

## Module Specification

### Module Summary Information

<b>1</b>	<b>Module Title</b>	Practical Skills 2
<b>2</b>	<b>Module Credits</b>	20
<b>3</b>	<b>Module Level</b>	3
<b>4</b>	<b>Module Code</b>	ENG3014

<b>5</b>	<b>Module Overview</b>
<p>This module aims to provide the practical and professional skills to enable you to progress to the first year of an engineering degree.</p> <p>As the theoretical aspects of physical science and maths are delivered in another theme of the foundation 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, communication and analysis and the third, a project space where you will have the opportunity to integrate learning from across all elements of the semester.</p> <p>It is anticipated that the module will be delivered as three 2 hour sessions, and will include a very small group tutorial session where you will meet with your tutor in groups of 5 – 10 students.</p> <p>This module will interact with modules in the other two themes in the Foundation Year in that it will rely on knowledge of mathematical techniques and the theoretical underpinning of the science theme.</p> <p>The delivery of this module makes use of the "flipped" methodology, where the work is practice-based, active problem solving using practical skills and real examples.</p>	

<b>6</b>	<b>Indicative Content</b>
<p><b>Professional Skills</b>        Introduction to engineering project (CDIO), Project planning, research tools, writing of technical reports and referencing, Presentation skills and preparation. Introduction to graphical representation.</p> <p><b>Mechanical and electronic labs</b>        Amplitude and Frequency modulation, Passive Filters (Low pass and high pass), Active Filters (low pass and high pass), Operational amplifier configurations, Digital to analogue converter, Analogue to Digital converter, Equilibrium of forces, Simple harmonic motion, Energy conservation rolling cylinders, Torsional deflection of shafts, Specific heat capacity, Reflections on learning. Produce level 3 portfolio.</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>	Complete a range of practical labs supporting the learning in the foundation year semester 2 modules and demonstrate understanding of the key principles.
	<b>2</b>	Develop and apply advanced graphical representation tools for effective communication of ideas
	<b>3</b>	Construct teams, successfully manage resource to complete projects.

<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>	<b>X</b>		<b>X</b>

<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	96	
<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	104	
<b>Total Study Hours:</b>	200	