

GLASGOW CALEDONIAN UNIVERSITY
Programme Specification Pro-forma (PSP)

1. GENERAL INFORMATION

1. Programme Title:	MEng/BEng(Hons)/BEng Mechanical Engineering (Design/Systems)
2. Final Award:	MEng Mechanical Engineering (Design/Systems)
3. Exit Awards:	BEng (Hons) Mechanical Engineering BEng Mechanical Engineering Dip HE Mechanical Engineering Cert HE Mechanical Engineering
4. Awarding Body:	Glasgow Caledonian University
5. Period of Approval:	September 2021 to August 2026
6. School:	School of Computing, Engineering and Built Environment
7. Host Department:	Dept of Mechanical Engineering
8. UCAS Code:	MEng ME (H381), BEng (Hon) ME (H380)
9. PSB Involvement:	Institution of Mechanical Engineers (IMechE)
10. Place of Delivery:	Glasgow City Campus Online subject to availability
11. Subject Benchmark Statement:	QAA Benchmarking Statements for Engineering
12. Dates of PSP Preparation/Revision:	December 2020

2. EDUCATIONAL AIMS OF THE PROGRAMME

Programme Philosophy

To produce multi-disciplinary professional engineers with a bias toward mechanical engineering, who have the required knowledge and understanding of specific mechanical engineering principles, integrated with an understanding of general engineering, manufacturing and business, reinforced with good personal, interpersonal and team-working skills, to enable them to perform effectively in any appropriate situation.

General Aims of the Programme

- To create in the student an ability to think clearly and logically.
- To equip the student with a range of analytical methods for use in engineering applications.
- To provide such principles and practice as will allow the student to acquire an understanding of engineering to cope adequately with technological change.
- To develop the students' ability to contribute to the specification, design, testing, commissioning, modification, manufacture and maintenance of engineering artefacts and systems.
- To develop fully the student's abilities in the use of computer-aided engineering and relevant aspects of information technology.
- To make the student aware of the ethics, social, economic, and environmental impact of engineering.
- To extend, enhance and improve the judgement of the student in decision making by extension of analytical, creative and intellectual skills.
- To integrate the expertise of staff gained from research, consultancy and scholarly activity into the programme materials where appropriate.
- To develop the students' interpersonal skills to enable effective communication and team working
- To provide a broad education by an integrated study of vocational and academic disciplines.

BEng(Honours) Graduates will gain the following specialist knowledge, abilities and skills.

- A knowledge of the range and use of analytical methods available for the design, specification, and monitoring of mechanical engineering systems.

- The ability to analyse and evaluate the performance and operational characteristics of a range of mechanical engineering equipment.
- A strong theoretical understanding in mechanical engineering, enabling the student to respond positively to technological development and innovation.
- Ability to utilise modern advanced computer-aided design, simulation and analysis techniques in the solution of engineering problems in a mechanical engineering environment.
- An awareness and appreciation of the practical issues involved in the design, specification, maintenance, commissioning and manufacture of mechanical equipment and associated systems.
- An awareness of the social, regulatory and environmental impact of engineering solutions to the production, distribution, and utilisation of mechanical engineering equipment.
- Knowledge of the latest developments in the subject area through the inclusion of research material where appropriate based on staff research, consultancy and other scholarly activity.

MEng Graduates will have in addition to the BEng.

- The ability to integrate their knowledge and understanding of mathematics, science, computer-based methods, design, the economic, social and environmental context, and engineering practice to solve a substantial range of engineering problems, some of a complex nature.
- Acquired much of this ability through involvement in individual and group projects, and
- Greater degree of industrial involvement than those in Bachelor's degree programmes.

3. INTENDED LEARNING OUTCOMES

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, skills, qualities and other attributes in the following areas:

3A Knowledge and understanding;

- A1: Knowledge and understanding of scientific and mathematical principles and methodology necessary to underpin their education in their engineering discipline and to enable them to apply mathematical methods, tools and notations proficiently in the analysis and solution of engineering problems.
- A2: The engineering principles, concepts, and theories relevant to their own engineering discipline and other engineering disciplines and an awareness of developing technologies related to their own engineering specialism.
- A3: The analytical methods, modelling techniques, computer models and software tools relevant to their engineering discipline in order to solve engineering problems.
- A4: Structured design processes and methodologies and a systems approach to engineering problems and product design.
- A5: The commercial and economic context of engineering activity and the management techniques, which may be used to achieve engineering objectives within that context.
- A6: The framework of relevant legal requirements, codes of practice, quality issues and industrial standards governing engineering activity and product design.
- A7: The multi-disciplinary nature of product engineering, the need for a high level of professional and ethical conduct in engineering practice, and, the requirement for engineering activities to promote sustainable development.

3B Practice: Applied knowledge, skills and understanding;

- B1: Demonstrate proficiency in the use of specialist equipment, development tools, materials and processes employed in design and manufacturing systems.
- B2: Exercise safe working practices and demonstrate proficiency in workshop and laboratory skills.
- B3: Use and manage a structured design process in the creation and development of an economically viable product.
- B4: Demonstrate a critical appreciation of the complexity and interaction of managerial, technical and environmental issues in the modern workplace.
- B5: Manage sustainable and ethical product design within companies and across supply chains.
- B6: Apply project management and business practices appropriately.

- B7: Operate and act responsibly, adhere to professional codes of practice and industrial standards, taking account of the need to progress environmental, social and economic outcomes simultaneously.
- B8: Specialist knowledge in design and manufacturing engineering and its application.
- B9: Critical thinking and problem solving applied to design and manufacturing engineering.
- B10: Critical analysis.
- B11: Effective information retrieval and research skills.
- B12: Commercial awareness.

3C Generic cognitive skills;

- C1: Apply mathematical methods and scientific and engineering principles proficiently in the analysis, synthesis, performance assessment, critical appraisal and evaluation of design and manufacturing systems.
- C2: Select and apply appropriate analytical and computer based methods for modeling and analysing engineering problems.
- C3: Select and apply appropriate computer software tools to the synthesis, implementation, evaluation, analysis and solution of electronic problems and systems.
- C4: Investigate and define a problem and identify constraints including environmental and sustainability, health and safety and risk assessment issues.
- C5: Apply a systems approach to the analysis and solution of engineering problems and the design of manufactured products.
- C6: Use imagination, creativity and innovation, through synthesis of ideas, to provide products and services whilst exercising professional judgment and methods to resolve dilemmas arising from ethical, sustainability and financial constraints.
- C7: Apply management techniques to achieve engineering objectives within a commercial and economic context.

3D Communication, numeracy and ICT skills

- D1: Communication skills; written, oral and listening.
- D2: Numeracy as applied to the solution of engineering problems.
- D3: Computer literacy as applied to the solution of engineering problems.
- D4: Presentation skills.

3E Autonomy, accountability and working with others.

- E1: Self-confidence, self-discipline & self-reliance (independent working).
- E2: Awareness of strengths and weaknesses.
- E3: Creativity, innovation & independent thinking.
- E4: Appreciating and desiring the need for continuing professional development.
- E5: Reliability, integrity, honesty and ethical awareness.
- E6: Entrepreneurial, independence and risk-taking.
- E7: Ability to prioritise tasks and time management (organising and planning work).
- E8: Interpersonal skills, team working and leadership.

Programme Strategy for Learning

The SfL for the MEng/BEng(hon)/BEng Mechanical Engineering (Design/Systems) programmes is fundamental to achieving the overall aims of the programme. The teaching approach is student centred, practical and participative and has been designed to move away from the traditional teacher centred paradigm to a more active, student driven, personalised engaged model of learning using state of the art technologies necessary for employability in a digital age.

Students will be encouraged to take a broad view of their education and contextualise course materials to their personal objectives and the real world. A range of delivery methods will be used on the programme including: lectures (Collaborate Ultra); group-based tutorials and seminars (both tutor and student led); group based practical exercises (virtual lab exercise) in concept design (supervised and directed); problem based learning scenarios and case studies; directed study; coursework assignments (individual and group-based) and supervised projects.

Online digital support media (GCU Learn) will allow students to utilise alternative learning materials suitable to their personal learning style. GCU's SfL is underpinned by a model design principles. This programme embeds these principles in the following ways. Specific areas of enhancement of MEng/BEng(hon)/BEng Mechanical Engineering (Design/Systems) programmes is given in detail in [Appendix 4a](#).

Students in the MEng/BEng(hon)/BEng Mechanical Engineering (Design/Systems) programme will have the opportunity to develop these attributes not just through what we teach but also how we teach: through a learning experience which is active, collaborative, challenging and authentic. Students will have opportunities to develop these attributes further by participating in co and extra-curricular activities aligned to our Common Good mission. Some opportunities are tailored to students on particular programmes of study; others are open to all students across the University. Common Good attributes are given in detail in [Appendix 5a](#).

4 PROGRAMME STRUCTURES AND REQUIREMENTS, LEVELS, MODULES, CREDITS AND AWARDS

**MEng/BEng(Hons)/BEng:
Mechanical Engineering (Design or Systems)
LEVEL 1 AND LEVEL 2 ARE COMMON FOR BOTH PROGRAMMES:**

Year 1		SCQF 7		
Module Code	Module Title	Level	Credits	Trimester
M1H326673	Mathematics 1	1	20	A/B
M1H326677	Mechanical Principles	1	20	B
M1H626680	Electrical Principles	1	20	B
M1H326682	Modern Engineering Practice	1	20	A/B
M1H626678	Engineering for Society	1	20	A
M1H326689	Engineering Science	1	20	A
Exit with Certificate of Higher Education (CertHE) in Engineering				
Year 2		SCQF 8		
Module Code	Module Title	Level	Credits	Trimester
M2H326684	Mathematics 2	2	20	A/B
M2H323512	Thermodynamics & Fluid Mechanics	2	20	A
M2H720058	Manufacture & Materials 2	2	20	A
M2H623625	Integrated Engineering Studies 2	2	10	A
M2H624225	Electrical Systems	2	10	B
M2H622325	Control and Instrumentation Systems	2	20	B
M2H721926	Engineering Design and Analysis 2	2	20	B
Exit with Diploma of Higher Education (DipHE) in Mechanical Engineering				

**MEng/BEng(Hons)/BEng:
Mechanical Engineering (Design)
LEVELS 3 AND 4:**

Year 3		SCQF 9		
Module Code	Module Title	Level	Credits	Trimester
MHH113285	Computer Aided Engineering	4	20	A
M3H721406	Manufacture & Materials 3	3	20	A
M3H120320	Engineering Design & Analysis 3	3	20	A
	EITHER			
M3J923150	Energy Conversion Technologies	3	20	B

M3H623554	Integrated Engineering Studies 3	3	20	B
M3H723623	Engineering Operations Management	3	20	B
	OR			
	European Project Semester ¹	3	60	B
Exit with BEng Degree in Mechanical Engineering (Design)				
SCQF 10				
YEAR 4	SANDWICH PROGRAMME (OPTIONAL for those students not previously on placement in Semester B)			
Module Code	Module Title	Level	Credits	Trimester
M3H721925	Diploma in Industrial Practice	3	60	36 weeks
M3H323616	European Erasmus Exchange	3	60	A/B
Year 4	Full-Time Programme			
Year 5	Sandwich Programme			
Module Code	Module Title	Level	Credits	Trimester
MHH623549	Honours Project (Engineering)	4	40	A / B
MHH126675	Simulation for Design and Manufacture	4	20	A
MHH122359	Engineering Design & Analysis 4	4	20	A
MHH123523	Computer Aided Design 2	4	20	B
	OPTIONS (CHOOSE 1 FROM 3)			
MHH323630	Design Process, Assembly and Manufacture	4	20	B
MHH323524	Renewable Energy Equipment Design	4	20	B
Exit with BEng (Honours) Degree in Mechanical Engineering (Design)				

Notes

1. Students who elect to undertake the European Project Semester in Semester B of third year will not have the suitable underpinning to take the Renewable Energy Equipment Design option in fourth year.

**MEng/BEng(Hons)/BEng:
Mechanical Engineering (Design)
LEVEL 5: SCQF 11**

Year 5/6		MEng Programme		
Module Code	Module Title	Level	Credits	Trimester
MMH723842	MEng Team Project.	5	45	A(15) & B(30)
MMN223676	Strategy & Innovation	5	15	A
MMH323561	Applied Thermofluids & CFD	5	15	A
MMH723672	Manufacturing Management	5	15	A
MMH123668	Advanced Computer Aided Engineering	5	30	B
Exit with MEng Degree in Mechanical Engineering (Design)				

MEng/BEng(Hons)/BEng:

**Mechanical Engineering (Systems)
LEVELS 3 AND 4:**

Year 3		SCQF 9		
Module Code	Module Title	Level	Credit	Trimester
M3H606414	Control Engineering 3	3	20	A

M3H721406	Manufacture & Materials 3	3	20	A
M3H120320	Engineering Design & Analysis 3	3	20	A
	EITHER			
M3J923150	Energy Conversion Technologies	3	20	B
M3H623554	Integrated Engineering Studies 3	3	20	B
M3H723623	Engineering Operations Management	3	20	B
	OR			
	European Project Semester ¹	3	60	B
Year 3+	Optional Year in Industry/Erasmus Exchange			
Module Code	Module Title	Level	Credits	Trimester
M3H721925	Industrial Practice	3	60	A / B
M3H323616	Erasmus European Exchange	3	60	A / B
Exit with BEng (unclassified) Degree in Mechanical Engineering (Systems)				
Year 4	Full-Time Programme			
Module Code	Module Title	Level	Credits	Trimester
MHH623549	Project	4	40	A / B
MHH113285	Computer-Aided Engineering	4	20	A
MHH122359	Engineering Design & Analysis 4	4	20	A
	OPTIONS (CHOOSE 2 FROM 3)			
MHH622747	Control Engineering 4	4	20	B
MHH323630	Design Process, Assembly and Manufacture	4	20	B
MHH323524	Renewable Energy Equipment Design	4	20	B
Exit with BEng (Honours) Degree in Mechanical Engineering (Systems)				

Notes

1. Students who elect to undertake the European Project Semester in Semester B of third year will not have the suitable underpinning to take the Renewable Energy Equipment Design option in fourth year.

MEng/BEng(Hons)/BEng:

Mechanical Engineering (Systems)

LEVEL 5: SCQF 11

Year 5	Full-Time Programme			
Module Code	Module Title	Level	Credits	Trimester
MMH723842	MEng Group Project	5	45	A / B
MMN223676	Strategy and Innovation	5	15	A
MMH323561	Applied Thermofluids & CFD	5	15	A
MMH226690	Advanced Engineering Mechanics	5	15	A
MMH223558	Energy Audit and Energy Asset Management	5	15	B
	OPTIONS (CHOOSE 1 FROM 2)			
MMH623670	Condition Monitoring	5	15	B
MMH626691	Sustainable Materials and Manufacturing Processes	5	15	B
Exit with MEng Degree in Mechanical Engineering (Systems)				

5. SUPPORT FOR STUDENTS AND THEIR LEARNING

Student Induction

Student induction is a formal programme of events which occurs when students initially enrol on the programmes. Students will normally meet the Programme Leader or year tutor prior to teaching on the new Session in Trimester A in the University (and also in the first week of Trimester B for students start at this point). The programme of events and information includes the following:

- Introduction to Programme Leader and members of the programme team including year tutor
- An induction pack which includes a programme information handbook, module descriptors, assessment schedules and a study skills pack.
- Introduction to the programme aims and objectives, the programme content and modes of assessment.
- Introduction to Personal Development Planning (PDP)
- Introduction to My Caledonian and GCU Learn (Blackboard) services
- Introduction to personal academic adviser
- Introduction to Student Services and the School Learning Development Centre
- Tour of the Library and the use of on-line library catalogue
- Tour of the campus
- Group activities which act as ice breakers and help form initial friendships.
- Student/staff e-mail
- All years have student representatives who attend the Student/Staff Consultative Group meetings
- Option of credit-bearing year in industry

Student Support and Counselling

- Preparation for Employment, Personal and Professional development initiatives embedded in modules and in regular Year Tutor / PL meetings
- Learning Development Centre support for academic activities
- Study skills packages and support from School Learning and Development Centre (LDC)
- Proactive school-based student support scheme including attendance/absence monitoring
- School Disability Co-ordinate/Advisor
- Equality and Diversity Policy
- Access to Student Support Services including Careers Service and Guidance
- Peer Assisted Study Sessions provide a mechanism for students from the later years of the programme to assist new students with studies, (study group)
- Student counsellors to develop bonds between students and the profession

IT Support

- The University C&IT (Computer and Information Technology) services provide a range of student support mechanisms through, wireless access, My Caledonian, student email facilities, open access to a number of University Intranet and Internet connected laboratories, and a Learning Café.
- The School also has a number of laboratories with University Intranet and also Internet connectivity to allow access to Managed Learning Environments such as GCU Learn 'Blackboard', which supplement and assist module provision and delivery.
- Blended Learning employed including e-resources at module and programme level

Academic Support

- Academic support is provided through access to academic advisor, year tutor, module leaders and tutors. Staff room numbers, email and telephone contact details are provided in the Module Handbooks and can be accessed through a Managed Learning Environment.
- In order to provide on-going support for students, academic staff including the Programme Leader operates a policy of open access for consultation and help through email and suitable managed learning environments. If there is a major concern by an individual student, the student is encouraged in the first instance to contact the Programme Leader/Organiser to discuss their concerns and to help try and facilitate an early resolution. Students are also made aware of the support and guidance offered by the Student Services Department and may be referred to Student Services as appropriate by both academic and administrative staff.

Personal Development Planning

- As part of the learning strategy students will participate in Personal Development Planning (PDP) to ensure that they undertake effective planning for their own personal, educational and career development.
- Students will be supported throughout the programme through a group of well-designed modules e.g. IES's that will inform the PDP process and support the students in developing effective techniques for reviewing their progress.
- Students will identify outcomes at an early stage and with the support of their Academic Advisor will review their progress as the programme develops.
- A key element in the PDP process is to foster the employability of graduates. Students will be encouraged to make use of the University Careers Guidance service and other mechanisms in order to develop an awareness of the industry and identify career opportunities.
- Students, particularly at Level 4 (Hons) and Level 5 (MEng) will be encouraged to attend research seminars and IMechE and IET local branch meetings which are mostly held within the University.
- Part time students are already employed in a relevant industry and will normally be undertaking the programme as part of their continued professional development. However, the PDP process is also applicable to them and will help them to focus on their objectives and to ensure that they gain maximum benefit from the programme. Students at all levels are encouraged to reflect on their progress and achievement of Learning Outcomes and draw comparisons with the curriculum mapping against programme and UK_SPEC outcomes.

Project Activities and Support

- Students undertake an individual project, supported through the allocation of an academic supervisor, or supervisors, prior to the start of trimester 1 of Level 4 (Hons). The programmes have a named academic who acts as the Project Coordinator and who provides overall guidance for both the student cohort and the academic supervisors on the management and assessment procedures of the individual project.
- The Project Coordinator (project module leader) is there to ensure that the project runs smoothly and will provide a detailed introductory talk in relation to the running and execution of the Project at the beginning of their projects.
- The underlying philosophy of the project is to allow each student to develop and mature educationally by selecting, studying, analysing and evaluating in depth some problem or area within the named programme discipline. The project offers a further and critical alternative to learning within the traditional lecture/tutorial environment and consequently an alternative method for the student to demonstrate their capabilities and to achieve the key learning objectives required from the module. Projects are normally industrially related, research or consultancy based. The project is assessed as per the module descriptor:
 - Interim Assessment Written Report (15%)
 - Oral Presentation (15%)
 - Overall Performance and Dissertation (70%)

The Project Handbook provides all the key information on the running, management and assessment of the project.

MEng Group Project

In Level 5 the MEng project is designed to be a cross subject/discipline activity involving working as teams. For example, it could be product realisation focussed, and allow students to introduce the business/financial considerations, ethical, environmental and sustainability issues and engage with the interaction of computer simulation for design, analysis, manufacturing and rapid prototyping. Students will have experience of similar activities in earlier years of the programme and ensure that the culture of professionalism within a team working environment is established and evident at the exit stage of the MEng award. Assessment is carefully structured in order to determine how candidates operate both as part of a focussed team and individually containing both peer assessed elements and individual viva as well as written coursework elements.

6. CRITERIA FOR ADMISSION

Candidates must be able to satisfy the general admissions requirements of Glasgow Caledonian University

Programme Admission Requirements:

Candidates are required to meet the general entry requirements of the University. Specifically:-

6.1 Full Time /Sandwich Programme

6.1.1 Minimum Entry Qualifications

Candidates for the programme will normally be at least 17 years of age at the start of the programme and should have passed one of the following (6.1.2 to 6.1.6)

6.1.2 Scottish Certificate of Education, for L1 entry, with:

MEng route: ABBB

BEng route: BBBC

The subjects passed must include Higher Grade Mathematics and at least one Higher Grade in Physics, or Technology Studies plus English, all of which should be at Grade C or above.

6.1.3 General Certificate of Education, for L1 entry, with:

2 A or 3 A/AS Level subjects.

The subjects passed must include A/AS Level Mathematics and at least one A/AS Level in Physics, or Engineering Science plus English.

Flexible Entry - Credit Transfer and RPL:

The University's Guidance Document will be adhered to for all applicants. An applicant may wish to offer prior learning or experience or a combination of this and a formal qualification to gain access to the programme.

6.1.4 HNC/HC Entry

A good Higher National Certificate or Higher Certificate (with at least 4 merits) in an appropriate engineering subject. Applicants who satisfy the above may, dependent on the HN modules taken, be offered exemption from some year 1 modules and in exceptional circumstances will be offered direct entry to year 2. The latter would typically apply to articulation arrangements with FE Colleges who might offer an HNC plus balancing studies to achieve full exemption from level 1 of the programme. Alternative routes for direct entry to year 2 are an HNC + relevant experience (refer Section 6.3.3), or HNC + passes in Mathematics I and Engineering Computing I (by Distance Learning or part-time study) or equivalents.

Mathematics for Engineers 1, and 2 or equivalent,

And a Minimum of B in the graded unit, or equivalent.

6.1.5 GCU Pathways (H380) Programme Admission Requirements

The minimum entry requirements are:

SQA Higher: BB (must include Maths or a Science) or equivalent.

6.1.6 Access Programme Entry

Consideration will be given to applicants who have successfully completed an Access to Science and Engineering in Higher Education programme. The programme is designed specifically to tutor candidates, who have not obtained the appropriate formal qualifications, to a level in Mathematics and Physics in order to enable them entry to a degree

6.1.7 Summer School Entry

Candidates who comply with the pointage requirements above but do not have H Grade or A/AS Level passes in Mathematics and Science may enter the programme provided they successfully complete the University Summer School Programme in these subjects.

Entry with Advanced Standing:

6.1.8 HND/HD Entry

Applicants, who have completed a Higher National Diploma or Higher Diploma (with at least 4 merits) in an appropriate area, will be considered for direct entry to the second year of the degree programme. In addition, exemptions may be given to some level 2 modules and in exceptional circumstances will be offered direct entry to year 3. The latter would typically apply to articulation arrangements with FE Colleges who might offer an HND plus balancing studies to achieve full exemption from level 1 and 2 of the programme.

Essential:

**Mathematics 1, 2, 3, 4 and 5 (H7K033, H7K134, H7K234, H7K335 and H7K435) or equivalent
OR**

**Mathematics for Engineers 1, 2 and 3 (DG4H 33, DG4L 34, DG4P 35) or equivalent,
And a Minimum of B in the 2nd year graded unit, or equivalent.**

Glasgow Caledonian University leads the way in widening access to higher education. As part of the University's mission to promote the common good, we work with schools, children and families in the local community to raise educational aspirations in young people and their families. The Contextualised Admissions Policy aims to build on this work and recognise the different student learner journeys. The policy aims to recognise and acknowledge that not all applicants have an equal opportunity to demonstrate their full academic potential and will take into consideration the context and circumstance in which a student has achieved his/her academic grades. For details please access the policy here: <https://www.gcu.ac.uk/aes/documentsandpolicies/>

7. METHODS FOR EVALUATING AND IMPROVING THE QUALITY AND STANDARDS OF TEACHING AND LEARNING

Mechanisms for review and evaluation of teaching, learning, assessment, the curriculum and outcome standards:

- Annual Programme Monitoring Process
- Annual Module Monitoring Process
- Module Feedback Questionnaire
- External Examiner(s) Reports
- Annual monitoring (required by Professional and/or Statutory Bodies)
- Enhancement-led Internal Subject Review (ELISR)
- Enhancement-led Institutional Review (ELIR)

Committees with responsibility for monitoring and evaluating quality and standards:

- Student-Staff Consultative Group (SSCG)
- Programme Board (PB)
- School Board
- Assessment Board (AB)
- University Learning and Teaching Sub-Committee (LTSC)
- University Academic Policy and Practice Committee (APPC)
- University Senate

Mechanisms for gaining student feedback on the quality of teaching and their learning experience:

- Student-Staff Consultative Group (SSCG)
- Student representation on Programme Board (PB)
- Student representation on School Board

- Module Feedback Questionnaire
- GCULearn
- Open access to members of Programme Team e.g. Module Leaders, Programme Leader, Academic Advisor, Year Tutor

Staff development priorities include:

- Postgraduate Certificate in Academic Practice
- Continuous Professional Development (CPD)
- Performance and Development Annual Review (PDAR)
- Peer support for teaching
- Mentoring scheme for new teaching staff
- Conference and seminar attendance and presentation
- Research Excellence Framework (REF) submission
- Membership of Higher Education Academy (HEA)
- Membership of and involvement with Professional Bodies

8. ASSESSMENT REGULATIONS

Students should expect to complete their programme of study under the Regulations that were in place at the commencement of their studies on that programme, unless proposed changes to University Regulations are advantageous to students.

The Glasgow Caledonian University Assessment Regulations which apply to this programme, dependent on year of entry can be found at:

[GCU Assessment Regulations](#)

or

The Glasgow Caledonian University Assessment Regulations which apply to this programme, dependent on the year of entry and with the following approved exceptions can be found at :

[GCU Assessment Regulations](#)

9. INDICATORS OF QUALITY AND STANDARDS

The range and type of performance indicators used to consider quality and standards within the programme and modules within it are outlined in the University's Quality Assurance and Enhancement Handbook which can be accessed at: -

<http://www.gcu.ac.uk/gaq/qualityenhancementandassurance/qualityenhancementandassurancehandbook/>

Section 7 of this document lists the wide variety of methods used for evaluating and improving the quality and standards of teaching and learning within the programme.

The University and School ensure that individual modules which students undertake within programmes are of a high quality and maintain high standards. Within this context, a module improvement plan is formulated following each module delivery and demonstrated within the module monitoring reports.

At a programme level, continual programme analysis is undertaken (APA) with a programme enhancement plan completed. Programme board deliberations, student staff consultative group minutes and external examiners reports are all taken into consideration.

In addition, the programme team engage in biennial module review to ensure quality enhancement and currency of all modules.

10. INFORMATION ABOUT THE PROGRAMME

Key information about the programme can be found in:

- Definitive Programme Document
- Programme Handbook
- Module Handbook
- University Website <http://www.gcu.ac.uk>
- School Website
- GCULearn
- My Caledonian
- University Prospectus

This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. More detailed information on the learning outcomes, content and teaching, learning assessment methods of each module can be found in the University Module catalogue which can be accessed from the University website. The accuracy of the information in this document is reviewed by the University and may be checked by the Quality Assurance Agency for Higher Education.

A curriculum map is attached showing how the outcomes are being developed and assessed within the programme. This relates the modules from Section 4 to the outcomes in Section 3.

DATE: **December 2020**

Curriculum Map: MEng Mechanical Engineering

The curriculum map links the modules (Section 4) to the Learning Outcomes listed in Section 3

	Code	Title	A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	C1	C2	C3	C4	C5	C6	C7	D1	D2	D3	D4	E1	E2	E3	E4	E5	E6	E7	E8		
SC0F7	M1H326673	Mathematics 1	X	X		X	X	X														X		X																		
	M1H326677	Mechanical Principles	X		X			X									X		X																							
	M1H626678	Engineering for Society	X	X	X	X					X		X	X	X									X	X					X	X		X	X								
	M1H326682	Modern Engineering Practice																					X	X	X					X	X		X									
	M1H326689	Engineering Science	X	X	X			X															X	X	X		X															
	M1H626680	Electrical Principles																X		X			X		X																	
SC0F8	M2H326684	Mathematics 2	X	X	X																	X		X																		
	M2H323512	Thermodynamics & Fluid Mechanics																						X					X							X						
	M2H720058	Manufacture & Materials 2		X	X																	X	X																			
	M2H623625	Integrated Engineering Studies 2	X	X	X	X																						X					X									
	M2H624225	Electrical Systems				X	X	X					X											X		X			X													
	M2H622325	Control and Instrumentation Systems																											X													
	M2H721926	Engineering Design and Analysis 2	X	X	X			X															X		X		X															
SC0F9	M3H606414	Control Engineering 3									X	X	X									X						X		X					X		X					
	MHH113285	Computer Aided Engineering		X		X												X		X																						
	M3H721406	Manufacture & Materials 3										X	X	X									X						X		X											
	M3H120320	Engineering Design & Analysis 3	X	X	X			X															X		X		X								X							
	M3J923150	Energy Conversion Technologies				X	X	X						X												X	X		X													
	M3H623554	Integrated Engineering Studies 3	X	X	X	X																				X		X						X	X							
	M3H723623	Engineering Operations Management						X				X			X													X		X												
	M3H623747	European Project Semester ¹		X	X	X	X																					X		X						X	X					
SC0F10	M3H721925	Diploma in Industrial Practice						X	X	X	X																							X		X			X	X		
	M3H323616	European Erasmus Exchange				X		X							X		X																				X		X			
	MHH623549	Honours Project (Engineering)	X	X	X	X								X								X		X				X					X									
	MHH126675	Simulation for Design & Manufacture				X	X					X													X			X														
	MHH122359	Engineering Design & Analysis 4	X		X			X															X		X																	
	MHH123523	Computer Aided Design 2			X		X	X									X		X	X								X		X	X											
	MHH323630	Design Process, Assembly and Manufacture				X							X														X		X													
	MHH323524	Renewable Energy Equipment Design										X		X									X							X												
SC0F11	MMH723842	MEng Team Project	X	X	X	X																			X		X				X	X										
	MMN223676	Strategy & Innovation															X		X			X	X	X				X														
	MMH323561	Applied Thermofluids & CFD					X			X			X															X		X								X				
	MMH723672	Manufacturing Management					X	X				X																														
	MMH623670	Condition Monitoring	X	X	X			X																																		
	MMH123668	Advanced Computer Aided Engineering	X	X	X			X									X	X		X					X	X		X			X											
	MMH226690	Advanced Engineering Mechanics			X	X	X																					X		X												
	MMH223558	Energy Audit & Energy Asset Management														X							X	X																		
	MMH626691	Sustainable Materials & Manufacturing Processes						X			X				X																		X			X		X				

Notes

1. Students who elect to undertake the European Project Semester in Semester B of third year will not have the suitable underpinning to take the Renewable Energy Equipment Design option in fourth year.

ASSESSMENT LOADING MAP for Mechanical Engineering (Design)

YEAR	COURSES	Tri	Credits	Assessment Method	CW1	CW2	CW3	CW4	CW5	CW6	CW7	CT	Exam	CW1	CW2	CW3	CW4	CW5	CW6	CW7	CT	Exam	
YEAR 1	Electrical Principles (M1H626680)	B	20	coursework 100%	100									W13									
	Modern Engineering Practice (M1H326682)	A/B	20	50% CW; 50% CW%	20	40	30	10															
	Engineering for Society (M1H626678)	A	20	coursework 100%	70	20	10							W10	W12	W12							
	Mathematics 1 (M1H326673)	A/B	20	50% CW; 50% exam									50	50								W6&W10	W13-15
	Mechanical Principles (M1H326677)	B	20	coursework 100%	100										W6	W12							
	Engineering Science (M1H326689)	A	20	50% CW; 50% CW%									50	50									W7&W11
YEAR 2	Control and Instrumentation Systems (M2H622325)	A	20	30% CW; 70% exam	30								70	W11									W13-15
	Electrical Systems (M2H624225)	B	10	50% CW; 50% CW%	50	50								W13									
	Engineering Design and Analysis 2 (M2H721926)	B	20	30% CW; 70% exam	30								70	W5									W13-15
	Integrated Engineering Studies 2 (M2H623625)	A	10	coursework 100%	70	30								W12	W12								
	Manufacture & Materials 2 (M2H720058)	A	20	30% CW; 70% exam	30								70	W5									W13-15
	Mathematics 2 (M2H326684)	A/B	20	50% CW; 50% exam									50	50								W6&W10	W13-15
	Thermodynamics & Fluid Mechanics (M2H323512)	A	20	30% CW; 70% exam	30								70										W13-15
YEAR 3	Computer Aided Engineering (MHH113285)	A	20	coursework 100%	25	75								W6	W12								
	Energy Conversion Technologies (M3J923150)	B	20	30% CW; 70% exam	30								70	W5									W13-15
	Engineering Design & Analysis 3 (M3H120320)	A	20	30% CW; 70% exam	30								70	W6									W13-15
	Engineering Operations Management (M3H723623)	B	20	30% CW; 70% exam	15	15							70	W6									W13-15
	European Project Semester (Option) (M3H623747)	B	60	coursework 100%																			
	Integrated Engineering Studies 3 (M3H623554)	B	20	coursework 100%	60	20	20							W13	W13	W13							W13-15
	Manufacture & Materials 3 (M3H721406)	A	20	30% CW; 70% exam	10	20							70	W4	W12								W13-15
YEAR 4	Computer Aided Design 2 (MHH123523)	B	20	20% CW; 60% CW; 20% CW	20	60	20							W6	W11	W13							
	Design Process, Assembly and Manufacture (Option) (MHH323688)	B	20	30% CW; 70% exam	30								70	W13									W13-15
	Engineering Design & Analysis 4 (MHH122359)	A	20	30% CW; 70% exam	30								70	W5									W13-15
	Project (MHH623549)	A/B	40	coursework 100%	15	17	70							W4	W14	W29							
	Renewable Energy Equipment Design (Option) (MHH323524)	B	20	30% CW; 70% exam	30								70	W7	W13								W13-15
	Simulation for Design & Manufacture (MHH126675)	A	20	30% CW; 20% CW; 50% CW	30	20	50								W8	W12	W13						
YEAR 5	Advanced Computer Aided Engineering (MMH123668)	B	30	coursework 100%	20	20	20	40						W6	W6	W9	W10						
	Applied Thermofluids & CFD (MMH323561)	A	15	30% CW; 70% exam	30								70	W9									W13-15
	Manufacturing Management (MMH723672)	A	15	30% CW; 70% exam	30								70	W12	W12								
	MEng Group Project (MMH723842)	A/B	45	coursework 100%	5	10	5	50	10	10	10			W2	W12A	W12B	W12B	W13B	W13B	W13B			W13-15
	Strategy and Innovation (MMN223676)	A	15	50% CW; 50% exam	50									50	W7	W8							W13-15

The Curriculum Map Mechanical Engineering (Design) links the modules (Section 4) to the Learning Outcomes listed in Section 3 AHEP3 outputs standard to meet UK-SPEC requirements PSPMAP1

YEAR	COURSES	Tri	Credits	Assessment Method	SM1b	SM2b	SM3b	EA1b	EA2	EA3b	EA4b	D1	D2	D3b	D4	D5	D6	EL1	EL2	EL3	EL4	EL5	EL6	P1	P2	P3	P4	P5	P6	P7	P8	P11	G1	G2	G3	G4			
YEAR 1	Electrical Principles (M1H626680)	B	20	coursework 100%	✓	✓		✓	✓	✓															✓	✓													
	Modern Engineering Practice (M1H326682)	AB	20	50% CW; 50% CW%																						✓	✓	✓		✓									
	Engineering for Society (M1H626678)	A	20	coursework 100%			✓					✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓	✓							✓		
	Mathematics 1 (M1H326673)	AB	20	50% CW; 50% exam	✓			✓																			✓												
	Mechanical Principles (M1H326677)	B	20	coursework 100%	✓	✓	✓	✓	✓	✓	✓	✓								✓						✓	✓	✓	✓										
	Engineering Science (M1H326689)	A	20	50% CW; 50% CW%	✓	✓	✓	✓				✓														✓	✓	✓	✓									✓	
YEAR 2	Control and Instrumentation Systems (M2H622325)	A	20	30% CW; 70% exam		✓		✓	✓	✓	✓																												
	Electrical Systems (M2H624225)	B	10	50% CW; 50% CW%		✓	✓	✓	✓					✓																									
	Engineering Design and Analysis 2 (M2H721926)	B	20	30% CW; 70% exam	✓		✓	✓	✓			✓	✓			✓											✓			✓									
	Integrated Engineering Studies 2 (M2H623625)	A	10	coursework 100%			✓	✓				✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓							✓	
	Manufacture & Materials 2 (M2H720058)	A	20	30% CW; 70% exam	✓		✓					✓	✓							✓																			
	Mathematics 2 (M2H326684)	AB	20	50% CW; 50% exam	✓	✓			✓	✓	✓																												
	Thermodynamics & Fluid Mechanics (M2H323512)	A	20	30% CW; 70% exam	✓	✓			✓	✓							✓										✓	✓											
YEAR 3	Computer Aided Engineering (MHH113285)	A	20	coursework 100%		✓		✓	✓	✓	✓	✓	✓												✓	✓	✓	✓											
	Energy Conversion Technologies (M3J923150)	B	20	30% CW; 70% exam	✓	✓	✓	✓			✓												✓																
	Engineering Design & Analysis 3 (M3H120320)	A	20	30% CW; 70% exam	✓	✓					✓		✓	✓			✓										✓	✓		✓									
	Engineering Operations Management (M3H723623)	B	20	30% CW; 70% exam				✓	✓	✓															✓														
	European Project Semester (Option) (M3H623747)	B	60	coursework 100%			✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓							
	Integrated Engineering Studies 3 (M3H623554)	B	20	coursework 100%	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓								✓
	Manufacture & Materials 3 (M3H721406)	A	20	coursework 100%	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓					✓																	✓
YEAR 4	Computer Aided Design 2 (MHH123523)	B	20	50% CW; 50% CW			✓		✓	✓				✓																									
	Design Process, Assembly and Manufacture (Option) (MHH323630)	B	20	30% CW; 70% exam	✓	✓	✓			✓	✓			✓	✓								✓																
	Engineering Design & Analysis 4 (MHH122359)	A	20	30% CW; 70% exam	✓	✓		✓	✓	✓	✓	✓	✓	✓			✓										✓	✓		✓									
	Project (MHH623549)	AB	40	coursework 100%			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓								✓
	Renewable Energy Equipment Design (Option) (MHH323524)	B	20	30% CW; 70% exam	✓		✓	✓			✓												✓	✓	✓														
	Simulation for Design & Manufacture (MHH126675)	A	20	coursework 100%		✓		✓	✓			✓	✓	✓	✓	✓	✓											✓											
YEAR 5	Advanced Computer Aided Engineering (MMH123668)	B	30	coursework 100%	✓		✓	✓			✓	✓											✓	✓															
	Applied Thermofluids & CFD (MMH323561)	A	15	30% CW; 70% exam	✓				✓	✓																													
	Manufacturing Management (MMH723672)	A	15	30% CW; 70% exam		✓				✓			✓																										
	MEng Group Project (MMH723842)	AB	45	coursework 100%			✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Strategy and Innovation (MMN223676)	A	15	50% CW; 50% exam	✓					✓					✓	✓											✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

ASSESSMENT LOADING MAP for Mechanical Engineering (Systems)

YEAR	COURSES	Tri	Credits	Assessment Method	CW1	CW2	CW3	CW4	CW5	CW6	CW7	CT	Exam	CW1	CW2	CW3	CW4	CW5	CW6	CW7	CT	Exam	
YEAR 1	Electrical Principles (M1H626680)	B	20	coursework 100%	100									W13									
	Modern Engineering Practice (M1H326682)	AB	20	50% CW; 50% CW%	20	40	30	10															
	Engineering for Society (M1H626678)	A	20	coursework 100%	70	20	10							W10	W12	W12							
	Mathematics 1 (M1H326673)	AB	20	50% CW; 50% exam									50	50								W6&W10	W13-15
	Mechanical Principles (M1H326677)	B	20	coursework 100%	100										W6	W12							
	Engineering Science (M1H326689)	A	20	50% CW; 50% CW%										50	50								W7&W11
YEAR 2	Control and Instrumentation Systems (M2H622325)	A	20	30% CW; 70% exam	30								70	W11									W13-15
	Electrical Systems (M2H624225)	B	10	50% CW; 50% CW%	50	50								W13									
	Engineering Design and Analysis 2 (M2H721926)	B	20	30% CW; 70% exam	30								70	W5									W13-15
	Integrated Engineering Studies 2 (M2H623625)	A	10	coursework 100%	70	30								W12	W12								
	Manufacture & Materials 2 (M2H720058)	A	20	30% CW; 70% exam	30								70	W5									W13-15
	Mathematics 2 (M2H326684)	AB	20	50% CW; 50% exam									50	50								W6&W10	W13-15
	Thermodynamics & Fluid Mechanics (M2H323512)	A	20	30% CW; 70% exam	30								70										W13-15
YEAR 3	Control Engineering 3 (M3H606414)	5	30	30% CW; 70% exam																			
	Energy Conversion Technologies (M3J923150)	B	20	30% CW; 70% exam	30								70	W5									W13-15
	Engineering Design & Analysis 3 (M3H120320)	A	20	30% CW; 70% exam	30								70	W6									W13-15
	Engineering Operations Management (M3H723623)	B	20	30% CW; 70% exam	15	15							70	W6									W13-15
	European Project Semester (Option) (M3H623747)	B	60	coursework 100%																			
	Integrated Engineering Studies 3 (M3H623554)	B	20	coursework 100%	60	20	20							W13	W13	W13							W13-15
	Manufacture & Materials 3 (M3H721406)	A	20	30% CW; 70% exam	10	20							70	W4	W12								W13-15
YEAR 4	Computer Aided Engineering (MHH113285)	A	20	coursework 100%	25	75								W6	W12								
	Control Engineering 4 (MHH622747) (Option)	6	20	30% CW; 70% exam	30								70	W18	W29								
	Design Process, Assembly and Manufacture (Option) (MHH323524)	B	20	30% CW; 70% exam	30								70	W13									W13-15
	Engineering Design & Analysis 4 (MHH122359)	A	20	30% CW; 70% exam	30								70	W5									W13-15
	Hons Project (MHH623549)	AB	40	coursework 100%	15	15	70							W4	W14	W29							
	Renewable Energy Equipment Design (Option) (MHH323524)	B	20	30% CW; 70% exam	30								70	W7	W13								W13-15
YEAR 5	Advanced Engineering Mechanics (MMH226690)	B	30	coursework 100%	20	20	20	40						W6	W6	W9	W10						
	Energy Audit and Energy Asset Management (MMH223558)	7	c	50% CW; 50% CW	50	50								W7	W8								
	Applied Thermofluids & CFD (MMH323561)	A	15	30% CW; 70% exam	30								70	W9									W13-15
	Condition Monitoring (MMH623670) OPTION	7	o	50% CW; 50% exam	50								70	W5									W13-15
	Sustainable Materials & Manufacturing Processes (Option) (MMH323561)	7	o	30% CW; 70% exam	30								70	W6									W13-15
	MEng Group Project (MMH723842)	AB	45	coursework 100%	5	10	5	50	10	10	10			W2	W12A	W12B	W12B	W13B	W13B	W13B			W13-15
	Strategy and Innovation (MMN223676)	A	15	50% CW; 50% exam	50								50	W7	W8								W13-15

The Curriculum Map Mechanical Engineering (Systems) links the modules (Section 4) to the Learning Outcomes listed in Section 3 AHEP3 outputs standard to meet UK-SPEC requirements PSPMAP2

YEAR	COURSES	Tr	Credits	Assessment Method	SM1b	SM2b	SM3b	EA1b	EA2	EA3b	EA4b	D1	D2	D3b	D4	D5	D6	EL1	EL2	EL3	EL4	EL5	EL6	P1	P2	P3	P4	P5	P6	P7	P8	P11	G1	G2	G3	G4			
YEAR 1	Electrical Principles (M1H626680)	B	20	coursework 100%	✓	✓		✓	✓	✓															✓	✓													
	Modern Engineering Practice (M1H326682)	AB	20	50% CW; 50% CW%																						✓	✓	✓		✓									
	Engineering for Society (M1H626678)	A	20	coursework 100%			✓					✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓				✓			✓			
	Mathematics 1 (M1H326673)	AB	20	50% CW; 50% exam	✓			✓																			✓												
	Mechanical Principles (M1H326677)	B	20	coursework 100%	✓	✓	✓	✓	✓	✓	✓									✓					✓	✓	✓	✓											
	Engineering Science (M1H326689)	A	20	50% CW; 50% CW%	✓	✓	✓	✓				✓													✓	✓	✓	✓							✓				
YEAR 2	Control and Instrumentation Systems (M2H622325)	A	20	30% CW; 70% exam		✓		✓	✓	✓	✓																												
	Electrical Systems (M2H624225)	B	10	50% CW; 50% CW%		✓	✓	✓	✓				✓																										
	Engineering Design and Analysis 2 (M2H721926)	B	20	30% CW; 70% exam	✓		✓	✓	✓			✓	✓			✓											✓												
	Integrated Engineering Studies 2 (M2H623625)	A	10	coursework 100%			✓	✓				✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓						✓		
	Manufacture & Materials 2 (M2H720058)	A	20	30% CW; 70% exam	✓		✓					✓	✓					✓		✓							✓				✓	✓							
	Mathematics 2 (M2H326684)	AB	20	50% CW; 50% exam	✓	✓		✓	✓	✓																													
	Thermodynamics & Fluid Mechanics (M2H323512)	A	20	30% CW; 70% exam	✓	✓		✓	✓							✓										✓	✓												
YEAR 3	Control Engineering 3 (M3H606414)	5	30	30% CW; 70% exam	✓	✓	✓	✓	✓	✓	✓		✓														✓	✓											
	Energy Conversion Technologies (M3J923150)	B	20	coursework 100%	✓	✓	✓	✓				✓											✓					✓											
	Engineering Design & Analysis 3 (M3H120320)	A	20	30% CW; 70% exam	✓	✓						✓	✓			✓	✓										✓	✓											
	Engineering Operations Management (M3H723623)	B	20	30% CW; 70% exam				✓	✓	✓															✓														
	European Project Semester (Option) (M3H623747)	B	60	coursework 100%			✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓								
	Integrated Engineering Studies 3 (M3H623554)	B	20	coursework 100%	✓	✓	✓	✓			✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						✓		
	Manufacture & Materials 3 (M3H721406)	A	20	coursework 100%	✓	✓	✓	✓	✓	✓		✓	✓	✓		✓	✓										✓				✓	✓	✓	✓	✓	✓	✓	✓	
YEAR 4	Computer Aided Engineering (MHH113285)	A	20	coursework 100%		✓		✓	✓	✓	✓	✓	✓											✓	✓	✓	✓												
	Control Engineering 4 (MHH622747) (Option)	6	20	30% CW; 70% exam		✓	✓	✓	✓	✓	✓	✓	✓	✓																									
	Design Process, Assembly and Manufacture (Option) (MHH32363)	B	20	30% CW; 70% exam	✓	✓	✓				✓	✓	✓	✓									✓					✓											
	Engineering Design & Analysis 4 (MHH122359)	A	20	30% CW; 70% exam	✓	✓		✓	✓	✓	✓	✓	✓	✓													✓	✓											
	Hons Project (MHH623549)	AB	40	coursework 100%			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓			✓	
	Renewable Energy Equipment Design (Option) (MHH323524)	B	20	30% CW; 70% exam	✓		✓	✓	✓			✓	✓	✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓	✓	✓	✓	
YEAR 5	Advanced Engineering Mechanics (MMH226690)	B	30	30% CW; 70% exam	✓				✓		✓	✓	✓																										
	Energy Audit and Energy Asset Management (MMH223558)	7	15	30% CW; 70% exam									✓										✓															✓	
	Applied Thermofluids & CFD (MMH323561)	A	15	30% CW; 70% exam	✓					✓	✓						✓																						
	Condition Monitoring (MMH623670) OPTION	7	15	50% CW; 50% exam	✓	✓	✓	✓	✓	✓		✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓								
	Sustainable Materials & Manufacturing Processes (Option) (MMH6)	7	15	30% CW; 70% exam			✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓							✓	
	MEng Group Project (MMH723842)	AB	45	coursework 100%			✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Strategy and Innovation (MMN223676)	A	15	50% CW; 50% exam	✓						✓		✓	✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓							✓	