

Module Title:	Project 3 (Avionic)
Language of Instruction:	English
Credits:	5
NFQ Level:	7
Module Delivered In	No Programmes
Teaching & Learning Strategies:	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
Module Aim:	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.
Learning Outcomes	
<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
Pre-requisite learning	
Module Recommendations	
<i>This is prior learning (or a practical skill) that is recommended before enrolment in this module.</i>	
No recommendations listed	
Incompatible Modules	
<i>These are modules which have learning outcomes that are too similar to the learning outcomes of this module.</i>	
No incompatible modules listed	
Co-requisite Modules	
No Co-requisite modules listed	
Requirements	
<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
Health & Operational Safety Set of safety procedures for personal safety ~ Set of operational procedures to ensure correct equipment operation
Project Planning Main project tasks for completion it by a specified completion date ~ Gantt chart showing proposed tasks in chronological order
Project Design 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;
Project Development PCB assembly using the fabricated PCB and selected components. ~ Mechanical assembly required (for e.g. panel mounting, enclosure customisation).
Final Testing Comparison between the theoretical and actual project operation, showing specific calculations ~ Problems or complications with the project design
Project Documentation All relevant documents to operate the project correctly ~ Final project report ~ Project logbook as appropriate
Final Presentation 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

Workload: Full Time		
<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

