Module Descriptor

Title	MSc Dissertation		
Session	2025/26	**Status**	Published
Code	ENGG11054	**SCQF Level**	11
Credit Points	60	**ECTS (European Credit Transfer Scheme)**	30
School	**Computing, Engineering and Physical Sciences**		
Module Co-ordinator	C Rodriguez		

Summary of Module

On completion of your dissertation, you will gain the following Graduate Attributes:

• You will be a Critical thinker as you work on a research-minded project.

• You will be a Problem solving and effective communicator.

• Your research will be innovative and creative producing resilient solutions to the current sustainability challenges.

Students undertake a programme of practical research and study at an advanced level, dealing with a topic or issue relevant to sustainable technology. Topics are chosen either from an industrial situation, a relevant topic of interest to you or an initiative from an academic member of staff. On occasion, topics are available through contacts in local businesses where students can have an opportunity to prepare their dissertation whilst working with a company.

Dissertation guidelines are available at the beginning of the academic year and posted on the virtual learning environment.

You will work independently under the supervision of an experienced academic. You will develop a deep and thorough knowledge of your chosen subject and your dissertation will show critical analysis, development of results and innovative and creative solutions to complex sustainability issues. On completion of your research topic, you will present your dissertation in written and oral formats.

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	Consolidate and integrate knowledge gained from the taught modules and carry out a programme of research in such a way as to apply effective strategies within sustainable technology.
L2	Demonstrate an advanced level of understanding of the application of research methods to the investigation of a problem or issue.
L3	Critically review and interpret information, draw detailed conclusions and present results in concise written and oral formats.
L4	N/A
L5	N/A

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 11** Gain a critical understanding of the research methods necessary for carrying out a substantive piece of research within a sustainable technology topic. Demonstrate a critical knowledge that covers and integrates the principles of sustainability and the circular economy and their application at an advanced level.

[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

Practice: Applied Knowledge and Understanding	**SCQF 11** Using a range of skills and techniques, identify elements of sustainability that contribute to the MSc dissertation and that lead to original research. Define, plan and execute a significant project of research, investigation or development.
Generic Cognitive skills	**SCQF 11** Undertake skilled, competent, safe, evaluative and reflective analytical practice. Develop critical thinking to critically assess information or data and make informed judgments. Develop and demonstrate original and creative thinking and responses in dealing with complex or novel problems and issues.
Communication, ICT and Numeracy Skills	**SCQF 11** Communicate, using appropriate methods, to a range of audiences with different levels of knowledge and/or expertise.
Autonomy, Accountability and Working with Others	**SCQF 11** Manage time, prioritise workloads and recognise and manage personal emotions and stress. Work independently to create innovative solutions to current sustainable engineering issues.

Prerequisites	**Module Code**	**Module Title**
	Other	
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
Independent Study	588
n/a	0
n/a	0
n/a	0
n/a	0
TOTAL	600

Indicative Resources

The following materials form essential underpinning for the module content and ultimately for the learning outcomes:

MSc guidelines provided to students.

Leedy, P. D. and J E Ormrod (2021) Practical Research: Planning & Design. 12th Edition. Boston: Pearson

Dawson, C. (2009) Introduction to Research Methods: A Practical Guide for Anyone Undertaking a Research Project, How To Books Ltd, 4th Ed.

Patricia Leavy (2023) Research design : quantitative, qualitative, mixed methods, arts-based, and community-based participatory research approaches. New York, NY : The Guilford Press. 2nd ed.

As each dissertation is a different topic, the resources necessary for each topic are discussed and found within literature searches.

(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	Engineering
Moderator	L Sun
External Examiner	P Weston
Accreditation Details	N/A
Module Appears in CPD catalogue	☐ **Yes** ☒ **No**
Changes / Version Number	v3.0 Updated Indicatives Resources, Attendance and Engagement Procedure, and Equality and Diversity sections.

Assessment (also refer to Assessment Outcomes Grids below)
Assessment 1
Written thesis worth 80%
Assessment 2
Oral presentation worth 20%
Assessment 3
N/A
(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**
Dissertation	☒	☒	☒	☐	☐	80	0

Component 2							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
Presentation	☒	☒	☒	☐	☐	20	1

Component 3

Assessment Type	LO1	LO2	LO3	LO4	LO5	Weighting of Assessment Element (%)	Timetabled Contact Hours
	☐	☐	☐	☐	☐		
Combined total for all components						100%	1 hours

Change Control

What	When	Who
Updated Indicatives Resources, Attendance and Engagement Procedure, and Equality and Diversity sections.	March 2025	C Rodriguez