Module Descriptor

Title	Mathematics Project		
Session	2025/26	**Status**	Published
Code	MATH10011	**SCQF Level**	10
Credit Points	40	**ECTS (European Credit Transfer Scheme)**	20
School	**Computing, Engineering and Physical Sciences**		
Module Co-ordinator	Dr Kenneth Nisbet		

Summary of Module

The mathematics (or statistics) final year project offers the opportunity for students to put their knowledge into practice, experiencing how mathematics (or statistics) is carried out in a research environment.

Students will conduct their independent research project with staff supervision. Taught sessions on any extra software related material that may be necessary will be provided.

In the initial stages of the Honours project the outcome for the student is a thorough understanding of their project area. A clear plan will be delineated as to what is to be achieved in the main part of the project, identifying key milestones along the way.

Students will learn to identify, analyse and synthesise the necessary mathematical (or statistical) concepts and methodologies in a critical manner. It is important that a coherent pathway between the initial problem and the final conclusions is maintained.

With reference to the Mathematics programme, this module offers the students the opportunity to learn by experience, with suitable supervisory guidance, whilst confidently employing their mathematical (or statistical) knowledge and problem-solving techniques.

Further, students will be asked to consider target setting and evaluation of their own work and will also be encouraged to reflect on personal and professional learning in academic work. The PDP process will culminate in the production of an Initial Professional Development Action Plan.

- Graduate Attributes (Academic): critical thinker; analytical; inquiring; knowledgeable; digitally literate; problem solver; autonomous; incisive; innovative.
- Graduate Attributes (Personal): effective communicator; influential; motivated.

Graduate Attributes (Professional): collaborative; research-minded; enterprising; ambitious; driven.

Module Delivery Method	On-Campus[1] ☒	Hybrid[2] ☐	Online[3] ☐	Work -Based Learning[4] ☐
Campuses for Module Delivery	☐ Ayr ☐ Dumfries	☐ Lanarkshire ☐ London ☒ Paisley	☐ Online / Distance Learning ☐ Other (specify)	

Terms for Module Delivery	Term 1	☐	Term 2	☐	Term 3	☐
Long-thin Delivery over more than one Term	Term 1 – Term 2	☒	Term 2 – Term 3	☐	Term 3 – Term 1	☐

Learning Outcomes	
L1	Develop a plan for an extended mathematical and/or statistical investigation.
L2	Demonstrate understanding of the context of the investigation.
L3	Carry out an extended investigation, applying appropriate mathematical and/or statistical techniques.
L4	Communicate the plan, the context and the output to peers and professional colleagues.
L5	

Employability Skills and Personal Development Planning (PDP) Skills	
SCQF Headings	**During completion of this module, there will be an opportunity to achieve core skills in:**
Knowledge and Understanding (K and U)	**SCQF 10** The project covers all relevant areas mentioned at SCQF Level 10. The student will carry out a review of the background to the work to be undertaken with the aid of suitable published resources, together with interaction with their supervisor and other staff. The student will be able to identify and develop their understanding of the key concepts underpinning their investigations.
Practice: Applied Knowledge and Understanding	**SCQF 10** The student will utilise the necessary mathematical and/or statistical skills to carry out an extended piece of work. The project is an excellent

[1] Where contact hours are synchronous/ live and take place fully on campus. Campus-based learning is focused on providing an interactive learning experience supported by a range of digitally-enabled asynchronous learning opportunities including learning materials, resources, and opportunities provided via the virtual learning environment. On-campus contact hours will be clearly articulated to students.

[2] The module includes a combination of synchronous/ live on-campus and online learning events. These will be supported by a range of digitally-enabled asynchronous learning opportunities including learning materials, resources, and opportunities provided via the virtual learning environment. On-campus and online contact hours will be clearly articulated to students.

[3] Where all learning is solely delivered by web-based or internet-based technologies and the participants can engage in all learning activities through these means. All required contact hours will be clearly articulated to students.

[4] Learning activities where the main location for the learning experience is in the workplace. All required contact hours, whether online or on campus, will be clearly articulated to students

	way for students to apply the knowledge and understanding they have developed throughout their programme across a range of modules. The student will execute a research-driven project in which they have to plan and log an investigation, identifying key milestones along the way.
Generic Cognitive skills	**SCQF 10** The student will produce, present and evaluate information and ideas in a coherent and well documented way.
Communication, ICT and Numeracy Skills	**SCQF 10** The student will: • convey ideas in well-structured and coherent forms; • use a range of forms of communication effectively in both familiar and new contexts; • use advanced techniques to obtain and process a variety of information and data, and; • use software, as necessary, to support the work undertaken.
Autonomy, Accountability and Working with Others	**SCQF 10** The student will exercise initiative and independence in carrying out planned activities, will meet clearly delineated milestone agreed with their project supervisor.

Prerequisites	**Module Code** MATH09002	**Module Title** Differential Equations 2
	Other The above module plus any 80 credits MATH coded options at Level 9.	
Co-requisites	**Module Code**	**Module Title**

Learning and Teaching	
In line with current learning and teaching principles, a 20-credit module includes 200 learning hours, normally including a minimum of 36 contact hours and maximum of 48 contact hours.	
Learning Activities During completion of this module, the learning activities undertaken to achieve the module learning outcomes are stated below:	**Student Learning Hours** (Note: Learning hours include both contact hours and hours spent on other learning activities)
Tutorial / Synchronous Support Activity	12
Lecture / Core Content Delivery	8
Independent Study	380
Please select	
Please select	
Please select	

TOTAL	400

Indicative Resources
The following materials form essential underpinning for the module content and ultimately for the learning outcomes: Materials will be suggested by the Project Supervisor.
(N.B. Although reading lists should include current publications, students are advised (particularly for material marked with an asterisk*) to wait until the start of session for confirmation of the most up-to-date material)

Attendance and Engagement Requirements
In line with the Student Attendance and Engagement Procedure, Students are academically engaged if they are regularly attending and participating in timetabled on-campus and online teaching sessions, asynchronous online learning activities, course-related learning resources, and complete assessments and submit these on time. **For the purposes of this module, academic engagement equates to the following:** The School of Computing, Engineering and Physical Sciences considers attendance and engagement to mean a commitment to attending, and engaging in, timetabled sessions. You will scan your attendance via the scanners each time you are on-campus and you will login to the VLE several times per week. Where you are unable to attend a timetabled learning session due to illness or other circumstance, you should notify the Programme Leader that you cannot attend. Across the School an 80% attendance threshold is set. If you fall below this, you will be referred to the Student Success Team to see how we can best support your studies.

Equality and Diversity
The University's Equality, Diversity and Human Rights Procedure can be accessed at the following link: UWS Equality, Diversity and Human Rights Code. Aligned with the University's commitment to equality and diversity, this module supports equality of opportunity for students from all backgrounds and learning needs. Using the VLE, material will be presented electronically in formats that allow flexible access and manipulation of content. This module complies with University regulations and guidance on inclusive learning and teaching practice. Specialist assistive equipment, support provision and adjustment to assessment practice in accordance with the University's policies and regulations.
(N.B. Every effort will be made by the University to accommodate any equality and diversity issues brought to the attention of the School)

Supplemental Information

Divisional Programme Board	**Engineering Physical Sciences**
Overall Assessment Results	☐ **Pass / Fail** ☒ **Graded**
Module Eligible for Compensation	☐ **Yes** ☒ **No** **If this module is eligible for compensation, there may be cases where compensation is not permitted due to programme accreditation requirements. Please check the associated programme specification for details.**

School Assessment Board	Physical Sciences
Moderator	All other Mathematics staff
External Examiner	Dr Chris Guiver
Accreditation Details	
Module Appears in CPD catalogue	☐ **Yes** ☒ **No**
Changes / Version Number	1.05. Module coordinator changed and delivery terms tidied up. Contact hours for presentation tidied up.

Assessment (also refer to Assessment Outcomes Grids below)
Assessment 1
Final Report
Assessment 2
Oral presentation
Assessment 3
(N.B. (i) Assessment Outcomes Grids for the module (one for each component) can be found below which clearly demonstrate how the learning outcomes of the module will be assessed. (ii) An indicative schedule listing approximate times within the academic calendar when assessment is likely to feature will be provided within the Student Module Handbook.)

Component 1							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
Final Report	☒	☒	☒	☒	☐	80	0

Component 2							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
Presentation	☐	☐	☐	☒	☐	20	0.5

Component 3							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
	☐	☐	☐	☐	☐		
Combined total for all components						100%	hours

Change Control

What	**When**	**Who**

Module coordinator changed	March 2025	Kenneth Nisbet
Delivery Terms tidied up	March 2025	Kenneth Nisbet
Contact hours for presentation tidied up.	March 2025	Kenneth Nisbet