



Waterford Institute *of* Technology
INSTITIÚID TEICNEOLAÍOCHTA PHORT LÁIRGE

HIGHER DIPLOMA IN SCIENCE IN COMPUTER SCIENCE (NFQ – LEVEL 8)

Project Handbook 2017/18

School of Lifelong Learning and Education

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1. ASSESSMENT CRITERIA

Each project will be assessed based on the following criteria:

CORE CRITERIA

- Model: light-weight, relevant modelling, generally in accordance with a recognised process. For a software project this is most commonly expressed in a subset of UML. For other types of project a different formalism may be more appropriate. (15%)
- Documentation: project-related communication including, but not limited to: keeping appropriate logs, writing well-constructed formal reports, maintaining sketches of ideas in diagrammatic/written form in UML or otherwise. (15%)
- Implementation: based on the modelling and the content of the reports. (30%)
- Level: appropriate mix of (a) originality, (b) innovation and (c) complexity (25%)

CRITICAL SELF-REVIEW

- what you learned (5%)
- what you achieved, and in what direction the project might be taken if more time was available (5%)
- how problems were addressed and solved (5%)

In addition, you must attend all meetings with your supervisor. There are no marks allocated for these, but failure to attend, without good cause, will disrupt the assessment procedure.

2. STRUCTURE OF THE PROJECT

The body of work constituting "the project" will commence in January 2018, and can be divided into three phases:

Inception Phase: including formation of the project concept, initial meeting with supervisor, draft and final proposals + (optionally) interaction with work place mentor.

Development Phase: Realisation of the project as proposed or amended in agreement with your supervisor.

Dissemination Phase: Preparation of final report. Presentation of project demonstration/presentation. Delivery of final documentation.

It is envisaged most of the time will be spent in the Development Phase. In order to help you plan your project, these milestones will serve as a useful guide:

• Milestone 1 – Initial Meeting with Supervisor (week of 8 th January 2018)
• Milestone 2 – Draft Proposal by Friday 20 th January 2018
• Milestone 3 – Final Proposal by Friday 2 nd February 2018
• Milestone 4 – Interim Report by Friday 9 th March 2018
• Milestone 5 – Submission of Final Project by Friday 11 th May 2018
• Milestone 6 – Presentation of Final Project by Friday 18 th May 2018

3. PROJECT PROPOSALS

You are invited to make project proposals on an individual basis. The proposal may reflect a deep personal interest, the interest of your supervisor or aspects of the technology and business processes of your work placement. It may be useful to conceive a project as a solution to a problem. Representative examples include:

- An entire application (mobile app, web app or both)
- A component of an application (database, or other software component)
- A software tool, library or framework
- An analysis/profile of a system or component (for instance from a security perspective)
- Exceptionally, a project may be a detailed state of the art for a given field.

The problem may be directly aligned with your work placement opportunity, or it may be independent of it. This may depend on the disposition of the industry providing the placement, your personal goals and interests and the advice of your project supervisor.

Three documents are expected during the projects development and realisation:

Proposal

This will articulate the project concept and nature and will serve to scope the work of realising the project. It may typically be less than 2 pages

Interim Report

This will be a substantial update on the progress of the project – and can be regarded as an early draft of the final report. It may be 10-15 pages, depending on the project type

Final Report

This is the final report – and may include a short number of slides for presentation/demonstration purposes. Final reports would typically be less than 40 pages.

Typically, the final report will be accompanied by associated codebase, which can be submitted as a zipped archive or other repository format.

4. PROJECT ADMINISTRATION AND ACADEMIC SUPERVISION

Each student will be appointed an academic supervisor to provide supervision and direction for the duration of the project. Also, it is recommended that the work place mentor reviews and signs off on the student's learning log (see appendix 2 for structure of learning log) and discusses the project progress at regular intervals.

In addition, Ian Downey who is coordinator for the B.Sc. Hons Computing Projects, will collect abstracts and photographs for the Project Book published at the end of the year. This book is made available to future employers and others at the Student Fair at which you have the opportunity to show your projects. See section 9 below for further details on the Project Book.

5. REPORTS AND OTHER DELIVERABLES

You will be required to adhere to the milestones outlined in section 2. Also, you will need to submit 1 hard copy of each proposal/report to your supervisor and upload a further copy to Moodle. See appendix 1 for an outline of the final project report.

6. DECLARATION OF AUTHENTICITY

On the first inside page of any report, you should have printed out the following declaration, and, in the case of any hard copy, this is to be signed and dated by the project participant and work place mentor if sensitive company information is being used for project purposes.

I declare that the work which follows is my own, and that any quotations from any sources (e.g. books, journals, the internet) are clearly identified as such by the use of 'single quotation marks', for shorter excerpt and identified italics for longer quotations. All quotations and paraphrases are accompanied by (date, author) in the text and a fuller citation is the bibliography. I have not submitted the work represented in this report in any other course of study leading to an academic award.

Student..... Date

Work Place Mentor..... Date

7. EXAMINERS AND PROJECT EXAMINATIONS

There will be three examiner categories:

- (a) The Supervisor and Course Leader
- (b) Course Board Review Team
- (c) the External Examiners

8. MEETINGS THROUGHOUT THE YEAR

Usually each project student will have a weekly meeting with their supervisor consisting of (12 half hour meetings or 6 one hour meetings) at the discretion of the supervisor and work place mentor. He or she will show his/her progress, emphasis being placed on risk-reduction from week to week as issues associated with (a) project requirements gathering, (b) technologies and (c) skills building are addressed.

Each meeting must be logged perhaps simply by a brief exchange of emails between student and supervisor after the meeting outlining what was agreed and what is to be done for the next meeting. It may be appropriate to implement this log in the form of a journal.

If either the supervisor or the student is unable to keep a project-related appointment, the other party will be informed as soon as possible. Naturally it will be rare for such cancellation to take place.

9. PROJECT ABSTRACTS, CLASS WEB SITE, AND PRINTED PROJECT BOOK

A project abstract of between 300 and 500 words is required together with a personal digital photograph in jpeg format.

A professional/academic title of the project should be chosen at this stage in addition to an optional "commercial" title. An example of a professional/academic title might be "distributed library book retrieval system". An example of an optional commercial title might be "FindThatBook.com".

The abstract **MUST** be provided on or before the due date. This date will be made known during Semester 2.

The reason for the abstract and photograph is so that a departmental web site can be prepared with details of all the projects being undertaken by fourth year students. Your project work is a very important activity within the School of Lifelong Learning and Education and the Department of Mathematics, Physics and Computing. The work that you put into your projects is valued accordingly. You will have opportunities to update the web site during the academic year.

In addition, the abstracts and photographs will appear in the full colour project book issued at the end of the year. This book will be based on the web site. Please ask for your own copy of last year's book, to better understand its purpose.

10. PROJECT ARCHIVING

Final projects may be archived, as part of the Institute's efforts to provide a repository of the interesting and valuable work carried out by its members.

11. PROJECT FINISHING DATES

The module will have an oral examination/demonstration on the week of the **18^h May 2018**.

12. PROJECT ADMINISTRATIVE WEB SITE

Each staff member and student involved with projects is required to be familiar with Moodle and all its updates. In addition each person is required to be familiar with the relevant individual course Moodle facility (if any) and all its updates. It is recommended the web sites/Moodle are reviewed once a week or more. (refer to work placement CRN)

13. APPENDICES

APPENDIX 1: PROJECT PROPOSAL OUTLINE

Project proposals are now invited from all members of the Higher Diploma in Science in Computer Science class. The submission dates for project proposals are as follows:

- Milestone 2 – Draft Proposal by Friday 19th January 2018
- Milestone 3 – Final Proposal by Friday 2nd February 2018

For the hand-up procedure and any additional information and advice, please check with the course leader for your programme, or use information on Moodle that he/she may have provided.

- Your project proposal must have a title (see below).
- Your project proposal will be about four or five hundred words long.
- Please re-read your proposal when written, and amend it if necessary, to ensure that it is easy to read and makes sense to another person.
- You may wish to include a diagram or two.
- You should provide a list (with a title) of technologies that your project will employ, both software (including programming languages) and hardware.
- You should provide a list (with a title) of tools and frameworks that you intend to use.
- You should indicate the project process you intend to use: for example: whether you intend to implement your software all at once or as a series of production quality releases where more functionality is added as you go along.
- You should indicate other parties with whom you are collaborating or parties for whom the software is being written. These are sometimes collectively referred to as stakeholders.
- A title page is important to ensure that we can easily file and retrieve your report. Please provide a page at the front carrying the following information:
 - A title of your proposed project, for example: *Distributed Book Retrieval System* or whatever is appropriate.
 - The words *Project Proposal* below that in a smaller font.
 - Your name and student number
 - Your programme: Higher Diploma in Science in Computer Science.

A submission box has been provided on Moodle; please submit on or before the date that has been set.

APPENDIX 2: WEEKLY LEARNING LOG

To be completed by the student in cooperation with the Work Place Mentor during placement.

Student name	
Organisation name	
Job Title	Start Date
	End Date
Work location	

Week	Task/Activity	Skills required	Supervisor Initials

Linking learning to learning outcomes:			
Learning Event	What did you learn?	Relevant learning outcome(s)	Evidence
Reflections on the learning event:			
Reflections on the learning event:			