## Interdisciplinary Team Project

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| Stage | | | | 2 | | | | | | | | | |
| Semester | | | | 2 | | | | | | | | | |
| Module Title | | | | Interdisciplinary Team Project | | | | | | | | | |
| Module Reference Code | | | |  | | | | | | | | | |
| Status (M/E) | | | | M | | | | | | | | | |
| ECTS Credit | | | | 10 | | | | | | | | | |
| Module NFQ Level | | | | 7 | | | | | | | | | |
| Pre-requisite Modules | | | | Code | | | Title | | | | | | |
| Co-requisite Modules | | | | Code | | | Title | | | | | | |
| Capstone (Y/N) | | | |  | | | | | | | | | |
| Teaching Personnel | | | | Title | | | Name | | | | | | |
|  | | | | Mr  Dr | | | Mikhail Timofeev  Orla Lahart | | | | | | |
| Contact Hours | | | | | | | Non-Contact Hours | | | | | | Total |
|  | | | | | | |  | | | | | |  |
| Lecture | Practical | | Tutorial | | Seminar | | Assignment | | Placement | | Independent | |  |
| 12 | 60 | |  | |  | |  | |  | | 178 | | 250 |
| Allocation of marks within the Module | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | |
|  | | Continuous Assessment | | | | Project | | Practical | | Terminal Examination | | Total | |
| % Contribution | |  | | | | 100% | |  | | 0% | | 100% | |

### Intended Module Learning Outcomes

On successful completion of this module, learners will:

**LO 1.** Specify, design, implement and document a medium scale project in the chosen area of specialisation, including the identification and assignment of different software development roles within a team.

**LO 2.** Make the use of emerging development techniques/tools, technologies/languages

**LO 3.** Meet strict project deadlines.

**LO 4.** Develop and enhance interpersonal communication skills to become a successful member of a working team.

### Module Objectives

The module aims to:

* Consolidate the knowledge and skills acquired in other modules by specifying, designing, implementing and documenting a medium scale software/web application.

### Module Curriculum

**Topic**

A practical development project is undertaken. While faculty members may suggest topics, the Project specification is decided by the student in consultation with faculty. Students follow the typical development life cycle to produce a software/web application of substance.

This module is common across all undergraduate programmes in the School of Computing. Students from all programmes will need to demonstrate competency in core technical skills (e.g. introduction to programming, databases, web design). Students studying programmes in the area of business computing and technology management must also demonstrate additional acquired business skills (e.g. management, marketing etc) while, students studying more technical programmes must demonstrate further technical skills (e.g. programming skills) and ability to utilise emerging technologies/languages.

**Selection of groups and a peer-review process**

The interdisciplinary project teams may be formed based on a self-selection process with representation from all disciplines. During week 1 those students who do not belong to a team may fill in a questionnaire that would indicate their skill set and a type of project they may be interested in. These students will be placed on a team by a lecturer or a faculty member. Each team will comprise a number of roles. Within each team students may assume a role which best reflects their strengths, however, all students must demonstrate the core technical competencies as outlined previously.

A peer-review process in place will assist in determining the contribution of each individual on a team. Two questionnaires (distributed in the middle of the term and at a final stage) will assist the lecturer or a faculty member in assessing the work of each team member. The results of both questionnaires and analysis of student’s online project activity will influence the final mark of each student.

**The Interdisciplinary project**

The main project phases which are assessed separately include: project proposal, requirements specification, prototype implementation, final release, testing and evaluation. In the beginning of the Semester students attend classes, consultations and seminars on immanent issues including requirements analysis, development method, programming language and development tools. Throughout the Semester students work under the direction of the project supervisor where the supervisor meets the teams during class time. The project team reports on the project progress. In the mid of the Semester, students present a prototype to examiners, outlining their progress to date and demonstrating that the main technical difficulties have been solved. In the end of the Semester, students present the final release to examiners and produce the required documentation.

Examples of project area include but are not limited to:

* E-commerce applications (e.g.  event registration)
* Gaming applications (e.g. educational game for children)
* Innovative business applications (e.g. applications that support new business ventures)
* Web applications (e.g.  tutoring application)
* Data management applications (e.g. Attendance monitoring system)
* Applications that support the management process (e.g. KPI dashboard application)

**Background**

* Introduction to Project
* Coding guidelines
* Supervision requirements
* Overview of examinations (timelines, dates etc.)

**Project Activities**

* Project Proposal
* Requirements Specification
* Prototype
* Mid point presentation
* Software System
* Final Presentation

**Project Proposal**

* Background to the project
* Brief description of the approach to be followed in implementing the project
* Special resources required, if any
* Major implementation steps and timelines
* Names of academic staff members consulted

**Requirement Specification**

* Requirements Analysis
* Requirement Specification

**Prototype**

* Guidelines
* Horizontal
* Vertical

**Mid point presentation**

* Proof of concept
* A brief power-point overview
* Progress on the project schedule
* A demonstration of a simple project prototype (verifying the feasibility of the project)
* Grading (Presentation, Progress, Prototype)

**Final Presentation**

* Introduction
* Goal
* Central Theories
* System
* Design
* Implementation
* Evaluation
* Discussions
* Demonstrations

### Teaching & Learning Strategy

The learning strategy involves the use of workshops, e-Learning content, presentations and a project. Students will also have access to web based support.

### Assessment Strategy

|  |  |
| --- | --- |
| Allocation of marks | |
| **Continuous Assessment** | 100% |
| **Total** | 100% |

#### Assessment Breakdown

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Assessment**  **Type** | **Assignment**  **Description** | **Outcome**  **Addressed** | **% of total marks** | |
| Project | Project Proposal 5%  Requirement Specification 5%  Online Collaboration & Progress 10%  Preliminary Presentation 10% Dissertation & Project Showcase 70%  Assessment Total 100% | 1,2,3,4 | | 100.00 |

#### Repeat Assessment

Learners who fail this module will be required to sit a repeat module assessment where all learning outcomes will be examined.

#### Sample Assessment

Sample Structure for Proposal for Interdisciplinary Project

Project Title

Team Members:

Overview:

*What is this project about?*

Target group:

*Who will use this software? Are any skills or prior-knowledge required to use this software? Why would users want to use this software? Are there different roles involved (e.g., admin vs. user)?*

Functionality:

*What can this software do? What can it not do?*

Mock-up:

*How will this software look like? Create a mock-up that illustrates the functionality and insert it here.  You may use wireframe software (e.g., Balsamiq), graphics software or presentation software to create an impression of the user interface.*

Timelines:

*Major implementation steps & timelines.*

Summary:

*Overall, what is the benefit of this software? Are there any risks involved? Any additional resources required.*

Sample Marking Scheme:

1. Completeness - 45%

* Overview - 6%
* Target group - 6%
* Functionality - 6%
* Mock-up - 6%
* Summary - 6%

2. Clarity - 45%

* Answer to the “Why?” question – 10%
  + Why does this work need to be done?
  + Why there is a need for the mash-up that you propose?
  + Why is important?
  + Link of the project with the target group
* Answer to the “What?” question – 10%
  + What work needs to be done on the project?
  + The link between the project, functionality, mock-up and work to be undertaken
  + What resources are needed?
* Answer to the “Who” question – 10%
  + Who is conducting this work?
  + Is there a plausible plan and technical approach described?
    1. Document flow – 10 %
  + Use of appropriate language and structure
  + Use of appropriate referencing style.

### Reading List & Other Resources

This module does not have any book resources.

### Learning Environment

Learning will take place in a classroom/lab/workplace environment with access IT resources. Learners will have access to library resources, both physical & electronic and to faculty outside of the classroom where required. Module materials will be placed on Moodle, the College’s virtual learning environment.