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| Module Title: | Development Project |
| Language of Instruction: | English |
| Credits: | 5 |
| NFQ Level: | 8 |
| Module Delivered In | No Programmes |
| Teaching & Learning Strategies: | A critical part of the Team project is the interaction between the project supervisor and the student(s). Students are expected to attend in the laboratory. During this time, they will participate, under supervision, in group and individual learning in order to complete the assigned project. Where students fail to attend, vital skills necessary to complete the project will not be obtained |
| Module Aim: | To give the students the knowledge, competencies and skills to plan, implement and execute work effectively as a team member in a virtual industrial environment. Students have to work together and carry out individual tasks upon which the whole team is dependent |
| Learning Outcomes | |
| <i>On successful completion of this module the learner should be able to:</i> | |
| LO1 | Prepare a literature search and arrange a project plan for the team brief |
| LO2 | Plan, manage and organize work effectively as a team member. |
| LO3 | Design the necessary hardware / software for the assigned team element of the prototype |
| LO4 | Evaluate the team element and the overall prototype design using CAD tools |
| LO5 | Demonstrate self-direction, team organization and problem solving in the formal report |
| LO6 | Assess ethical issues in relation to the team conduct and prototype design |
| 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

Team structure

Team members will be assigned responsibilities for the following key areas: Team leader (rotating position between team members)
Propulsion system Aerodynamics Control system Software / Hardware design System Integration Testing Quality control / budget costs

Project Brief

Initially, the team will be presented with a conceptual design and a budget. The team will have to produce a Project Specification / Objectives Literature search Project management plan Address any ethical issues in relation to the design The supervisor will discuss the assessment plan with the team to ensure a clear understanding

Project Plan

The team will select the plan which meets the objectives within the time allowed for the project

Preliminary design

CAD tools will be used for simulation in the development of the design Design software will be used to produce any working drawings for the prototype. Software tools will be used to generate the program design Suitable application software will be used to monitor costs throughout the project

Prototype Development

The actual prototype will be developed and any issues with Hardware / Software interfaces addressed

Test

Testing of prototype

Presentation

The student will be required to make a presentation on the progress of his / her project every two weeks. A final presentation by the team or member on the completed design

Log Book

A log of student activity will be maintained throughout the period of the project

Thesis

Formal report on the final project

Assessment Breakdown

%

Project

100.00%

No Continuous Assessment

Project

| Assessment Type | Assessment Description | Outcome addressed | % of total | Assessment Date |
|-----------------|--|-------------------|------------|-----------------|
| Project | The final report is assessed on: Conducting a literature survey using available resources both internal and external to the college. Carrying out a project plan. Initial concept design, system design, and CAD drawings for aviation project. Manufacture, validating and testing through out the process to meet the specification.. Effort and participation as a team, design innovation and skill in report writing. | 1,2,3,4,5,6 | 70.00 | n/a |
| Project | Assessment Description % of Total Mark Initial presentations: 5%, Interim presentations 15%. Final presentation 10%. All presentations are made in front of a panel of academic staff and their peers. The academic staff assess the presentation based on structure, time management and delivery. | 2,4,5 | 30.00 | 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> |
| Independent Learning Time | 15 Weeks per Stage | 4.00 |
| Total Hours | | 60.00 |

