

<b>Module Title:</b>	Project 3 (Avionic)
<b>Language of Instruction:</b>	English
<b>Credits:</b>	5
<b>NFQ Level:</b>	7
<b>Module Delivered In</b>	No Programmes
<b>Teaching &amp; Learning Strategies:</b>	The following tools shall be used to teach this module • Practical project assignments designed using project based learning techniques • Schematic and PCB layout (CAD) software packages • Circuit design and test tutorial sessions • Electronic and mechanical workshop sessions • Schematic, layout and circuit simulation sessions in a computer laboratory
<b>Module Aim:</b>	To give the students the knowledge, competencies and skills necessary to complete an individual avionics project using the following procedure Design and develop an avionic module; Draft aviation industry standard schematics. Generate PCB layout drawings. Generate all related documentation to build and test the project. Execute the assembly and testing of the project.
<b>Learning Outcomes</b>	
<i>On successful completion of this module the learner should be able to:</i>	
LO1	Create a project plan using a Gantt chart
LO2	Clearly explain the circuits, components and materials used to complete the project design
LO3	Construct and test the circuits on stripboard and/or PCB using selected components
LO4	Compare theoretical and actual project operation after final testing, showing specific calculations
LO5	Present the final project use clear presentational skills
<b>Pre-requisite learning</b>	
<b>Module Recommendations</b>	
<i>This is prior learning (or a practical skill) that is recommended before enrolment in this module.</i>	
No recommendations listed	
<b>Incompatible Modules</b>	
<i>These are modules which have learning outcomes that are too similar to the learning outcomes of this module.</i>	
No incompatible modules listed	
<b>Co-requisite Modules</b>	
No Co-requisite modules listed	
<b>Requirements</b>	
<i>This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.</i>	
No requirements listed	

## Module Content & Assessment

Indicative Content
<b>Health &amp; Operational Safety</b> Set of safety procedures for personal safety ~ Set of operational procedures to ensure correct equipment operation
<b>Project Planning</b> Main project tasks for completion it by a specified completion date ~ Gantt chart showing proposed tasks in chronological order
<b>Project Design</b> Design calculations and design decisions and trade-offs; ~ Circuits and components and materials used to complete the project ~ Schematics using industry standard symbols; ~ Use of standard CAD systems to simulate the design;
<b>Project Development</b> PCB assembly using the fabricated PCB and selected components. ~ Mechanical assembly required (for e.g. panel mounting, enclosure customisation).
<b>Final Testing</b> Comparison between the theoretical and actual project operation, showing specific calculations ~ Problems or complications with the project design
<b>Project Documentation</b> All relevant documents to operate the project correctly ~ Final project report ~ Project logbook as appropriate
<b>Final Presentation</b> Basic operational theory behind the project ~ Presentation of the final project showing the project in working order ~ Use of clear presentational skills throughout

Assessment Breakdown	%
Project	100.00%

No Continuous Assessment

Project				
Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Project	All assessment will be practical assignment based.	1,2,3,4,5	100.00	n/a

No Practical

No End of Module Formal Examination

SETU Carlow Campus reserves the right to alter the nature and timings of assessment

**Module Workload**

<b>Workload: Full Time</b>		
<i>Workload Type</i>	<i>Frequency</i>	<i>Average Weekly Learner Workload</i>
Practicals	Every Week	3.00
Independent Learning	Every Week	0.50
Total Hours		3.50

