

Module Title:	Dissertation
Credits:	10
NFQ Level:	8
Module Delivered In	2 programme(s)
Teaching & Learning Strategies:	Lectures Demonstrations Private study
Module Aim:	The dissertation provides students with the opportunity to carry out individual research, into a chosen aspect of study arising from the course programme. The Dissertation is a major aspect of the honours degree as it challenges students to fully demonstrate an individual understanding both of the depth and breadth of the subject areas. The dissertation will take the form of a substantial study in a subject area related to Civil, Structural or Environmental Engineering, largely through the exercise of independent inquiry. The aims of this module are to provide students with the opportunity: 1. to apply the knowledge and skills learned on the course to the solution of Civil, Structural or Environmental Engineering problem; 2. to extend their existing knowledge, expertise and skills in their chosen topic; 3. to gain experience at managing a dissertation; 4. to make contact with external bodies; 5. to develop written and verbal communication skills; 6. to demonstrate their ability to carry out an independent piece of research and development work.

Learning Outcomes	
<i>On successful completion of this module the learner should be able to:</i>	
LO1	to manage a substantial piece of individual research and development work.
LO2	to pursue an area of academic discipline of the course to substantial depth.
LO3	to communicate effectively in writing a programme of work and, orally defend the work in a logical, precise and coherent manner.
LO4	to demonstrate ability to exercise judgment, independent thought, initiative, intellectual achievement, understanding of the chosen subject matter, and the principles being applied.
LO5	to develop and demonstrate the ability to manage and present the work in a precise and coherent manner.
LO6	To work effectively as part of a team in a competitive environment

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

Content of Scheme Design Reviews

During the first twelve weeks a case study of recent engineering projects will be presented to the students by lecturers or external engineering professionals. The students will be divided into design teams to facilitate group co-operation. The case study will take the form of a design competition whereby the engineering solutions shall be evaluated by the teams and presented in report form. Each group will be required to attend an interview to present and defend their scheme design. Every member of each design team will be required to take the roles of designer and reviewer for the reporting and presentation of each scheme solution.

Content of Dissertation

Within the first six weeks of the course, students will decide, in consultation with course lecturers, on a title for their dissertation. Each student will be assigned a supervisor based on the interest of the student and each supervisor will supervise not more than five students. The exact theme of dissertation will be a result of discussion and compromise between the student and the supervisor. The actual topic of research must be in line with the course content and problems related to the work experience of students will be considered. Each student should submit a dissertation together with an oral presentation of seven minutes in front of an assessment panel. Supervisors may recommend students to attend research seminars organised by other departments within the Institute when such seminars are relevant and useful to the dissertation project. The supervisor will assign a coursework mark to the student related to the attendance of the research seminars, which will be marked by the supervisor. Whatever form it takes, a dissertation will normally include all of the following elements: • A literature survey; • Use of internal and external resources; • Research element; • Theoretical analysis; • Validation of new and emerging techniques researched • Interpretation of results. The balance of elements in a dissertation will depend on the exact form of the dissertation. While it is expected that each dissertation will contain a literature survey, a dissertation that is based entirely on a literature survey will not be acceptable. Equally an analytical dissertation must contain elements of validation and interpretation. Most dissertations, regardless of their form, should normally include some element of analysis whether technical or financial or both.

Detailed Programme

Before the end of week 4 of the course it is expected that, in consultation with their supervisor, students will prepare a detailed dissertation description, programme and timeline of the work to be carried out. This will include: • A statement of the objectives to be achieved; • An outline list of the publications to be surveyed; • Suggestions on contacts to be made with external bodies; • An outline of the research work to be undertaken; • A suggestion on any relevant financial analysis that could be carried out; • Suggestions on how the outcome of the work could be tested or validated; • A statement identifying the risks involved in carrying out the work and the steps to be taken, under the health and safety regulations, to minimise these risks.

Supervision of Dissertation Work

One lecturer will coordinate overall dissertation work and will distribute an agreed Dissertation Briefing Document to each student. Other lecturers will supervise individual dissertations

Log Book

Students will maintain a weekly record, in a logbook, of their progress. This record will contain a list of references consulted, contacts made with others both inside and outside the College, any design or analytical work carried out, documents prepared, surveys carried out and any other dissertation work undertaken. Logbooks should be submitted weekly to dissertation supervisors for inspection.

Detailed Plan

By the end of the first month on the course, students will be expected to draw up a detailed plan of when the work will be undertaken and to present this to their supervisor. This plan will identify a number of stages for the work and the week numbers during which these stages will be carried out.

Overall Schedule

In addition to the activities outlined above, students will be required to make two oral presentations on their dissertation and to submit one written report. It is expected that the dissertation will be completed in 24 out of the 30 weeks in the academic year. This will allow time for the students to prepare for their final examinations.

First Presentation

During week 12, students will be expected to make formal presentations to staff and students on their dissertation. They will be encouraged to make use of an overhead projector or PowerPoint. Where PowerPoint is used, they will be required to load PCs before a session begins. They will not be allowed to use more than 10 acetate sheets or slides. Presentations will be limited to 5 minutes and will be followed by questions.

Written Report

During week 23, students will be expected to submit to their supervisor their final written report. This report will be limited to 50 pages long, inclusive of the title page, the preliminary pages, graphs, tables, diagrams, charts, photographs, references, appendices etc. The report will be typed on one side of A4 sheets, using 12 points Times New Roman font and 1.5 line spacing. The report will contain the following: • One title page; • One page containing a declaration of originality; • One page containing acknowledgments; • One page containing a summary of the dissertation; • A table of contents; • An introduction; • A literature survey; • The body of the dissertation; • Interpretation of results and conclusions; • A list of references and, if appropriate, a bibliography; • Appendices as appropriate. The report will contain no more than 16,000 words, inclusive of the preliminary pages, the references, bibliography and appendices. Where the word limit is exceeded the marks credited initially to the dissertation will be scaled down by a percentage equal to the percentage word excess. The title page will contain at the top the name of the College, School and Department; in the middle the title of the course, the title of the dissertation and the author's name; in the bottom left hand corner the date of submission and in the bottom right hand corner the number of words.

Final Presentation

During week 24, students will be expected to make their final presentations. The rules of procedure here will be the same as for the first presentation, except that the time limit will be extended to 10 minutes.

Assessment Breakdown	%
Project	17.00%
Practical	83.00%

No Continuous Assessment

Project				
<i>Assessment Type</i>	<i>Assessment Description</i>	<i>Outcome addressed</i>	<i>% of total</i>	<i>Assessment Date</i>
Project	Group Project	5,6	17.00	n/a

Practical				
<i>Assessment Type</i>	<i>Assessment Description</i>	<i>Outcome addressed</i>	<i>% of total</i>	<i>Assessment Date</i>
Practical/Skills Evaluation	Presentation 1: 5% Presentation 2: 15% Dissertation Report: 63%	1,2,3,4,5,6	83.00	n/a

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>
Estimated Learner Hours	30 Weeks per Stage	8.00
Total Hours		240.00

Module Delivered In

Programme Code	Programme	Semester	Delivery
CW_CMHCE_B	Bachelor of Engineering (Honours) in Civil Engineering - Ab Initio	7	Mandatory
CW_CMCEN_B	Bachelor of Engineering (Honours) in Civil Engineering - Add On	3	Mandatory