## 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 present twice to academic staff, once at Christmas and again at the end of the project.

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. A schedule of all deliverables is available on blackboard.

## 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 2019** and finish in **May 2020**. 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 many phases, these can be viewed in the project schedule on blackboard. Your supervisor will advise you how to progress through these phases, however it is your responsibility to ensure you know dates of deliverables and submit the required deliverables on time.

You will submit smaller deliverables directly to your supervisor; however, major deliverables will be submitted to the project co-coordinator on blackboard (possibly sideshowbob for final code).

### 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.

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## 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.

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## Project Management

The project schedule is available on blackboard. Each student should become very familiar with this schedule to ensure good 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 can be discussed with your supervisor at regular meetings.

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## Problems/Issues during the Year

If the class have general questions during the year please contact the Project Coordinator – Anne Wright for clarification. (anne.wright@iadt.ie)

If a student has a problem that may impact submissions, please talk to your supervisor. If the problem is not resolved, please contact Anne Wright.

I will organize meetings during the year to discuss upcoming submission. So please keep an eye on your email and ensure you attend meetings.

## Proposal phase

Due : 27 September 2019

Submit : On Blackboard

You must submit a project proposal detailing the application they plan to research, design and implement. You will describe the research problem, and possible technology implementations for a solution.

**You can view sample proposals are on blackboard.**