PROJECT | Introduction to Module

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OVERVIEW

- Two Semester
- 10 Credit
- Individual Project
- Primarily individual supervision. Some onsite contact but mostly virtual through Skype etc.
- Progress recorded through Mahara
- Assessed by team of lecturers

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ASSESSMENT

End of Semester 1 – 30%   Project Proposal, presentation and reflection.

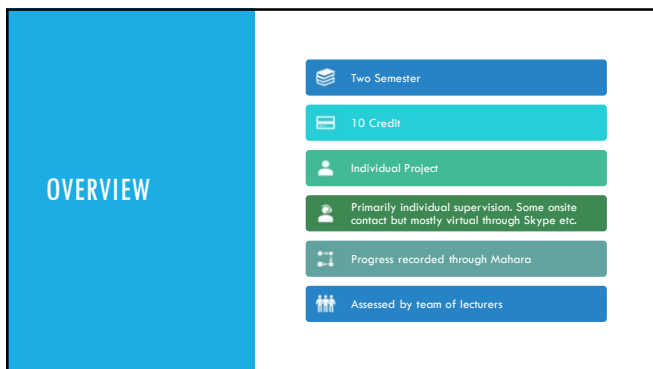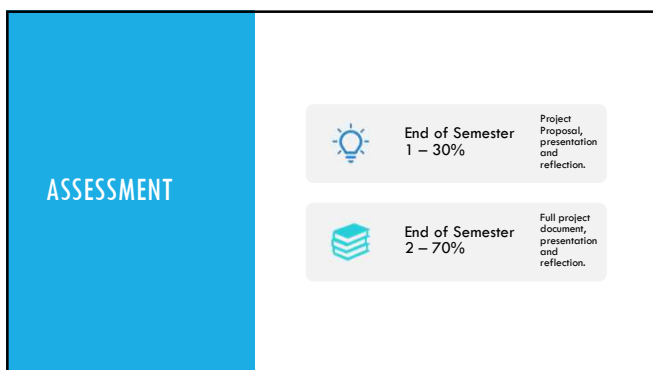End of Semester 2 – 70%   Full project document, presentation and reflection.

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PROJECT PROPOSAL — KEY ELEMENTS

Description of problem domain

Research questions

Research methods

Data description and presentation

Data import

Data cleaning including treatment of outliers

Data exploration

Preliminary analysis(?)

Plan to completion

Ethical clearance

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Weeks 1-3: Exploration of potential data sets and research problems.

Weeks 4-6: Specification of research questions and selection of data. — Interim short report describing problem and data chosen.

Weeks 7-9: Data import, cleaning, exploration and dealing with outliers.

Weeks 10-12: Project proposal document, presentation and reflection.

SEMESTER 1

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EXAMPLE PROJECTS

Machine Learning & Sports - Identification of physical actions in sport
- Can machine learning methods be used to identify kicking action in Gaelic Football from raw Mems and GPS sensor data?

Momentum effect in tennis, golf, snooker, darts etc.
- Does the fact that you have won a series of sets in tennis mean that you are more likely to win subsequent sets?

Statistical Modelling of Pattern of play in Sports?
- Based on annotated game activity can statistical models be used to show that the pattern of play in Gaelic Football has changed from 1999 to 2019?

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EXAMPLE PROJECTS

Time Series Analysis of House Prices

- Based on time series analysis is there a difference in the trend of house prices in urban and rural Ireland?

Energy Consumption in the Home

- Can statistical models be used to investigate the relationship between energy consumption in the home and average external daily temperature?

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EXAMPLE PROJECTS

Social Housing: what are the main impacts on meeting social housing targets in areas across Ireland.

Homelessness in Ireland since the recession

Homelessness vs Unemployment rate in Ireland

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TASK FOR WEDNESDAY OCTOBER 2ND

Complete the following template with two different research ideas:

1. Problem Description (Max 100 words)

2. Research Question

3. Data Sources and Brief Description

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