MODULE SPECIFICATION

Part 1: Information			
Module Title	Mathematics, Statistics and Operational Research Project A		
Module Code	UFMFU9-30-3	Level	Level 6
For implementation from	2019-20		
UWE Credit Rating	30	ECTS Credit Rating	15
Faculty	Faculty of Environment & Technology	Field	Engineering, Design and Mathematics
Department	FET Dept of Engin Design & Mathematics		
Module type:	Project		
Pre-requisites	None		
Excluded Combinations	Mathematics Education Project 2019-20, Mathematics, Statistics and Operational Research Project B 2019-20		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description

Overview: The aim of this module is to provide students with the opportunity to undertake an in-depth individual investigation in Mathematics, Statistics or Operational Research (these areas are abbreviated to 'Mathematics' in what follows).

Features: Module Entry Requirements: 80 credits at Level Two or above.

Educational Aims: See Learning Outcomes.

Outline Syllabus: The particular mathematical syllabus that is followed depends on the designated personal project file and on the investigative path followed by the particular student. The module group syllabus is as follows:

Research in Mathematics:
The geography of Mathematics.
Tools for research.
The study and evaluation of mathematical literature.

Communicating Mathematics:
The process of academic writing.
Mathematical language and environments.

Report writing skills.
Presentation skills.

Teaching and Learning Methods: The origin of the investigation is the designated personal project file: this is a collection of documents (possibly a single document) assembled by the student's project adviser. Each document in a given personal project file might be one of the following types (but other possibilities could also arise): a chapter in a textbook or in a monograph; a journal article; an account in a conference proceedings; a statistical report; a data set. The role of the adviser is to provide guidance and to monitor progress. The student spends the first third of Semester One undertaking a study and critical evaluation of the document(s) in the designated personal project file, at the end of which the first part of assessment, namely Report One, is produced. Subsequent to submission of Report One, the student initiates and takes forward the personal investigative phase of the project, utilising the outcome of their study of the designated personal project file document(s) as a starting point. Throughout the project, students meet with their adviser regularly, and there are also some scheduled group workshops. The second part of the assessment, namely Report Two, is submitted at the end of Semester Two, and this is followed by the third part of the assessment, namely the Presentation.

Scheduled contact is either of the one-to-one type, where the student and their adviser meet, or of the group workshop type, where the general syllabus topics are discussed and where occasional group project activities take place.

Self-study involves the student's engaging with the study and evaluation of their personal project file, and subsequently with all the various aspects of their individual project investigation.

Scheduled individual contact (student and adviser): 12 hours.
Scheduled group contact: 8 hours.
Self-study and Assessment: 280 hours.
Total: 300 hours.

Part 3: Assessment

Component A. There are three separate elements, viz., Report One (15%), Report Two (65%) and Presentation (20%).

Report One, submitted about two fifths of the way through Semester One, is composed as follows: critical evaluation of the document(s) that constitute the designated personal project file; description of the development of the project beyond the designated personal project file. Report One provides evidence for Learning Outcomes One and Three, in particular.

Report Two, submitted at the end of Semester Two, is a coherent and substantial account of the process and results of the student's individual investigation. Report Two provides evidence for Learning Outcomes Two and Three, in particular.

The Presentation, delivered to a small audience at the end of the academic year, gives an account of carefully selected parts of Report Two, after which the student responds to questions about their project work. The Presentation provides evidence for Learning Outcome Four, in particular.

First Sit Components	**Final Assessment**	**Element weighting**	**Description**
Report - Component A	✓	65 %	Report Two (final assessment and compulsory pass at 40% or above)
Report - Component A		15 %	Report one
Presentation - Component A		20 %	Presentation

Resit Components	Final Assessment	Element weighting	Description
Report - Component A	✓	80 %	Report (compulsory pass at 40% or above).
Presentation - Component A		20 %	Presentation

Part 4: Teaching and Learning Methods

Learning Outcomes

On successful completion of this module students will achieve the following learning outcomes:

Module Learning Outcomes	Reference
Study and evaluate selected mathematical literature, this study and evaluation being undertaken at a depth appropriate to Level Three of an honours Mathematics degree programme	MO1
Undertake a personal investigative project in Mathematics, the starting point for which is the designated personal project file	MO2
Write a Mathematics report using appropriate language, notation, style and referencing	MO3
Deliver an oral presentation, using appropriate media and language, in which a coherent account of the key elements of the personal investigative project is given, and after which questions on the project work are posed to the student	MO4

Contact Hours

Independent Study Hours:	
Independent study/self-guided study	280
Total Independent Study Hours:	280
Scheduled Learning and Teaching Hours:	
Face-to-face learning	20
Total Scheduled Learning and Teaching Hours:	20
Hours to be allocated	300
Allocated Hours	300

Reading List

The reading list for this module can be accessed via the following link:

https://uwe.rl.talis.com/modules/ufmfu9-30-3.html

Part 5: Contributes Towards
This module contributes towards the following programmes of study: