and analysis and the third, a project space where you have the opportunity to integrate learning from across all elements of the semester.</p> <p>You will develop practical professional engineering skills including skills required for conceiving, designing, implementing and operating engineering solutions.</p> <p>It is anticipated that the module will be delivered as three 3 hour sessions, and will include a very small group tutorial session where you will meet with your tutors in groups of 5 – 10 students.</p> <p>This module will interact with modules in the other two themes in the first year in that it will rely on knowledge of mathematical techniques, and the theoretical underpinning of the engineering principles, design and professional skills theme.</p>	

<b>6</b>	<b>Indicative Content</b>
<p><b>Professional Skills</b>        Small group tutorial, Introduction to engineering project (CDIO), Further research tools, avoiding plagiarism, Critical analysis, CAD part design, mathematical modelling tools.</p> <p><b>Mechanical and electronic labs</b>        Torsional testing, Impact testing, Bending stresses, Rotational bed, Referred inertia, Torsional pendulum, Sequential logic, Rectifier circuits, Transitional CE characteristics, Operational amplifiers, Active filters, Analogue to Digital Converter.</p>	

<b>7</b>	<b>Module Learning Outcomes</b>	
	<b>On successful completion of the module, students will be able to:</b>	
	<b>1</b>	Organise and complete a range of practical labs and activities. Analyse and present findings in an appropriate manner
	<b>2</b>	Analyse design proposals and select the best solution from a range of options, then utilise CAD for effective communication.
	<b>3</b>	Develop an ability to manage a group project by controlling time and resources, setting milestones and reflecting upon its success.

<b>8</b>	<b>Module Assessment</b>		
<b>Learning Outcome</b>			
	<b>Coursework</b>	<b>Exam</b>	<b>In-Person</b>
<b>1-3</b>	X		X

<b>9</b>	<b>Breakdown Learning and Teaching Activities</b>	
<b>Learning Activities</b>	<b>Hours</b>	
<b>Scheduled Learning (SL)</b> includes lectures, practical classes and workshops, peer group learning, Graduate+, as specified in timetable	120	
<b>Directed Learning (DL)</b> includes placements, work-based learning, external visits, on-line activity, Graduate+, peer learning, as directed on VLE	0	
<b>Private Study (PS)</b> includes preparation for exams	80	
<b>Total Study Hours:</b>	200	