

University of the West of Scotland
Postgraduate Programme Specification

Session: [add date]

Last Modified: [add date]

Status: Draft / Published [click here to add detail]

1	Named Award Title:	MSc Chemical Engineering
2	Award Title for Each Award: ¹	MSc Chemical Engineering PG Di Chemical Engineering PG Cert Chemical Engineering
3	Date of Validation / Approval:	March 2017
4	Details of Cohorts Applies to:	Cohorts from session 2017-2018
5	Awarding Institution/Body:	University of the West of Scotland
6	Teaching Institution(s): ²	University of the West of Scotland [click here to add detail]
7	Language of Instruction & Examination:	English
8	Award Accredited By:	Seeking accreditation from Institute of Chemical Engineers
9a	Maximum Period of Registration:	Full time: 3 years. Part time: 4 years Authorised Interruption Guidance notes (uws.ac.uk)
9b	Duration of Study:	Full Time – 1 years; Part Time – 2 years;
10	Mode of Study:	Full Time Part Time
11	Campus:	Paisley
12	School:	School of Computing, Engineering and Physical Sciences
13	Programme Board:	Engineering
14	Programme Leader:	Mojtaba Mirzaeian

15. Admission Criteria

Candidates must be able to satisfy the general admission requirements of the University of the West of Scotland as specified in Chapter 2 of the University Regulatory Framework together with the following programme requirements:

¹ Include main award and all exit awards e.g. PgD, MSc

² University of the West of Scotland and include any collaborative partner institutions involved in delivery.

Appropriate Undergraduate Qualifications:

Applicants will typically possess a degree or equivalent. In the absence of a degree, where entry requirements do not conform to the general entry requirements, other evidence can be considered on an individual basis in line with Regulations 2.13 – 2.36 (Recognition of Prior Learning – RPL / Recognition of Credit).

2nd Class Bachelor's Honours Degree in Chemical Engineering

Other Required Qualifications/Experience

Applicants with other academic, vocational or professional qualifications deemed to be equivalent may also be considered. Applications from international students with equivalency of qualifications are welcome. Scholarships may be available on application.

Further desirable skills pre-application (i.e. to satisfy additional PSRB requirements or other)

Where English is not the first language, applicants must be able to satisfy the University of their competence in English. Either by having a TOEFL score of 550 or above or an IELTS score of 6 or above (5.5 in each component) or equivalent.

16	<p>General Overview</p> <p>The MSc in Chemical Engineering is a unique UK postgraduate taught programme that draws upon the industrial experience and research strengths of the University of The West of Scotland in Chemical Engineering and other engineering disciplines. It offers an advanced qualification to engineering graduates wishing to progress their career and develop an in-depth and practical understanding of Chemical Engineering in the chemical process industries such as food, petrochemicals, pharmaceuticals, energy, electronics, cosmetics, fine chemicals, etc. The content of the programme is both timely and is desired by industry both locally and globally.</p> <p>The MSc is intended to be completed in a 12-month period synchronised with the main undergraduate intake in September but running through to the end of the summer break period. There is the opportunity for a January intake; however, this will extend the length of the programme to 18 months.</p> <p>Postgraduate Certificate (PgCert Chemical Engineering) and Postgraduate Diploma (PgD Chemical Engineering) awards provide an exit award points from the Masters programme at the end of terms one and two respectively. However, the main focus is on completion of the MSc.</p> <p>Term one comprises of three taught modules. These are Advanced Fluid Mechanics & CFD (20 Credits), Process Design Sustainability and Safety (20 Credits), and Advanced Heat Transfer (20 Credits).</p> <p>Term two consists of a further four taught modules: Advanced Reactor Design (20 Credits), Renewable Energy and Energy Storage Systems (10 Credits), Separation Processes (20 Credits) and Research Design and Methods (10 Credits).</p> <p>All of the term one and two modules are compulsory. It is a feature of this programme that the modules are taught around real world problems. Guest lectures from industrial experts will complement the delivery of the modules. Each student will be able to study a particular topic in greater detail via the MSc Dissertation.</p> <p>Student learning is through an arrangement of lectures, tutorials, case studies, laboratory work, research and independent learning. The units are continuously assessed (reports, projects, oral presentations, seminars), examined by a written exam, or a combination of these assessment methods.</p> <p>The remaining balance of the overall calendar year is devoted to completion of each student's individual MSc Dissertation, scheduled and started in early term 3. A written Thesis on this work is submitted and an oral presentation of the work delivered, towards the end of the academic year.</p> <p>The MSc Dissertation is worth 60 credits and will support existing research programmes or industrially relevant projects wherever possible. Where possible the projects will be based on current UWS research or a company-based research project (particularly beneficial to part-time students). Students will be educated using a range of practical tools within each module; in particular they will leave with knowledge of rigorous decision analysis to support the use of innovative Chemical Engineering techniques. Most modules will contain a range of contributions from external guest lecturers (industrial experts). The programme's academic content reflects the desire to provide grounding in the core areas of Process Design Reactor Engineering, Fluid Mechanics, Separations Processes,</p>
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	Renewables and Research Methods, while demonstrating the comprehensive understanding of the relevant mathematics and other scientific principles and their applicability to such complex problems.
17	Graduate Attributes, Employability & Personal Development Planning
	<p>UWS' Graduate Attributes focus on academic, personal and professional skills and throughout the programmes that these skills develop competent and innovative graduates who are universally prepared, work-ready and successful (https://www.uws.ac.uk/current-students/your-graduate-attributes/).</p> <p>Upon completing this programme the students will be equipped with tools that will help them in their journey to be work-ready, successful and universal.</p> <p>The programme develops critical thinking and analytical skills that enhance the students' ability to deal with complicated issues and make them problem solvers. It encourages them to become motivated, innovative, autonomous, inquisitive, creative and imaginative.</p> <p>The programme and the teaching approaches encourage collaborative working, effective communications, resilience and perseverance, and development of research and inquiry skills.</p> <p>The aim is to produce graduates who are knowledgeable with excellent digital skills fit for the 21st century and aware of the global context in which they operate and the challenges that face humanity in the 21st century in the areas of water, food, energy, environment and well-being, who strive to lead, influence and dare to make transformational changes while being ethically-minded, socially responsible, critically aware of the environmental and social impacts of their decisions and actions, and culturally sensitive.</p> <p>The chemical and process engineering knowledge is developed throughout the programme using a variety of means including direct contact, projects, research, simulation and other productivity software utilisation wherever possible. This allows the development of graduates who are continuous learners, adaptive, innovative and leaders with the requirements of the 21st century chemical and process industries.</p> <p>Particularly, but not exclusively, in later years of the programme, critical analytical and inquiry skills are developed and used to solve industry related problems. Many of these are set in and constrained by consideration of engineering, safety, environmental protection, economics, and the over-arching regulatory frameworks for the chemical industry.</p> <p>Projects and research activities are used to prepare designs and analyse problems here incisive and innovative solutions are required to be effectively presented as part of collaborative groups or as individual autonomous learning activities.</p> <p>The programme promotes cultural awareness and emotional intelligence with a variety of group exercises developing resilient, ambitious and enterprising leadership qualities whilst ensuring that group members are emotionally and culturally aware and respectful communication and behaviours are the norm.</p>

	<p>Commercial awareness is linked to process design activities throughout the programme ensuring that costs associated with any process including capital costs, operating costs and/or decommissioning costs are evaluated and compared to other possible alternatives.</p> <p>Ethical awareness and social responsibility are developed throughout as integral part of the programme. A total approach that considers impact on human, biota and the environment is followed.</p> <p>Links to current University and programme research are promoted through the programme with opportunities for students to become involved in aspects of the research from the earliest opportunity either discretely or as part of an assessment.</p> <p>Graduates will also have achieved the additional requisite skills to register with the appropriate professional body with a view to becoming a Chartered Engineer (CEng) from having studied an IChemE accredited course.</p> <p>The overall aims of this programme, in relation to student success is to provide further study which will be at the forefront of the professional and academic aspects of the Chemical Engineering disciplines. Students will be able to enhance engineering theory and practice within the context of the management of Chemical Engineering challenges, through the development of new high level skills. Successful MSc graduates will be able to provide a sound scientific, technical and marketable understanding of Chemical Engineering matters and associated practice at a national and international level.</p> <p>Another outcome of successful programme completion is that it will encourage novelty and originality in the application of knowledge, with an understanding of how the limitations of knowledge are progressed and advanced through research practice. To produce professional and highly capable engineers to work within the field of chemical and process engineering both within a national and international context. This will lead to successful students providing further advanced recognition of the expansive nature of Chemical Engineering through the consolidation of knowledge from different modules on offer.</p> <p>There is also the opportunity for students to be provided with training in engineering research methods and to develop a range of related transferable skills. Success in this programme will also develop skills and training in the direct application of acquired knowledge towards the assessment and solution of Chemical Engineering problems, encouraging students to deal with complex issues both systematically and innovatively and to demonstrate novelty in undertaking both familiar and unfamiliar problems.</p> <p>Students, upon completion of the course, will have attained a Masters level qualification and may pursue additional postgraduate study or doctoral level both within the University and at other Higher Education Institutes. These may be either on a full-time, part-time or post experience basis.</p> <p>Upon completion of the course, students will have attained SCQF level 11 skills in relation to employment and PDP in the following areas: Knowledge and Understanding; Generic Cognitive Skills; Communication, ICT and Numeracy Skills; Autonomy, Accountability and Working With Others.</p>
18	Work Based Learning/Placement Details
	Work Based Learning is not applicable to the MSc in Mechanical Engineering.

19	Attendance and Engagement
	<p>In line with the Student Attendance and Engagement Procedure, Students are defined as academically engaged if they are regularly engaged with timetabled teaching sessions, course-related learning resources including those in the Library and on the VLE, and complete assessments and submit these on time.</p> <p>For the purposes of this programme, academic engagement equates to the following:</p> <p>Students are expected to attend all timetabled sessions and to engage with all formative and summative assessment elements of all the modules that are included in the programme specification as core modules as well as any optional module when applicable.</p>
20	Equality and Diversity
	<p>The University's Equality, Diversity and Human Rights Procedure can be accessed at the following link: UWS Equality, Diversity and Human Rights Code.</p> <p>Please detail any specific arrangements for this programme. This should be considered and not just refer the reader to the UWS Equality and Diversity policy.</p> <p>The programme is open to all students regardless of race, religion, gender or sexual orientation.</p>

Programme structures and requirements, SCQF level, term, module name and code, credits and awards ([Chapter 1, Regulatory Framework](#))

21	Learning Outcomes (Maximum of 5 per heading)
	<p>Outcomes should incorporate those applicable in the relevant QAA Benchmark statements.</p> <p>Please ensure that Learning Outcomes are appropriate for the level of study. Further information is available via SCQF: https://scqf.org.uk/support/support-for-educators-and-advisers/support-for-colleges-heis/ and a Level Descriptors tool is available (SCQF Level Descriptors Tool Scottish Credit and Qualifications Framework) and ensure appropriate cognisance of Chapter 1, Regulatory Framework. https://www.uws.ac.uk/media/6514/regulatory-framework-2023-2024.pdf</p>

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SCQF LEVEL 11 - Postgraduate Certificate (PgCert)	
Learning Outcomes (Maximum of 5 per heading)	
Knowledge and Understanding	
A1	A Critical knowledge that covers and integrates most of relevant science and technology related to the design of process equipment and systems and their relevance and application in the chemical process industry context and at advance level.

A2	A critical understanding and embedment of the main theories, concepts and principles within Chemical Engineering towards the practice of the profession.
A3	Comprehension, appreciation and critical understanding of a range of specialised theories applied to the dynamic nature of Chemical Engineering knowledge towards understanding each individual design and complete process.
A4	Extensive, detailed and critical knowledge and understanding of the role of the chemical engineer in an integrated chemical process that takes account of other issues such as the environment, sustainability and resources conservation.
A5	Develop a critical understanding of the implication of knowledge of chemical engineering principles in the advancement of modern and innovative chemical processes design, conservation of resources and sustainability.
Practice - Applied Knowledge and Understanding	
B1	Use a significant range of the core chemical engineering knowledge and skills to advance the knowledge of chemical process design and its application in chemical process context.
B2	Develop the ability to use a range of specialised skills, techniques, practices and/or materials that are informed by the recent advances in the fields of chemical engineering.
B3	Apply a range of standard and specialised research and other techniques to advance the understanding of chemical process design.
B4	Plan, develop and execute a relevant design based on advanced knowledge, research and innovation within a wide and often changeable variety of economic, legal and environmental constraints in the field of chemical and process engineering.
B5	Apply advanced scientific knowledge in a wide variety of chemical process applications that demand innovation.
Communication, ICT and Numeracy Skills	
C1	Communicate, using appropriate methods, to a range of audiences with different levels of knowledge/expertise.
C2	Communicate with peers, more senior colleagues and specialists.
C3	Use a wide range of ICT applications to support and enhance work at this level and show critical understanding of the scope and limitations of the tools used and their underlying theoretical basis.
C4	Undertake critical evaluations of a wide range of numerical and graphical data with the ability to deal with situations involving missing data and lack of information using research.
C5	
Generic Cognitive Skills - Problem Solving, Analysis, Evaluation	

D1	Apply critical analysis, evaluation and synthesis to forefront issues, or issues that are informed by forefront developments in the area of chemical engineering and the interaction with the other aspects of chemical process design such as environmental protection, safety, ethics and sustainability. Identify
D2	Practice at a high level the ability to critically identify, analyse, conceptualise and define new and abstract problems related to chemical process design and the application of the concepts in a Chemical Engineering context.
D3	Develop and demonstrate original and creative thinking and responses in dealing with complex or novel problems and issues related to the design of chemical processes.
D4	Critically review, consolidate and extend knowledge, skills, practices and thinking in the field of chemical process design.
D5	Deal with complex issues and make informed judgements in situations where there is absence of complete or consistent data/information through innovation and research.
Autonomy, Accountability and Working With Others	
E1	Exercise high level of autonomy and initiative in professional and equivalent activities with the ability to work independently on significant and demanding tasks.
E2	Take responsibility for own work and/or significant responsibility for the work of others providing leadership.
E3	Demonstrate leadership and/or initiative and make an identifiable contribution to change and development.
E4	Practise in ways which draw on critical reflection on own and others'™ roles and responsibilities.
E5	Deal with complex ethical and professional issues in engineering context and make informed judgements on issues not addressed by current professional and/or ethical codes or practices.

Learning Outcomes – Postgraduate Certificate (PgCert) Core Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	

Footnotes for Core Modules:

[click here to add detail]

Learning Outcomes - Postgraduate Certificate (PgCert) Optional Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
11	ENGG11033	Advanced Fluid Mechanics and CFD	20	✓			
11	ENGG11032	Advanced Heat Transfer	20	✓			
11	ENGG11036	Advanced Reactor Design	20		✓		
11	ENGG11037	Process Design, Sustainability and Safety	20	✓			
11	ENGG11038	Renewable Energy and Energy Storage Systems	10		✓		
11	COMP11017	Research Design and Methods	10		✓		
11	ENGG11039	Separation Processes	20		✓		

Footnotes for option modules

Offered as optional for the PgCert Chemical Engineering Award
The modules are core for the PgD Chemical Engineering and MSc Chemical Engineering awards.

Criteria for Progression and Award

For the award of PgCert Chemical Engineering, any 60 credits from the above modules must be achieved.

22a	Level 11 – Postgraduate Certificate (PgCert) Criteria for Progression and Award
	<p>Refer to Guidance note.</p> <p>There is <u>no progression</u> within stages at SCQF Level 11.</p>

	<p>In line with the Regulatory Framework, for the award of Postgraduate Certificate (PgC) Chemical Engineering, at least 60 credit points must be achieved of which a minimum of 40 are at SCQF Level 11 and none less than SCQF Level 10.</p> <p>Those students who achieve 60 credits from the above modules shall be eligible for the award of PgCert Chemical Engineering.</p> <p>No Distinction is awarded at PgCert level (Regulation 3.25).</p> <p>Links: UWS Regulatory Framework; and Student Experience Policy Statement.</p>
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Level 11 – Postgraduate Diploma (PgDip) Learning Outcomes (Maximum of 5 per heading)	
Knowledge and Understanding	
A1	A Critical knowledge that covers and integrates most of relevant science and technology related to the design of process equipment and systems and their relevance and application in the chemical process industry context and at advance level.
A2	A critical understanding and embedment of the main theories, concepts and principles within Chemical Engineering towards the practice of the profession.
A3	Comprehension, appreciation and critical understanding of a range of specialised theories applied to the dynamic nature of Chemical Engineering knowledge towards understanding each individual design and complete process.
A4	Extensive, detailed and critical knowledge and understanding of the role of the chemical engineer in an integrated chemical process that takes account of other issues such as the environment, sustainability and resources conservation.
A5	Develop a critical understanding of the implication of knowledge of chemical engineering principles in the advancement of modern and innovative chemical processes design, conservation of resources and sustainability.
Practice - Applied Knowledge and Understanding	
B1	Use a significant range of the core chemical engineering knowledge and skills to advance the knowledge of chemical process design and its application in chemical process context.
B2	Develop the ability to use a range of specialised skills, techniques, practices and/or materials that are informed by the recent advances in the fields of chemical engineering.
B3	Apply a range of standard and specialised research and other techniques to advance the understanding of chemical process design.
B4	Plan, develop and execute a relevant design based on advanced knowledge, research and innovation within a wide and often changeable variety of economic, legal and environmental constraints in the field of chemical and process engineering.
B5	Apply advanced scientific knowledge in a wide variety of chemical process applications that demand innovation.

Communication, ICT and Numeracy Skills	
C1	Communicate, using appropriate methods, to a range of audiences with different levels of knowledge/expertise.
C2	Communicate with peers, more senior colleagues and specialists.
C3	Use a wide range of ICT applications to support and enhance work at this level and show critical understanding of the scope and limitations of the tools used and their underlying theoretical basis.
C4	Undertake critical evaluations of a wide range of numerical and graphical data with the ability to deal with situations involving missing data and lack of information using research.
C5	
Generic Cognitive Skills - Problem Solving, Analysis, Evaluation	
D1	Apply critical analysis, evaluation and synthesis to forefront issues, or issues that are informed by forefront developments in the area of chemical engineering and the interaction with the other aspects of chemical process design such as environmental protection, safety, ethics and sustainability.
D2	Practice at a high level the ability to critically identify, analyse, conceptualise and define new and abstract problems related to chemical process design and the application of the concepts in a Chemical Engineering context.
D3	Develop and demonstrate original and creative thinking and responses in dealing with complex or novel problems and issues related to the design of chemical processes.
D4	Critically review, consolidate and extend knowledge, skills, practices and thinking in the field of chemical process design.
D5	Deal with complex issues and make informed judgements in situations where there is absence of complete or consistent data/information through innovation and research.
Autonomy, Accountability and Working With Others	
E1	Exercise high level of autonomy and initiative in professional and equivalent activities with the ability to work independently on significant and demanding tasks.
E2	Take responsibility for own work and/or significant responsibility for the work of others providing leadership.
E3	Demonstrate leadership and/or initiative and make an identifiable contribution to change and development.
E4	Practise in ways which draw on critical reflection on own and others' roles and responsibilities.
E5	Deal with complex ethical and professional issues in engineering context and make informed judgements on issues not addressed by current professional and/or ethical codes or practices.

Learning Outcomes – Postgraduate Diploma (PgD) Core Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
11	ENGG11033	Advanced Fluid Mechanics and CFD	20	✓			
11	ENGG11032	Advanced Heat Transfer	20	✓			
11	ENGG11036	Advanced Reactor Design	20		✓		
11	ENGG11037	Process Design, Sustainability and Safety	20	✓			
11	ENGG11038	Renewable Energy and Energy Storage Systems	10		✓		
11	COMP11017	Research Design and Methods	10		✓		
11	ENGG11039	Separation Processes	20		✓		

Footnotes for Core Modules:

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Learning Outcomes - Postgraduate Diploma (PgD) Optional Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	

Footnotes for option modules

<p>Criteria for Progression and Award</p> <p>All modules are required for 120 credits for the award of PgD Chemical Engineering.</p>

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22b	<p>Level 11 - PgDip Criteria for Progression and Award</p>
	<p>Refer to Guidance note.</p> <p>There is <u>no progression</u> within stages at SCQF Level 11.</p>

	<p>In line with the Regulatory Framework, for the award of Postgraduate Diploma (PgD) Chemical Engineering, at least 120 credit points must be achieved (including all core modules) of which a minimum of 90 are at SCQF Level 11 and none less than SCQF Level 10.</p> <p>Those students who achieve 120 credits shall be eligible for the award of PgD Chemical Engineering.</p> <p>Distinction will be awarded in line with University Regulations and no imported credit can be used. (Regulations 3.35 & 3.26)</p> <p>Links: UWS Regulatory Framework; and Student Experience Policy Statement.</p>
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SCQF LEVEL 11 - MASTERS Learning Outcomes (Maximum of 5 per heading)	
Knowledge and Understanding	
A1	A Critical knowledge that covers and integrates most of relevant science and technology related to the design of process equipment and systems and their relevance and application in the chemical process industry context and at advance level.
A2	A critical understanding and embedment of the main theories, concepts and principles within Chemical Engineering towards the practice of the profession.
A3	Comprehension, appreciation and critical understanding of a range of specialised theories applied to the dynamic nature of Chemical Engineering knowledge towards understanding each individual design and complete process.
A4	Extensive, detailed and critical knowledge and understanding of the role of the chemical engineer in an integrated chemical process that takes account of other issues such as the environment, sustainability and resources conservation.
A5	Develop a critical understanding of the implication of knowledge of chemical engineering principles in the advancement of modern and innovative chemical processes design, conservation of resources and sustainability.
Practice - Applied Knowledge and Understanding	
B1	Use a significant range of the core chemical engineering knowledge and skills to advance the knowledge of chemical process design and its application in chemical process context.
B2	Develop the ability to use a range of specialised skills, techniques, practices and/or materials that are informed by the recent advances in the fields of chemical engineering.
B3	Apply a range of standard and specialised research and other techniques to advance the understanding of chemical process design.
B4	Plan, develop and execute a relevant design based on advanced knowledge, research and innovation within a wide and often changeable variety of economic, legal and environmental constraints in the field of chemical and process engineering.

B5	Apply advanced scientific knowledge in a wide variety of chemical process applications that demand innovation.
Communication, ICT and Numeracy Skills	
C1	Communicate, using appropriate methods, to a range of audiences with different levels of knowledge/expertise.
C2	Communicate with peers, more senior colleagues and specialists.
C3	Use a wide range of ICT applications to support and enhance work at this level and show critical understanding of the scope and limitations of the tools used and their underlying theoretical basis.
C4	Undertake critical evaluations of a wide range of numerical and graphical data with the ability to deal with situations involving missing data and lack of information using research.
C5	
Generic Cognitive Skills - Problem Solving, Analysis, Evaluation	
D1	Apply critical analysis, evaluation and synthesis to forefront issues, or issues that are informed by forefront developments in the area of chemical engineering and the interaction with the other aspects of chemical process design such as environmental protection, safety, ethics and sustainability.
D2	Practice at a high level the ability to critically identify, analyse, conceptualise and define new and abstract problems related to chemical process design and the application of the concepts in a Chemical Engineering context.
D3	Develop and demonstrate original and creative thinking and responses in dealing with complex or novel problems and issues related to the design of chemical processes.
D4	Critically review, consolidate and extend knowledge, skills, practices and thinking in the field of chemical process design.
D5	Deal with complex issues and make informed judgements in situations where there is absence of complete or consistent data/information through innovation and research.
Autonomy, Accountability and Working With Others	
E1	Exercise high level of autonomy and initiative in professional and equivalent activities with the ability to work independently on significant and demanding tasks.
E2	Take responsibility for own work and/or significant responsibility for the work of others providing leadership.
E3	Demonstrate leadership and/or initiative and make an identifiable contribution to change and development.
E4	Practise in ways which draw on critical reflection on own and others'™ roles and responsibilities.
E5	Deal with complex ethical and professional issues in engineering context and make informed judgements on issues not addressed by current professional and/or ethical codes or practices.

Learning Outcomes - MASTERS Core Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
11	ENGG11033	Advanced Fluid Mechanics and CFD	20	✓			
11	ENGG11032	Advanced Heat Transfer	20	✓			
11	ENGG11035	MSc Dissertation (Chem Eng)	60			✓	
11	ENGG11036	Advanced Reactor Design	20		✓		
11	ENGG11037	Process Design, Sustainability and Safety	20	✓			
11	ENGG11038	Renewable Energy and Energy Storage Systems	10		✓		
11	COMP11017	Research Design and Methods	10		✓		
11	ENGG11039	Separation Processes	20		✓		

Footnotes for Core Modules:

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Learning Outcomes - MASTERS Optional Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	

Footnotes for option modules

Criteria for Award

All core modules (120 credits) + Dissertation (60 Credits) for the award of MSc

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22c	Level 11 MASTERS Criteria for Award
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	<p>Refer to Guidance note.</p> <p>In line with the Regulatory Framework, for the award of Masters Chemical Engineering, at least 180 credit points must be achieved (including all core modules (120 credits).</p> <p>Those students who achieve 180 credit points shall be eligible for the award of MSc Chemical Engineering.</p> <p>Distinction will be awarded in line with University Regulations and no imported credit can be used. (Regulations 3.35 & 3.26)</p> <p>Links: UWS Regulatory Framework; and Student Experience Policy Statement.</p>
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23	Regulations of Assessment
<p>Candidates will be bound by the general assessment regulations of the University as specified in the University Regulatory Framework .</p> <p>An overview of the assessment details is provided in the Student Handbook and the assessment criteria for each module is provided in the module descriptor which forms part of the module pack issued to students. For further details on assessment please refer to Chapter 3 of the Regulatory Framework.</p> <p>To qualify for an award of the University, students must complete all the programme requirements and must meet the credit minima detailed in Chapter 1 of the Regulatory Framework.</p>	
24	Combined Studies
<p>There may be instances where a student has been unsuccessful in meeting the award criteria for the named award and for other more generic named awards existing within the School. Provided that they have met the credit requirements in line with the SCQF credit minima (please see Regulation 1.21), they will be eligible for a Combined Studies award (please see Regulation 1.61).</p> <p>For students studying at Level 11, they will <i>normally</i> be eligible for an exit award of PgCert / PgDip / Masters in Combined Studies.</p>	

Change/Version Control

Changes made to the programme since it was last published:

What	When	Who
<p><u>Updated Links:</u></p> <ul style="list-style-type: none"> • Academic Engagement Procedure • Equality and Diversity • University Regulatory Framework • Removed invalid links 	19/10/2023	C Winter
Guidance Note 2023-24 provided	12/12/23	D Taylor

General housekeeping to text across sections and addition of links and some specific guidance. Addition of Duration of Study and some other text – for CMA.	12/12/23	D Taylor
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Version Number: PG 1 (2023-24)

- Change of programme leader.