B.Sc. in Creative Computing–
Year 4 Project Guidelines

Introduction

The research project will be based on the research, design, implementation and testing of some computer-based application.

The focus of the project may be in any appropriate area of computing, for example:

- Mobile, web or cloud computing
- Data visualisation, simulation or games
- Physical computing
- Virtual /Augmented reality
- Machine learning /Artificial intelligence
- Security
- Assistive Technologies

See http://showcase.iadt.ie/ for samples from last year.

Supervisors are invited to present their areas of interest to the class group.

The project will consist of a number of phases following an appropriate software development methodology. The student will write reports at various stages throughout the development of the project. These reports will form the basis of the complete report for the project. These reports and the developed application will be the deliverables for the project. The student will make a presentation of their project work to academic staff. There will also be a gradshow event for all projects to be reviewed by the supervisors and industry representatives.

The module is worth 20 ECTS credits.

Aim

The aim of this module is to allow students the opportunity to assimilate their knowledge and skills in computing, to research a particular area of computing, to produce a computer-based application within time constraints, and to develop their ability to reflect critically on methodology and outcome. The project is assessed on the basis of:

- A number of interim progress reports and/or presentations.
- The source code of the application, which is submitted in March 2019.
- A dissertation that is submitted in April 2019.
- Presentation at gradshow at the end of the academic year.

Learning Outcomes

On successful completion of the module students will be able to:

- Perform a requirements analysis for a computer-based application and assess the feasibility of the application.
- Research a computer-based topic and carry out a literature review with respect to that topic.
- Design, implement and test a computer-based application using appropriate tools, techniques and methodologies.
- Write a comprehensive report based on a computing-based project, including a description and evaluation of the project's methodology and results.
- Present the results of a computer-based project.

Project Phases

The project will start in **September 2018** and finish in **May 2019**. The proposal must be agreed with the staff supervising the projects.

The scope of the project has to be of sufficient complexity to meet the learning outcomes of a level 8, 4th year honours degree project.

The project will follow the iterative/incremental model of software development as it uses a more exploratory approach. The iterative/incremental model is the model most often followed by students because they often discover the application requirements as they develop the application.

The project life-cycle will be undertaken in the following discrete phases:

Phase	Weeks	Description	Deliverable	Date
1 Proposal	1-2		1 page proposal	Sept 28th
		Allocation of Supervisor		*Oct 3rd*
2. Discovery phase	4-6	**Identify** problem area, develop personas for users and write user stories. Ensure that the application is feasible, and determine system requirements. **Elaboration** –outline overall architecture framework required for application and the iterations/increments that will follow. *Supervisor Feedback*	Project plan, requirements document Paper-prototype On-screen lo-fidelity prototype. Wireframe Personas, User stories	Friday Oct 26th W*eek of Nov 5th*
3. Research and Iteration	8-12	Research completed and show evidence of at least 2 code iterations to date of the prototype.	Research and Analysis Report (including Literature Review) Running code prototype	Thursday Dec 6th
	13	**Interim Presentation**	Presentation of work to date	Monday Dec 10th
4. Further Iteration	14-18	Implement the application iteratively using stable application architecture.	Design document	Thurs 25th Jan
5. Transition/ Completion	19-23	Application is prepared for release and given to users for evaluation and testing.	Source code submission	**14th March 2019**
6. Thesis	14-27	Final project documentation:2 ring-bound hard-copies	Turnitin PDF file of report /Camtasia video	**Thursday 4th April 2019**
7. Promotion	27-31	**Gradshow**	**Date in May 2019 to be confirmed.**	

Supervision

Each student will be allocated a supervisor who is a member of the lecturing team. The supervisor is there to provide guidance and support and where possible will have expertise in the application area and/or development environment(s) being used. However, the supervisor is not expected to give hands-on support in terms of error-fixing, tuition in new programming environments etc.

Students are expected to meet with their supervisors regularly and to keep them appraised of progress at all times. Supervisors will have the most input to each student's final project grade so it is important to maintain regular contact so that they can evaluate your approach as well as your end product.

The project is expected to take about 300 hours of student effort throughout the year (September to May). There are 6 hours a week scheduled for student project work and it is up to students to decide how these hours should be used. For convenience and to ensure availability of resources, these hours are scheduled in computing labs.

Documentation

During the course of the project, you will be required to produce a number of written documents. There is a deadline by which each deliverable must be complete. The final deliverable is a comprehensive Dissertation or Project Report.

Project Management

We encourage students to use new project management tools (e.g. the **KanBan** method or Trello) and generate an updated log of tasks for each week. This log be discussed with your supervisor at regular meetings. Submit this with your Project plan, paper prototype, and requirements document deliverable for Oct 26th.

Proposal phase

By **Friday 28th of September 2018**, students must have submitted a project proposal detailing the application they will design and implement. Describe research problem, and possible technology implementations for a solution. This proposal will be read by project co-ordinator and allocated supervisor. Email proposal to Marian.mcdonnell@iadt.ie by 1pm **Friday 28th of September 2018.**