Programme Specification

BEng (Hons), MEng (Hons) Aeronautics & Astronautics 2020/21

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 s/he takes full advantage of the learning opportunities that are provided.

Awarding Institution	University of Southampton
Teaching Institution	University of Southampton, University of Southampton, Malaysia (international students for Parts I and II only)
Mode of study	Full time
Duration	5 years (MEng with Industrial Placement Year), 4 years (MEng) (BEng with Industrial Placement Year), 3 years (BEng)
Accreditation details	Royal Aeronautical Society Institution of Mechanical Engineers BEng (Honours) fully meets the academic requirement for registration as an Incorporated Engineer and partly meets the academic requirement for registration as a Chartered Engineer. MEng fully meets the academic requirement for registration as a Chartered Engineer.
Final award	Bachelor of Engineering (with Honours) (BEng) Master of Engineering (with Honours) (MEng)
Name of award	Aeronautics & Astronautics Aeronautics & Astronautics/Aerodynamics Aeronautics & Astronautics/Airvehicle Systems & Design Aeronautics & Astronautics/Computational Engineering & Design Aeronautics & Astronautics/Engineering Management- Aeronautics & Astronautics/Materials & Structures Aeronautics & Astronautics/Semester Abroad Aeronautics & Astronautics/Spacecraft Engineering All of the MEng degrees above may also be taken with an Industrial Placement Year and will then have 'with Industrial Placement Year' appended to the degree title
Interim Exit awards	Certificate of Higher Education Diploma of Higher Education Bachelor of Science (Ordinary)
FHEQ level of final award	Level 7 (MEng), Level 6 (BEng)
UCAS code	H422, BEng Aeronautics & Astronautics H40P, BEng Aeronautics & Astronautics with Industrial Placement Year (2018/19) H401, MEng Aeronautics & Astronautics H490, MEng Aeronautics & Astronautics/Aerodynamics

UCAS code	H491, MEng Aeronautics & Astronautics/Airvehicle Systems & Design 09F4, MEng Aeronautics & Astronautics/Computational Engineering & Design HN42, MEng Aeronautics & Astronautics/Engineering Management 7T32, MEng Aeronautics & Astronautics/Materials & Structures 39C5, MEng Aeronautics & Astronautics/Semester Abroad H493, MEng Aeronautics & Astronautics/Spacecraft Engineering H414, MEng Aeronautics & Astronautics with Industrial Placement Year HH41 MEng Aeronautics & Astronautics/Aerodynamics with Industrial Placement Year H41H MEng Aeronautics & Astronautics/Airvehicle Systems & Design with Industrial Placement Year H4H1 MEng Aeronautics & Astronautics/Computational Engineering & Design with Industrial Placement Year HH44 MEng Aeronautics & Astronautics/Engineering Management with Industrial Placement Year H44H MEng Aeronautics & Astronautics/Materials & Structures with Industrial Placement Year H4HH MEng Aeronautics & Astronautics/Semester Abroad with Industrial Placement Year H400 MEng Aeronautics & Astronautics/Spacecraft Engineering with Industrial Placement Year
QAA Subject Benchmark or other external reference	QAA Subject Benchmark – Engineering 2015; Accreditation of Higher Education Programmes, Edition 3, Engineering Accreditation Board
Director of Programme	
Director of Programmes	Dr Scott Walker
Programme Lead	Dr David Angland
Date specification was written	February 2019 (Dr S.J.I Walker)
Date programme was validated	April 2019
Date specification last updated	June2019

Programme Overview

Brief outline of the programme

The aim of the range of Aeronautics and Astronautics programmes is to help students develop a thorough background in engineering principles as applied to the design and operation of aerospace vehicles (aircraft and spacecraft) and to equip them for future careers in the aerospace and other engineering or technical industries. It also offers students the opportunity to specialise in certain areas of the discipline, according to their wishes and future career aspirations.

The first two years cover the fundamentals of basic engineering and Aeronautics and Astronautics. These two years are common for both the BEng and MEng programmes. Towards the end of Part II on the MEng programme you will be invited to transfer onto one of our specialist MEng themes for Parts III and IV along with selecting your optional module/s for Part III.

In Part III most of the modules you will study are related to the aerospace discipline, including either an aircraft design or a spacecraft design module and an individual project. In Part IV you will undertake a Group Design Project and you will have a greater level of flexibility in choosing more advanced aerospace topics along with the possibility of broadening your education by taking some modules outside the aerospace discipline (e.g. Human Factors in Engineering, modern languages, etc.) The programmes are designed in accordance with the Engineering Council requirements as a pathway, to

become a Chartered professional engineer. The MEng fully meets the educational requirements for Chartered Engineer status; the BEng is recognised as meeting the requirements in part and would need to be combined with suitable further learning for Chartered Engineer status to be achieved.

Learning and teaching

Knowledge and understanding on this integrated Masters in Aeronautics and Astronautics course is gained through a combination of formal and special lectures, tutorials (small group teaching), example classes, laboratory experiments, coursework and individual and group projects at all levels. Throughout the programme, students are encouraged to use additional recommended reading material for private study to consolidate the formal learning process, and to broaden and deepen their understanding. Students are encouraged to become student members of the relevant professional institution, to use their libraries and resources, and attend their lectures and meetings.

Assessment

Testing of the knowledge base is through a combination of unseen written examinations and assessed coursework in the form of problem solving exercises, laboratory reports, design exercises, essays, and individual and group projects. Analysis and problem solving skills are assessed through unseen written examinations and problem based exercises. Experimental, research and design skills are assessed through laboratory reports, coursework exercises, project reports and oral presentations.

As a research-led University, we undertake a continuous review of our programmes to ensure quality enhancement and to manage our resources. As a result, this programme may be revised during a student's period of registration. However, any revision will be balanced against the requirement that the student should receive the educational service expected. Please read our Disclaimer to see why, when and how changes may be made to a student's programme.

Programmes and major changes to programmes are approved through the University's programme validation process which is described in the University's quality handbook.

Special Features of the programme

A full week-long induction activity is held at the beginning of the first year. This is a team activity designed to explore basic flight concepts and to act as a cohort building exercise. It culminates in an award presented by the Royal Aeronautical Society to the best group.

At the end of the second year, students can apply to spend a semester abroad. We have identified a number of partner institutions where the final years are taught in English. In most cases these study periods are cost-neutral in terms of fees payable as they form part of exchange agreements. The agreements are based on a close analysis of the syllabus and educational standards of the partner institutions to ensure the compatibility of the two courses. Each student receives personalised advice from a member of academic staff on selecting the appropriate set of modules at the foreign institution and their progress is monitored throughout the semester.

Students also have the opportunity to go on an Industrial Placement Year between either the second and third year, or the third and fourth year. Students need to organise their own placement, although some assistance can be provided by the University. Students on the Industrial Placement Year will receive personalised advice on the placement from a member of academic staff and their progress will be monitored throughout the placement.

The programme is delivered at the University of Southampton, Southampton, UK, with all Programme Boards, Subject Panels, Exam Boards and Faculty Programme meetings held at Southampton. All module activities are based at or close to the Highfield Campus, Southampton, except for the following. Parts I and II are also delivered at University of Southampton Malaysia (UoSM), South Johor, Malaysia. You can elect to study one or both parts at UoSM. (For UK and EU nationals, Government funding/loan for fees may be restricted.) Further international study opportunities may be dependent on visa requirements. Study Abroad themes are not applicable to UoSM students.

Educational Aims of the Programme

The aims of the BEng and MEng Aeronautics and Astronautics programmes are to:
(Blue = both BEng & MEng; black = BEng only; *green italics* = MEng only; orange = Industrial Placement Year for BEng and MEng)

- Develop, in Parts I and II, a sound understanding of the fundamental principles, methods, analysis and synthesis in engineering design and applications appropriate to the Aeronautics and Astronautics disciplines that comprise Aerospace Engineering.
- Provide you, in Part III with opportunities to study specialist modules integrated within the structured learning environment, reflecting the internationally renowned research expertise within the Faculty.
- *Provide you, in Part III and IV (MEng) with a range of specialist modules integrated within the structured learning environment, reflecting the internationally renowned research expertise within the Faculty, in order to broaden and deepen your educational experience.*
- Train you to enable you to become professional engineers that meet many of the educational requirements of the Engineering Council (i.e. UK-SPEC), and to have a broad range of knowledge and skills (including IT and communication) capable of meeting the present and future demands of industry and commerce.
- *Train you to enable you to become professional engineers that meet the educational requirements of the Engineering Council (i.e. UK-SPEC), and to have a broad range of knowledge and skills (including IT and communication) capable of meeting the present and future demands of industry and commerce.*
- Offer you a degree structure that is relevant to industry and responsive to changes in technology and the needs of the community.
- Provide you with a supportive and intellectually stimulating environment that encourages an attitude of independent learning and enquiry, and fosters an ethos of lifetime learning and professional development.
- Offer you an individual project and group assignments which are supported by the research activities within the Faculty and stimulate the individual innovation and self-assessment required in engineering design.
- *Offer you an individual and a group design project which are supported by the research activities within the Faculty and stimulate the individual innovation, self-assessment and teamwork skills required in engineering design.*
- Offer you an opportunity to apply the knowledge you have developed during your studies in Parts I and II and gain experience of working within an engineering based organisation

Programme Learning Outcomes

The programme provides opportunities for you to develop and demonstrate knowledge and understanding, qualities, skills and other attributes in the areas shown below. The programme learning outcomes have been developed with reference to the Subject Benchmark Statement for engineering (https://www.qaa.ac.uk/docs/qaa/subject-benchmark-statements/sbs-engineering-15.pdf) which is aligned with the Engineering Council publication Accreditation of Higher Education Programmes (AHEP): UK Standard for Professional Engineering Competence (third edition) (https://www.engc.org.uk/engcdocuments/internet/Website/Accreditation%20of%20Higher%20Education%20Programmes%20third%20edition%20(1).pdf)

The combined BEng and MEng column shows the learning outcomes with a mixture of Full CEng (indicated with (m)) and Partial CEng (indicated with (b)) learning outcomes which are met at FHEQ Level 6. The MEng only column indicates all of the remaining Full CEng AHEP3 learning outcomes being met at FHEQ Level 7.

Some of the BEng programme learning outcomes exceed the minimum requirement of AHEP3 and these are indicated with *italics*. Details of which modules in each of the themes meet the AHEP3 learning outcomes can be found in Appendix 5. Learning outcomes related specifically to the industrial placement year are indicated in orange.

Knowledge and Understanding

Blue = both BEng and MEng; Black – BEng only; Green = MEng only; Orange = Industrial Placement Year for BEng and MEng.

	Science and mathematics Aeronautic and astronautic engineering is underpinned by science and mathematics, and other associated disciplines, as defined by the relevant professional engineering institution(s). On graduation you will have achieved:		
	BEng and MEng		MEng only
SM1(b)	A comprehensive knowledge and understanding of the scientific principles and methodology	SM1(m)	A comprehensive knowledge and understanding of scientific principles and methodology necessary to

	necessary to underpin their education in Aeronautics and Astronautics, to enable appreciation of the scientific and engineering context, and to support your understanding of relevant historical, current and future developments and technologies		underpin your education in Aeronautics and Astronautics, and an understanding and know-how of the scientific principles of related disciplines, to enable appreciation of the scientific and engineering context, and to support your understanding of relevant historical, current and future developments and technologies.
SM2(m)	Knowledge and understanding of mathematical and statistical methods necessary to underpin your education in Aeronautics and Astronautics, and to enable you to apply a range of mathematical and statistical methods, tools and notations proficiently and critically in the analysis and solution of engineering problems		
		SM4(m)	Awareness of developing technologies related to Aeronautics and Astronautics,
		SM5(m)	A comprehensive knowledge and understanding of mathematical and computational models relevant to Aeronautics and Astronautics and an appreciation of their limitations
		SM6(m)	Understanding of concepts from a range of areas, including some outside engineering, and the ability to evaluate them critically and to apply them effectively in Aeronautics and Astronautics projects

	Engineering analysis Engineering analysis involves the application of engineering concepts and tools to the solution of Aeronautic and Astronautic Engineering problems. On graduation you will have achieved:		
	BEng and MEng		MEng only
EA1(b)	Understanding of engineering principles and the ability to apply them to analyse key engineering processes.	EA1(m)	Understanding of engineering principles and the ability to apply them to undertake critical analysis of key engineering processes
EA4(m)	Understanding of, and the ability to apply, an integrated or systems approach to solving complex engineering problems		

	Design Design at this level is the creation and development of an economically viable product, process or system to meet a defined need. It involves significant technical and intellectual challenges and can be used to integrate all engineering understanding, knowledge and skills to the solution of real and complex Aeronautic and Astronautic Engineering problems. On graduation you will have the knowledge, understanding and skills to:		
	BEng and MEng		MEng only
D1(m)	Understand and evaluate business, customer and user needs in Aeronautic and Astronautic design including considerations such as the wider engineering context, public perception and aesthetics		

	Economic, legal, social, ethical and environmental context Engineering activity can have impacts on the environment, on commerce, on society and on individuals. On graduation you will have the skills to manage your activities and to be aware of the various legal and ethical constraints under which you are expected to operate, including:		
	BEng and MEng		MEng only
EL1(b)	Understanding of the need for a high level of professional and ethical conduct in engineering, a knowledge of professional codes of conduct	EL1(m)	Understanding of the need for a high level of professional and ethical conduct in engineering, a knowledge of professional codes of conduct and how ethical dilemmas can arise
EL2(b)	Knowledge and understanding of the commercial, economic and social context of engineering processes	EL2(m)	
EL3(b)	Knowledge and understanding of management techniques, including project management, that may be used to achieve engineering objectives	EL3(m)	Knowledge and understanding of management techniques, including project and change management, that may be used to achieve engineering objectives, their limitations, and how they may be applied appropriately
EL4(m)	Understanding of the requirement for engineering activities to promote sustainable development and ability to apply quantitative techniques where appropriate		
EL5(b)	Awareness of relevant legal requirements governing engineering activities, including personnel, health & safety, contracts, intellectual property rights, product safety and liability issues.	EL5(m)	Awareness of relevant legal requirements governing engineering activities, including personnel, health & safety, contracts, intellectual property rights, product safety and liability issues, and an awareness that these may differ internationally
EL6(b)	Knowledge and understanding of risk issues, including health & safety, environmental and commercial risk, and of risk assessment and risk management techniques	EL6(m)	Knowledge and understanding of risk issues, including health and safety, environmental and commercial risk, risk assessment and risk management techniques and an ability to evaluate commercial risk
		EL7(m)	Understanding of the key drivers for business success, including innovation, calculated commercial risks and customer satisfaction

	Engineering practice This is the practical application of engineering skills, combining theory and experience, and use of other relevant knowledge and skills. On graduation you will have achieved:		
	BEng and MEng		MEng only
P1(m)	Understanding of contexts in which engineering knowledge can be applied (eg operations and management, application and development of technology, etc)		
P2(b)	Knowledge of characteristics of particular materials relevant to Aeronautics and Astronautics,	P2(m)	Knowledge of characteristics of particular equipment, processes or products relevant to Aeronautics and Astronautics with extensive knowledge and understanding of a wide range of engineering materials and components
P4(m)	Understanding of the use of technical literature and other information sources		

P5(m)	Knowledge of relevant legal and contractual issues		
P6(m)	Understanding of appropriate codes of practice and industry standards		
P7(m)	Awareness of quality issues and their application to continuous improvement		
		P9(m)	A thorough understanding of current Aeronautic and Astronautic practice and its limitations, and some appreciation of likely new developments
P11(b)	Understanding of and ability to work within different roles within an engineering team	P11(m)	Understanding of different roles within an engineering team and the ability to exercise initiative and personal responsibility, which may be as a team member or leader

In addition, if you take the Industrial Placement Year you will be able to demonstrate an understanding of current and developing technical practice within the engineering industry and the business practice of your host organisation.

Teaching and Learning Methods

Acquisition of core knowledge and understanding is through lectures, seminars, tutorials, field and laboratory classes, computer classes, workshops, and independent study and research. You are encouraged from an early stage to supplement and consolidate your understanding and knowledge by independent study.

Assessment Methods

Testing of the knowledge base is through a combination of unseen written examinations and assessed coursework in the form of problem solving exercises, laboratory reports, design exercises, essays and individual and group projects.

Skills

	Science and mathematics Engineering is underpinned by science and mathematics, and other associated disciplines, as defined by the relevant professional engineering institution(s). On graduation you will have achieved:		
	BEng and MEng		MEng only
SM3(b)	Ability to apply and integrate knowledge and understanding of other engineering disciplines to support study of your own engineering discipline	SM3(m)	Ability to apply and integrate knowledge and understanding of other engineering disciplines to support study of your own engineering discipline and the ability to evaluate them critically and to apply them effectively

	Engineering analysis Engineering analysis involves the application of engineering concepts and tools to the solution of Aeronautic and Astronautic Engineering problems. On graduation you will have achieved:		
	BEng and MEng		MEng only
EA2(m)	Ability to identify, classify and describe the performance of systems and components through the use of analytical methods and modelling techniques		
EA3(b)	Ability to apply quantitative and computational methods, in order to solve engineering problems and implement appropriate action	EA3(m)	Ability to apply quantitative and computational methods, using alternative approaches and understanding their limitations, in

			order to solve engineering problems and implement appropriate action
		EA5(m)	Ability to use fundamental knowledge to investigate new and emerging technologies
		EA6(m)	Ability to extract and evaluate pertinent data and to apply engineering analysis techniques in the solution of unfamiliar problems

	Design Design at this level is the creation and development of an economically viable product, process or system to meet a defined need. It involves significant technical and intellectual challenges and can be used to integrate all engineering understanding, knowledge and skills to the solution of real and complex problems. On graduation you will have the knowledge, understanding and skills to:		
	BEng and MEng		MEng only
D2(m)	Investigate and define the problem, identifying any constraints including environmental and sustainability limitations; ethical, health, safety, security and risk issues; intellectual property; codes of practice and standards		
D3(b)	Work with information that may be incomplete or uncertain, quantify the effect of this on the design	D3(m)	Work with information that may be incomplete or uncertain, quantify the effect of this on the design and, where appropriate, use theory or experimental research to mitigate deficiencies
D4(m)	Apply advanced problem-solving skills, technical knowledge and understanding, to establish rigorous and creative solutions that are fit for purpose for all aspects of the problem including production, operation, maintenance and disposal		
D5(m)	Plan and manage the design process, including cost drivers, and evaluate outcomes		
D6(m)	Communicate their work to technical and non-technical audiences		
		D7(m)	Demonstrate wide knowledge and comprehensive understanding of design processes and methodologies and the ability to apply and adapt them in unfamiliar situations
		D8(m)	Demonstrate the ability to generate an innovative design for products, systems, components or processes to fulfil new needs

	Engineering practice This is the practical application of engineering skills, combining theory and experience, and use of other relevant knowledge and skills. On graduation you will have achieved:		
	BEng and MEng		MEng only
P3(m)	Ability to apply relevant practical and laboratory skills		
P8(m)	Ability to work with technical uncertainty		
P10(m)			Ability to apply engineering techniques taking account of a range of commercial and industrial constraints

	Additional general skills On graduation you will have developed transferable skills, additional to those set out in the other learning outcomes, that will be of value in a wide range of situations, including the ability to:		
	BEng and MEng		MEng only
G1(m)	Apply your skills in problem solving, communication, working with others, information retrieval, and the effective use of general IT facilities		
G2(m)	Plan self-learning and improve performance, as the foundation for lifelong learning/CPD		
G3(b)	plan and carry out a personal programme of work, adjusting where appropriate	G3(m)	Monitor and adjust a personal programme of work on an on-going basis
G4(m)	Exercise initiative and personal responsibility, which may be as a team member or leader.		

In addition, if you take the Industrial Placement Year you will be able to:

- Analyse, evaluate and interpret information from projects and, apply your theoretical knowledge in unfamiliar situations to solve problems
- Exercise professional judgement in a working context and evaluate and review your performance in the context of an engineering workplace.
- Identify areas for personal and career development and how these can be addressed
- Understand the different roles within a team and have the ability to exercise leadership and demonstrate effective understanding of time and project management skills.
- Apply your knowledge and skills taking account of commercial and industrial constraints.
- Understand the importance of health and safety in an engineering workplace and evidence continuous professional development by the use of a personal learning log.

Teaching and Learning Methods

Intellectual skills are developed through the teaching and learning activities. Analysis and problem solving skills are further developed through regular problem sheets issued by module lecturers and through small group teaching. Experimental, research and design skills are further developed through coursework exercises, laboratory work, and design and research projects. Individual feedback is provided on all work submitted. Appreciation of the practical applications of these skills is provided by interaction with industry through visiting lectures and industrial visits.

Assessment methods

Analysis and problem solving skills are assessed through unseen written examinations and problem based exercises. Experimental, research and design skills are assessed through laboratory reports, coursework exercises, project reports and oral presentations. Skills are formatively assessed through written reports and oral presentations, practical and laboratory reports. Summative assessment is through unseen examinations, extended essays, written reports and oral presentations, and completion of a research project.

Programme Structure

The University uses the European Credit Transfer Scheme (ECTS) to indicate the approximate amount of time a typical student can expect to spend in order to complete successfully a given module or programme, where 1 ECTS indicates around 20 nominal hours of study. Previously, Credit Accumulation and Transfer Scheme (CATS) points were used for this purpose where 1 CATS credit was 10 nominal hours of study. The University credit accumulation and transfer scheme is detailed at https://www.southampton.ac.uk/calendar/sectioniv/index.page.

In order to allow students to settle in to a University learning style, Part I is not structured in semesters and the majority of assessment occurs towards the end of the academic year. The teaching in Parts II to IV is generally structured as two semesters with an assessment session at the end of each. You study modules comprising 60 ECTS (120 CATS) in each of Parts I (level 4), II (level 5) and III (level 6), and IV (level 7). There are several degree possibilities in the programme of study:

- Three years full-time, leading to a Bachelor of Engineering (BEng) with Honours.
- Four years full-time, leading to a Bachelor of Engineering with Industrial Placement Year (BEng with IPY with Honours
- Four years full-time, leading to a Master of Engineering (MEng).
- Five years full-time, leading to a Master of Engineering with Industrial Placement Year (MEng with IPY).

In addition, there are the following exit points:

- Certificate of Higher Education, following successful completion of Part I.
- Diploma of Higher Education, following successful completion of Part II.
- Ordinary Degree of BSc Engineering (Ordinary), following successful completion of at least 150 ECTS (300 CATS), including 30 ECTS (60 CATS) at level 6.

Each module is a self-contained part of the programme of study and carries a credit rating. A student's contact hours will vary depending on their module/option choices. Full information about contact hours is provided in the individual module profiles.

Part I is assessed through an integrated set of assessments under the regulations at https://www.southampton.ac.uk/calendar/sectionvi/feps.page, and in Appendix 3 of this document. In Parts II and III, progression through the programme and classification of degrees are regulated by the standard university progression and classification rules which may be found in section IV of the University Calendar (https://www.southampton.ac.uk/calendar/sectioniv/index.page).

The duration of all the programmes may be extended by one year through enrolment on the Engineering Foundation Year.

The Programme Structure is outlined in Appendix 1a.

All students on the MEng programme can choose to be registered on a theme. Parts I and II are common for all themes and all MEng students are invited to consider changing or selecting themes at the conclusion of Part II.

Typical course content

On both the BEng and MEng degrees in the Aeronautics and Astronautics programmes you will study a number of core general engineering and aerospace-related subjects during the first two years. These provide a sound preparation for the final part of the degree. You will concentrate on the fundamentals of engineering and gain the skills and understanding required to use information technology in an engineering context.

In the MEng you will have the opportunity to specialise by selecting a particular theme/programme of study in Parts III and IV. On the BEng there are no specialist themes but you will be able to select two optional modules from a range that are available. On both programmes you will also undertake an individual project that usually takes the form of a design or research exercise, and involves the production of a formal report. A group aircraft (or spacecraft) design exercise is also completed in Part III.

In Part IV, MEng students participate in a Group Design Project (GDP). These projects are often linked to current research activities or topics that have relevance to industry.

The programme follows university guidelines for inclusivity and flexibility and provides and array of teaching and learning approaches that will enable any student who meets the entry requirements to access the curriculum and demonstrate achievement of all the intended learning outcomes.

Additional Costs

Students are responsible for meeting the cost of essential textbooks, and of producing such essays, assignments, laboratory reports and dissertations as are required to fulfil the academic requirements for each programme of study. Costs that students registered for this programme typically also have to pay for are included in Appendix 4.

Progression Requirements

The programme follows the University's regulations for Progression, Determination and Classification of Results: Undergraduate and Integrated Masters Programmes as set out in the University Calendar https://www.southampton.ac.uk/calendar/sectioniv/index.page.

Additional regulations applying to the assessment of Part I of your programme, the Industrial Placement Year and our other BEng (Hons)/MEng regulations may be found here: http://www.calendar.soton.ac.uk/sectionVIII/sectVIII-index.html.

Intermediate exit points

Students will be eligible for an interim exit award if they complete part of the programme but not all of it, as follows:

Qualification	Minimum overall credit in ECTS credits	Minimum ECTS Credits required at level of award
Bachelor of Science (Ordinary)	at least 150	30
Diploma of Higher Education	at least 120	45
Certificate of Higher Education	at least 60	45

A diagram showing the interim exit award points can be seen in Appendix 2.

Programme outcomes for different exit points

Level 4 (Part I)	You will have a sound knowledge of the basic concepts in Aeronautics & Astronautics and will have learned how to take different approaches to solving problems. You will be able to communicate accurately, and will have the qualities needed for employment requiring the exercise of some personal responsibility.
Level 5 (Part II)	You will have developed a sound understanding of the principals involved in a range of core Aeronautics & Astronautics subjects, and will have learned to apply those principles more widely. Through this, you will have learned to evaluate the appropriateness of different approaches to solving problems. You will have the qualities necessary for employment in situations requiring the exercise of personal responsibility and decision-making.
Level 6 (Part III) BEng	You will have developed an understanding of a complex body of knowledge relevant to Aeronautics & Astronautics, some of it at the forefront of current developments. Through this, you will have developed analytical techniques and problem-solving skills that can be applied to a range of engineering problems, and learned to communicate these effectively. As an Honours graduate you will be able to evaluate evidence, arguments and assumptions, and to reach sound judgements. You should have the qualities needed for employment in situations requiring the exercise of personal responsibility, and decision-making in complex and unpredictable circumstances
Level 7 (Part IV) MEng	Much of the study undertaken at Masters level reflects research at the forefront of Aeronautics & Astronautics. You will have shown originality in the application of knowledge, and you will understand how the boundaries of knowledge are advanced through research. You will be able to deal with complex issues both systematically and creatively, and show originality in tackling and solving problems individually and as part of a team. You will have the qualities needed for employment in circumstances requiring sound judgement, personal responsibility and initiative, in complex and unpredictable professional environments.

Support for Student Learning

There are systems for the support of student learning in the Faculty as well as available from central University facilities.

The University provides:

- library resources, including e-books, on-line journals and databases, which are comprehensive and up-to-date; together with assistance from Library staff to enable you to make the best use of these resources
- high speed access to online electronic learning resources on the Internet from dedicated PC Workstations onsite and from your own devices; laptops, smartphones and tablet PCs via the Eduroam wireless network. There is a wide range of application software available from the Student Public Workstations.
- computer accounts which will connect you to a number of learning technologies for example, the Blackboard virtual learning environment (which facilitates online learning and access to specific learning resources)
- standard ICT tools such as Email, secure filestore and calendars.
- access to key information through the MySouthampton Student Mobile Portal which delivers timetables, Module information, Locations, Tutor details, Library account, bus timetables etc. while you are on the move.
- IT support through a comprehensive website, telephone and online ticketed support and a dedicated helpdesk in the Hartley Library.
- Enabling Services offering support services and resources via a triage model to access crisis management, mental health support and counselling.
- assessment and support (including specialist IT support) facilities if you have a disability, long term health problem or Specific Learning Difficulty (e.g. dyslexia)
- the Student Services Centre (SSC) to assist you with a range of general enquiries including financial matters, accommodation, exams, graduation, student visas, ID cards
- Careers and Employability Services, advising on job search, applications, interviews, paid work, volunteering and internship opportunities and getting the most out of your extra-curricular activities alongside your degree programme when writing your CV
- other support that includes health services (GPs), chaplaincy (for all faiths) and 'out of hours' support for students in Halls (18.00-08.00)a Centre for Language Study, providing assistance in the development of English language and study skills for non-native speakers.
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The Students' Union provides

- an academic student representation system, consisting of Course Representatives, Academic Presidents, Faculty Officers and the Vice-President Education; SUSU provides training and support for all these representatives, whose role is to represent students' views to the University.
- opportunities for extracurricular activities and volunteering
- an Advice Centre offering free and confidential advice including support if you need to make an academic appeal
- support for student peer-to-peer groups, such as Nightline.

In the Faculty and your Discipline you will be able to access:

- Course books for each year of the programme
- introductory sessions for all years of the programme
- library information retrieval seminar
- workshop training
- small group tutorials in Parts 1 and II of the programmes
- the Engineering Design and Manufacturing Centre (EDMC) equipped with a range of workshop equipment, CAD/CAM
- engineering and specific software available on specifically designated computers
- personal academic tutors to assist you with personal problems and to advise on academic issues (contact maintained during periods of studying abroad); a senior tutor is also available
- access to academic staff through an open door policy as well as timetabled personal academic tutor meetings, appointment system and e-mail
- research seminars and invited lectures
- Student Office for the administration of your programme.

Methods for Evaluating the Quality of Teaching and Learning

You will have the opportunity to have your say on the quality of the programme in the following ways:

- completing student evaluation questionnaires for each module of the programme

- acting as a student representative on various committees, e.g. Staff: Student Liaison Committees, Faculty Programmes Committee OR providing comments to your student representative to feed back on your behalf.
- serving as a student representative on Scrutiny Groups for programme validation
- taking part in programme validation meetings by joining a panel of students to meet with the Scrutiny Group

The ways in which the quality of your programme is checked outside the University, are:

- regular module and programme reports which are monitored by the Faculty
- programme validation, normally every five years.
- external examiners, who produce an annual report
- professional body accreditation/inspection
- the national Research Excellence Framework (our research activity contributes directly to the quality of your learning experience)
- institutional Review by the Quality Assurance Agency

The ways in which the quality of your programme is checked inside the University, are:

- discipline, and School boards, convening at the end of each academic year, which consider the outcomes of each module's evaluation.
- moderation of examination papers, coursework and projects, both internally and externally.
- annual examiners' meetings and examiners' boards.
- annual programme and module reviews considering your feedback from all sources, feedback from teaching panels, external examiners and other bodies and student performance.
- periodic meetings of the School Industrial Advisory Board
- response to results from the National Student Survey
- revalidation by the University at least every five years.

Note that quality assurance of the part of the programme taken abroad, where applicable, is subject to the quality procedures of the relevant institutions. These procedures are subject to periodic monitoring by members of staff of the Faculty of Engineering and Physical Sciences.

Career Opportunities

Our Aeronautics and Astronautics degrees open up a wide range of exciting career opportunities. Previous graduate jobs have included aerospace engineer, pilot, race car designer, IT and management consultant, software and systems engineer, as well as roles in research and postgraduate study.

If you are considering a career in the armed forces, Southampton is one of the universities designated for the Defence Technical Undergraduate Scheme, which provides sponsored places to students on specific courses, including Aeronautics and Astronautics, and has active Army, Navy and Air Force units.

Among our many successful Aeronautics and Astronautics graduates is Adrian Newey, who has worked as an F1 designer for Williams and McLaren, and is now the chief technical officer of Red Bull F1 racing team. Top motor racing teams look to Southampton for the best new aerodynamics talent for the future.

External Examiner(s) for the programme

Name: Professor Mark Lowenberg
Institution: University of Bristol

Students must not contact External Examiner(s) directly, and external examiners have been advised to refer any such communications back to the University. Students should raise any general queries about the assessment and examination process for the programme with their Course Representative, for consideration through the Staff Student Liaison Committee in the first instance, and Student representatives on the Staff Student Liaison Committees will have the opportunity to consider external examiners' reports as part of the University's quality assurance process.

External examiners do not have a direct role in determining results for individual students, and students wishing to discuss their own performance in any assessment should contact their personal academic tutor in the first instance.

Please note: 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 s/he takes full advantage of the learning opportunities that are provided. More detailed information can be found in the programme handbook (or other appropriate guide) or online at http://www.southampton.ac.uk/studentservices/academic-life/faculty-handbooks.page.

Appendix 1a

Programme Structure

The information within this Appendix is liable to change in minor ways from year to year. It is accurate at the time of writing.

Part 1(Level 4)

The first year provides a background in engineering science, emphasising aerospace engineering aspects. We have an award winning induction programme during which teams of new students work together in a design and build project. This exciting introduction provides the opportunity to get to know fellow students and gain hands-on experience.

All modules below are at level 4 and are core, i.e. all required assessments must be taken and passed at the required pass mark. They total 60 ECTS (120 CATS). No optional modules will be undertaken in Part I. All modules in Part I are taught over two semesters with formal examinations held at the end of semester 2. Feedback on progress is provided throughout the year in several ways including via laboratory work, example sheets, tests, coursework and a formative exam at the end of Semester 1.

For information on the summative assessment of Part I please see Appendix 3.

Module Code	Module Name	Semester	Credit Points (ECTS/CATS)
FEEG1001	Design & Computing	1,2	15/30
FEEG1002	Mechanics, Structures & Materials	1,2	15/30
FEEG1003	Thermofluids	1,2	7.5/15
FEEG1004	Electrical & Electronic Systems	1,2	7.5/15
MATH1054	Maths for Engineering and the Environment I	1,2	7.5/15
SESA1015	Aircraft Operations & Flight Mechanics	1,2	7.5/15

Part II (Level 5)

The second year covers the main Aeronautics and Astronautics subjects with modules tailored to the discipline. The modules total 60 ECTS (120 CATS) across two semesters. Towards the end of Part II you have the opportunity to select the specialist or interdisciplinary theme that you will follow in Parts III and IV (MEng only, see Part III for details), as well as your Part III Individual Project.

Students selecting the Industrial Placement Year theme will take the placement module FEEG3009 either between Parts II and III or Parts III and IV. They may not start their placement until Part II has been passed. The IPY module FEEG3009 is Core for students taking the 'with IPY' version of the programme. Should the placement not be passed students can transfer back to the substantive programme.

Modules at level 5 totalling 60 ECTS (120 CATS); all modules are compulsory

Module Code	Module Name	Semester	Credit Points (ECTS/CATS)
FEEG2001	Systems Design & Computing	1,2	7.5/15
FEEG2005	Materials & Structures	2	7.5/15
FEEG2006	Engineering Management & Law	1,2	7.5/15
MATH2048	Maths for Engineering and the environment II	1	7.5/15
SESA2022	Aerodynamics	1	7.5/15
SESA2023	Propulsion	2	7.5/15
SESA2024	Astronautics	1	7.5/15
SESA2025	Mechanics of Flight	2	7.5/15

Part III/IV Specialist Themes (MEng only)

Aerodynamics	Materials & Structures
Air Vehicle Systems & Design	Semester Abroad
Computational Engineering & Design	Spacecraft Engineering
Engineering Management	

BEng Aeronautics & Astronautics

Part III Modules at level 6 totalling 60 ECTS (120 CATS)
Compulsory modules (C), *Optional modules* (O)
Where optional modules have been specified, the following is an indicative list of available optional modules, which are subject to change each academic year. Please note in some instances modules have limited spaces available.

Module Code	Module Title	Credit Points (ECTS/CATS)	Choice Type	Semester
FEEG3003	**Individual Project (core)**	15/30	C	1,2
SESA3026	Aircraft Structural Design	7.5/15	C	2
SESA3029	Aerothermodynamics	7.5/15	C	1
SESA3030	Aerospace Control Systems	7.5/15	C	1
SESA3040	Introduction to Aircraft Design	7.5/15	C	2
	Option	7.5/15	O	1
	Option	7.5/15	O	2

Semester 1 options:

Module Code	Module Title
FEEG3001	Finite Element Analysis in Solid Mechanics
FEEG3004	Human Factors in Engineering
SESM3031	Automobile Systems
SESG3019	UG Ambassador Scheme
SESG3024	Manufacturing and Materials
LANGXXXX	Language Module
LAWS3130	Industrial Law
MANG3048	Management Science for Engineers
MATH3081	Operational Research
MATH3083	Advanced Partial Differential Equations
FEEG6005	Applications of CFD
SESA6070	Experimental Methods for Aerodynamics

Semester 2 options:

Module Code	Module Title
FEEG3011	Introduction to Turbulence and Mixing
SESA3033	Wing Aerodynamics
SESM3032	Heat Transfer and Applications
MATH3082	Optimisation
MANG3049	Accounting and Finance for Engineers

Part III Modules at level 6 totalling 60 ECTS (120 CATS)
Compulsory modules (C), *Theme-specific modules (T)*, *Optional modules* (O)
Where optional modules have been specified, the following is an indicative list of available optional modules, which are subject to change each academic year. Please note in some instances modules have limited spaces available.

Module Code	Module Title	Credit Points ECTS/CATS	Choice Type	Semester
FEEG3003	**Individual Project (core)**	15/30	C	1,2
SESA3026	Aircraft Structural Design	7.5/15	C	2
SESA3029	Aerothermodynamics	7.5/15	C	1
SESA3030	Aerospace Control Systems	7.5/15	C	1
SESA3040	Introduction to Aircraft Design	7.5/15	C	2
	Option	7.5/15	O	1
	Option	7.5/15	O	2

Semester 1 options:

Module Code	Module Title
FEEG3001	Finite Element Analysis in Solid Mechanics
LAWS3130	Industrial Law
MANG3048	Management Science for Engineers
FEEG6005	Applications of CFD

Students must take either FEEG3001, SESM6047 or FEEG6005 as part of their degree. Therefore, if FEEG3001 or FEEG6005 is not selected in Part III, either SESM6047 or FEEG6005 must be taken in Part IV.
[SESM6047 refers to the level 7 equivalent of FEEG3001]

Semester 2 options:

Module Code	Module Title
FEEG3011	Introduction to Turbulence and Mixing
SESA3033	Wing Aerodynamics
SESM3028	Biomaterials
SESM3029	Engineering Design with Management

Part IV Modules at levels 7 totalling 60 ECTS/120 CATS
Compulsory modules (C), *Theme-specific modules* (T), *Optional modules* (O)

Module Code	Module Title	Credit Points ECTS/CATS	Choice Type	Semester
FEEG6013	**Group Design Project (core)**	22.5/45	C	1,2
MANG6318	Advanced Management	7.5/15	C	2
SESM6047/ FEEG6005	FEA in Solid Mechanics/Applications of CFD/Option	7.5/15	O	1
	Option	7.5/15	O	1/2
	Option	7.5/15	O	1/2
	Option	7.5/15	O	1/2

SESM6047 FEA in Solid Mechanics or FEEG6005 Applications of CFD must be taken if FEEG3001 or FEEG6005 was not selected in Part III. Otherwise an optional module can be selected as outlined below.

Options (O) may be theme-specific modules from other themes (subject to prerequisites) or interdisciplinary modules (e.g. Human Factors in Engineering, Management, Modern Languages, etc.). Only 7.5 ECTS (15 CATS) of options can be selected from modules originating from outside the School of Engineering and all modules must be at level 7. See Appendix 1b for a full list of modules.

MEng Aeronautics & Astronautics/Aerodynamics

Part III Modules at level 6 totalling 60 ECTS (120 CATS)
Compulsory modules (C), *Theme-specific modules (T)*, *Optional modules* (O).
Where optional modules have been specified, the following is an indicative list of available optional modules, which are subject to change each academic year. Please note in some instances modules have limited spaces available.

Module Code	Module Title	Credit Points ECTS/CATS	Choice Type	Semester
FEEG3003	**Individual Project (core)**	15/30	C	1,2
SESA3026	Aircraft Structural Design	7.5/15	C	2
SESA3029	Aerothermodynamics	7.5/15	C	1
SESA3030	Aerospace Control Systems	7.5/15	C	1
SESA3040	Introduction to Aircraft Design	7.5/15	C	2
SESA3033	Wing Aerodynamics	7.5/15	T	2
	Option	7.5/15	O	1

Semester 1 options:

Module Code	Module Title
FEEG3001	Finite Element Analysis in Solid Mechanics
FEEG6005	Applications of CFD
SESA6070	Experimental Methods for Aerodynamics

Students must take either FEEG3001, SESM6047 or FEEG6005 as part of their degree. Therefore, if FEEG3001 or FEEG6005 is not selected in Part III, either SESM6047 or FEEG6005 must be taken in Part IV.
[SESM6047 refers to the level 7 equivalent of FEEG3001]

Part IV Modules at levels 7 totalling 60 ECTS/120 CATS
Compulsory modules (C), *Theme-specific modules* (T), *Optional modules* (O)

Module Code	Module Title	Credit Points ECTS/CATS	Choice Type	Semester
FEEG6013	**Group Design Project (core)**	22.5/45	C	1,2
MANG6318	Advanced Management	7.5/15	C	2
SESM6047/ FEEG6005	FEA in Solid Mechanics/Applications of CFD/Theme-specific option	7.5/15	T	1/2
	Theme-specific option	7.5/15	T	1/2
	Theme-specific option	7.5/15	T	1/2
	Option	7.5/15	O	1/2

SESM6047 FEA in Solid Mechanics or FEEG6005 Applications of CFD must be taken if FEEG3001 or FEEG6005 was not selected in Part III. Otherwise a theme-specific option can be selected as outlined below.

Semester 1 Theme-specific options (T):

Module Code	Module Title
SESA6061	Turbulence: Physics and Modelling
SESA6070	Experimental Methods for Aerodynamics

Semester 2 Theme-specific options (T):

Module Code	Module Title
SESA6072	Race Car Aerodynamics
SESA6074	Hypersonic and High Temperature Gas Dynamics

Options (O) may be unselected theme-specific modules or theme-specific modules from other themes (subject to prerequisites) or interdisciplinary modules (e.g. Human Factors in Engineering, Management, Modern Languages, etc.).
Only 7.5 ECTS (15 CATS) of options can be selected from modules originating from outside the School of Engineering and all modules must be at level 7. See Appendix 1b for a full list of modules.

MEng Aeronautics & Astronautics/ Air Vehicle Systems & Design

Part III Modules at level 6 totalling 60 ECTS (120 CATS)
Compulsory modules (C), *Theme-specific modules (T)*, *Optional modules* (O).
Where optional modules have been specified, the following is an indicative list of available optional modules, which are subject to change each academic year. Please note in some instances modules have limited spaces available.

Module Code	Module Title	Credit Points ECTS/CATS	Choice Type	Semester
FEEG3003	**Individual Project (core)**	15/30	C	1,2
SESA3026	Aircraft Structural Design	7.5/15	C	2
SESA3029	Aerothermodynamics	7.5/15	C	1
SESA3030	Aerospace Control Systems	7.5/15	C	1
SESA3040	Introduction to Aircraft Design	7.5/15	C	2
SESA3033	Wing Aerodynamics	7.5/15	T	2
	Option	7.5/15	O	1

Semester 1 options:

Module Code	Module Title
FEEG 3001	Finite Element Analysis in Solid Mechanics
FEEG 3004	Human Factors in Engineering
FEEG 6005	Applications of CFD
SESA 6070	Experimental Methods for Aerodynamics
SESG 3019	UG Ambassador Scheme
SESG 3024	Manufacturing and Materials
SESM 3031	Automobile Systems

Students must take either FEEG3001, SESM6047 or FEEG6005 as part of their degree. Therefore, if FEEG3001 or FEEG6005 is not selected in Part III, either SESM6047 or FEEG6005 must be taken in Part IV.
[SESM6047 refers to the level 7 equivalent of FEEG3001]

Part IV Modules at levels 7 totalling 60 ECTS/120 CATS
Compulsory modules (C), *Theme-specific modules* (T), *Optional modules* (O).

Module Code	Module Title	Credit Points ECTS/CATS	Choice Type	Semester
FEEG6013	**Group Design Project (core)**	22.5/45	C	1,2
MANG6318	Advanced Management	7.5/15	C	2
SESM6047/ FEEG6005	FEA in Solid Mechanics/Applications of CFD/Theme-specific option	7.5/15	T	1/2
	Theme-specific option	7.5/15	T	1/2
	Theme-specific option	7.5/15	T	1/2
	Option	7.5/15	O	1/2

SESM6047 FEA in Solid Mechanics or FEEG6005 Applications of CFD must be taken if FEEG3001 or FEEG6005 was not selected in Part III. Otherwise a theme-specific option can be selected as outlined below.

Semester 1 Theme-specific options (T):

Module Code	Module Title
FEEG 6006	Systems Reliability
SESA 6075	Aircraft Propulsion

Semester 2 Theme-specific options (T):

Module Code	Module Title
FEEG 6009	Design Search and Optimisation (DSO)
SESA 6064	Aircraft Structures
SESA 6069	Avionics
SESA 6073	Powered Lift

Options (O) may be unselected theme-specific modules or theme-specific modules from other themes (subject to prerequisites) or interdisciplinary modules (e.g. Human Factors in Engineering, Management, Modern Languages, etc.).
Only 7.5 ECTS (15 CATS) of options can be selected from modules originating from outside the School of Engineering and all modules must be at level 7. See Appendix 1b for a full list of modules.

MEng Aeronautics & Astronautics/Computational Engineering & Design

Part III Modules at level 6 totalling 60 ECTS (120 CATS)
Compulsory modules (C), *Theme-specific modules (T)*, *Optional modules* (O).
Where optional modules have been specified, the following is an indicative list of available optional modules, which are subject to change each academic year. Please note in some instances modules have limited spaces available.

Module Code	Module Title	Credit Points ECTS/CATS	Choice Type	Semester
FEEG3003	**Individual Project (core)**	15/30	C	1,2
SESA3026	Aircraft Structural Design	7.5/15	C	2
SESA3029	Aerothermodynamics	7.5/15	C	1
SESA3030	Aerospace Control Systems	7.5/15	C	1
SESA3040	Introduction to Aircraft Design	7.5/15	C	2
	Option	7.5/15	O	1
	Option	7.5/15	O	2

Semester 1 options:

Module Code	Module Title
FEEG3001	Finite Element Analysis in Solid Mechanics
FEEG6005	Applications of CFD

Semester 2 options:

Module Code	Module Title
FEEG3011	Introduction to Turbulence and Mixing
SESA3033	Wing Aerodynamics
SESM3028	Biomaterials
SESM3029	Engineering Design with Management

Part IV Modules at levels 7 totalling 60 ECTS/120 CATS
Compulsory modules (C), *Theme-specific modules* (T), *Optional modules* (O)

Module Code	Module Title	Credit Points ECTS/CATS	Choice Type	Semester
FEEG6013	**Group Design Project** (**core**)	22.5/45	C	1,2
MANG6318	Advanced Management	7.5/15	C	2
	Theme-specific option	7.5/15	T	1/2
	Theme-specific option	7.5/15	T	1/2
	Theme-specific option	7.5/15	T	1/2
	Option	7.5/15	O	1/2

Semester 1 Theme-specific options (T):

Module Code	Module Title
FEEG6002	Advanced Computational Methods I
FEEG6005	Applications of CFD
FEEG6006	Systems Reliability
MATH6141	Numerical Methods

Semester 2 Theme-specific options (T):

Module Code	Module Title
FEEG6009	Design Search and Optimisation (DSO)
FEEG6010	Advanced Finite Element Analysis

SESM6038	Computational methods in biomedical engineering design

Options (O) may be unselected theme-specific modules or theme-specific modules from other themes (subject to prerequisites) or interdisciplinary modules (e.g. Human Factors in Engineering, Management, Modern Languages, etc.). Only 7.5 ECTS (15 CATS) of options can be selected from modules originating from outside the School of Engineering and all modules must be at level 7. See Appendix 1b for a full list of modules.

MEng Aeronautics & Astronautics/Engineering Management

Part III Modules at level 6 totalling 60 ECTS (120 CATS)
Compulsory modules (C), *Theme-specific modules (T)*, *Optional modules* (O).
Where optional modules have been specified, the following is an indicative list of available optional modules, which are subject to change each academic year. Please note in some instances modules have limited spaces available.

Module Code	Module Title	Credit Points ECTS/CATS	Choice Type	Semester
FEEG3003	**Individual Project (core)**	15/30	C	1,2
SESA3026	Aircraft Structural Design	7.5/15	C	2
SESA3029	Aerothermodynamics	7.5/15	C	1
SESA3030	Aerospace Control Systems	7.5/15	C	1
SESA3040	Introduction to Aircraft Design	7.5/15	C	2
	Option	7.5/15	O	1
	Option	7.5/15	O	2

Semester 1 options:

Module Code	Module Title
LAWS3130	Industrial Law
MANG3048	Management Science for Engineers

Semester 2 options:

Module Code	Module Title
FEEG3011	Introduction to Turbulence and Mixing
SESA3033	Wing Aerodynamics
SESM3028	Biomaterials
SESM3029	Engineering Design with Management
MANG3049	Accounting and Finance for Engineers

Part IV Modules at levels 7 totalling 60 ECTS/120 CATS
Compulsory modules (C), *Theme-specific modules* (T), *Optional modules* (O)

Module Code	Module Title	Credit Points ECTS/CATS	Choice Type	Semester
FEEG6013	**Group Design Project (core)**	22.5/45	C	1,2
MANG6318	Advanced Management	7.5/15	C	2
SESM6047/ FEEG6005	FEA in Solid Mechanics/Applications of CFD	7.5/15	T	1
	Theme-specific option	7.5/15	T	1/2
	Theme-specific option	7.5/15	T	1/2
	Option	7.5/15	O	1/2

Semester 1 Theme-specific options (T):

Module Code	Module Title
MANG6045	Consultancy Skills (7.5 CATS)
MANG6130	Strategic Management (7.5 CATS)
MANG6247	Information Systems Management and Strategy

Semester 2 Theme-specific options (T):

Module Code	Module Title

MANG6028	Corporate Finance
MANG6143	Project Risk Management
MANG6292	Operations Management (7.5 CATS)
MANG6293	Project Management (7.5 CATS)
MANG6318	Advanced Management

Options (O) may be theme-specific modules from other themes (subject to prerequisites) and limited to modules originating from within the School of Engineering. All modules must be at level 7. See Appendix 1b for a full list of modules.

MEng Aeronautics & Astronautics/Materials & Structures

Part III Modules at level 6 totalling 60 ECTS (120 CATS)
Compulsory modules (C), *Theme-specific modules (T)*, *Optional modules* (O).
Where optional modules have been specified, the following is an indicative list of available optional modules, which are subject to change each academic year. Please note in some instances modules have limited spaces available.

Module Code	Module Title	Credit Points ECTS/CATS	Choice Type	Semester
FEEG3003	**Individual Project (core)**	15/30	C	1,2
SESA3026	Aircraft Structural Design	7.5/15	C	2
SESA3029	Aerothermodynamics	7.5/15	C	1
SESA3030	Aerospace Control Systems	7.515	C	1
SESA3040	Introduction to Aircraft Design	7.5/15	C	2
FEEG3001	FEA in Solid Mechanics	7.5/15	T	1
	Option	7.5/15	O	2

Semester 2 options:

Module Code	Module Title
FEEG3011	Introduction to Turbulence and Mixing
SESA3033	Wing Aerodynamics
SESM3028	Biomaterials
SESM3029	Engineering Design with Management
FEEG6010	Advanced Finite Element Analysis
SESA6064	Aircraft Structures

Part IV Modules at levels 7 totalling 60 ECTS/120 CATS
Compulsory modules (C), *Theme-specific modules* (T), *Optional modules* (O)

Module Code	Module Title	Credit Points ECTS/CATS	Choice Type	Semester
FEEG6013	**Group Design Project (core)**	22.5/45	C	1,2
MANG6318	Advanced Management	7.5/15	C	2
	Theme-specific option	7.5/15	T	1/2
	Theme-specific option	7.5/15	T	1/2
	Theme-specific option	7.5/15	T	1/2
	Option	7.5/15	O	1/2

Semester 1 Theme-specific options (T):

Module Code	Module Title
SESG 3024	Manufacturing and Materials*
SESA 6059	Spacecraft Structural Design
SESG 6039	Composites Engineering Design and Mechanics
SESG 6042	Microstructural Engineering for Transport Applications
SESG 6044	Microstructure and Surface Characterisation

*may only be taken if FEEG6010 or SESA6064 was taken in Part III.

Semester 2 Theme-specific options (T):

Module Code	Module Title
FEEG 6010	Advanced Finite Element Analysis**
SESA 6064	Aircraft Structures**
SESG 6040	Failure of Materials and Components
SESG 6044	Microstructure and Surface Characterisation

**may only be taken if not taken in Part III.

Options (O) may be unselected theme-specific modules or theme-specific modules from other themes (subject to prerequisites) or interdisciplinary modules (e.g. Human Factors in Engineering, Management, Modern Languages, etc.).
Only 7.5 ECTS (15 CATS) of options can be selected from modules originating from outside the School of Engineering and all modules must be at level 7 (with the exceptions above). See Appendix 1b for a full list of modules.

MEng Aeronautics & Astronautics/Semester Abroad

An opportunity to spend a semester abroad studying at one of our partner institutions in Part III is offered. Students will be taught in English and are to take modules totalling 30 ECTS (60 CATS). The assessment of these modules will be carried out by the host institution and an ECTS-weighted average mark for the semester abroad will be inserted into the appropriate (semester 1 or semester 2) Semester Abroad module (weighted at 30 ECTS/60 ECTS). The University-approved marks conversion formula will be employed to do this.

Part III Semester 1 spent abroad:

Part III Modules at level 6 totalling 60 ECTS/120 CATS
Compulsory modules (C), Theme-specific modules (T), Optional modules (O).
Where optional modules have been specified, the following is an indicative list of available optional modules, which are subject to change each academic year. Please note in some instances modules have limited spaces available.

Module Code	Module Title	Credit Points ECTS/CATS	Choice Type	Semester
FEEG3003	**Individual Project (core)**	15/30	C	2
FEEG3005	Semester Abroad module Option 1 (Semester 1)	30/60	C	1
	In liaison with the lead for Semester Abroad all students must take, either here or abroad the following modules (or their equivalents at the other institution).			
SESA3026	Aircraft Structural Design	7.5/15		2
SESA3029	Aerothermodynamics	7.5/15		1
SESA3030	Aerospace Control Systems	7.5/15		1
SESA3040	Introduction to Aircraft Design	7.5/15		2
	Instead of SESA3040 students may take, either here or abroad the following modules (or their equivalents at the other institution):			
SESA3037	Concurrent Spacecraft Design	7.5/15		2
SESA3041	Spacecraft Systems Engineering and Design	7.5/15		1
	For each module equivalent to SESA3026 and SESA3037 or SESA3040 taken abroad or deferred to Part IV, a theme-specific optional module may be chosen.	7.5/15	T	2
	For each module at level 6 deferred to Part IV, a module at level 7 must be taken abroad.			

Theme-specific options (T) are as follows:

FEEG3001-Finite Element Analysis in Solid Mechanics (Sem 1); FEEG3004-Human Factors in Engineering (Sem 1); FEEG6005-Applications of CFD (Sem 1); FEEG3011-Introduction to Turbulence and Mixing (Sem 2); MANG3048-Management Science for Engineers (Sem 1); MANG3049-Accounting and Finance for Engineers (Sem 2); SESA3038-Space Environment (Sem 2); SESA3039-Advanced Astronautics (Sem 1); SESA3033- Wing Aerodynamics (Sem 2); SESA6070-Experimental Methods for Aerodynamics (Sem 1); SESG3024-Manufacturing and Materials (Sem 1); SESM-3028-Biomaterials (Sem 2); SESM3029-Engineering Design with Management (Sem 2); SESM3030-Control and Instrumentation (Sem 1); SESM3031-Automobile Systems (Sem 1); SESM3032- Heat Transfer and Applications (Sem 2); SESM3033-Orthopaedic Biomechanics (Sem 1).

Part IV Modules at levels 7 (min 60) and 6 (max 15) totalling 60 ECTS
Compulsory modules (C), *Theme-specific modules* (T), *Optional modules* (O)

Module Code	Module Title	Credit Points ECTS/CATS	Choice Type	Semester	Level
FEEG6013	**Group Design Project (core)**	22.5/45	C	1,2	7
MANG6318	Advanced Management	7.5/15	C	2	7
	If the module requirements shown for Part III above were <u>not</u> met in Part III up to 15 ECTS credits to be taken in Part IV from the following level 6 modules in liaison with the lead for Semester Abroad:				
SESA3026	Aircraft Structural Design	7.5/15	T	2	6
SESA3029	Aerothermodynamics	7.5/15	T	1	6
SESA3030	Aerospace Control Systems	7.5/15	T	1	6
SESA3037	Concurrent Spacecraft Design	7.5/15	T	2	6
SESA3040	Introduction to Aircraft Design	7.5/15	T	2	6
SESA3041	Spacecraft Systems Engineering and Design	7.5/15	T	1	6
	If all module requirements for Part III can be met in Part IV by taking less than 15 ECTS credit from the above list, theme-specific optional modules may be chosen instead.				
	In liaison with the lead for Semester Abroad all students must take, either here or abroad the following modules (or their equivalents at the other institution).				
FEEG6005	Applications of CFD	7.5/15	T	1	7
	Instead of FEEG6005 students may take, either here or abroad the following modules (or their equivalents at the other institution):				
SESM6047	Finite Element Analysis in Solid Mechanics	7.5/15	T	1	7
	For each module equivalent to FEEG6005 or FEEG3001 taken abroad, a theme-specific optional module may be chosen.				
	And 7.5 ECTS from Level 7 options				
	Option	7.5/15	O	1/2	7

Part IV Theme-specific options (T) and options (O) a maximum of 15 ECTS at level 6 including those shown above, remaining must be level 7 and may be theme-specific modules from other themes (subject to prerequisites) or interdisciplinary modules. Only 7.5 ECTS (15 CATS) of options can be selected from modules originating from outside the School of Engineering. See Appendix 1b for details.

Part III Semester 2 spent abroad:

Part III Modules at level 6 totalling 60 ECTS/120 CATS
Compulsory modules (C), *Theme-specific modules (T)*, *Optional modules* (O)

Module Code	Module Title	Credit Points ECTS/CATS	Choice Type	Semester
FEEG3003	**Individual Project (core)**	15/30	C	2
FEEG3006	Semester Abroad module Option 1 (Semester 2)	30/60	C	1
	In liaison with the lead for Semester Abroad all students must take, either here or abroad the following modules (or their equivalents at the other institution).			
SESA3026	Aircraft Structural Design	7.5/15		2
SESA3029	Aerothermodynamics	7.5/15		1
SESA3030	Aerospace Control Systems	7.5/15		1
SESA3040	Introduction to Aircraft Design	7.5/15		2
	Instead of SESA3040 students may take, either here or abroad the following modules (or their equivalents at the other institution):			
SESA3037	Concurrent Spacecraft Design	7.5/15		2
SESA3041	Spacecraft Systems Engineering and Design	7.5/15		1
	For each module equivalent to SESA3029, SESA3030 and SESA3041 taken abroad or deferred to Part IV, a theme-specific optional may be chosen.	7.5/15	T	1
	For each module at level 6 deferred to Part IV, a module at level 7 must be taken abroad.			

Theme-specific options (T) are as follows:
FEEG3001-Finite Element Analysis in Solid Mechanics (Sem 1); FEEG3004-Human Factors in Engineering (Sem 1); FEEG6005-Applications of CFD (Sem 1); FEEG3011-Introduction to Turbulence and Mixing (Sem 2); MANG3048-Management Science for Engineers (Sem 1); MANG3049-Accounting and Finance for Engineers (Sem 2); SESA3038-Space Environment (Sem 2); SESA3039-Advanced Astronautics (Sem 1); SESA3033- Wing Aerodynamics (Sem 2); SESA6070-Experimental Methods for Aerodynamics (Sem 1); SESG3024-Manufacturing and Materials (Sem 1); SESM-3028-Biomaterials (Sem 2); SESM3029-Engineering Design with Management (Sem 2); SESM3030-Control and Instrumentation (Sem 1); SESM3031-Automobile Systems (Sem 1); SESM3032- Heat Transfer and Applications (Sem 2); SESM3033-Orthopaedic Biomechanics (Sem 1).

MEng Aeronautics & Astronautics/Spacecraft Engineering

Part III Modules at level 6 totalling 60 ECTS (120 CATS)
Compulsory modules (C), *Theme-specific modules (T)*, *Optional modules* (O)

Module Code	Module Title	ECTS/CATS Credit Points	Choice Type	Semester
FEEG3003	**Individual Project (core)**	15/30	C	1,2
SESA3026	Aircraft Structural Design	7.5/15	C	2
SESA3029	Aerothermodynamics	7.5/15	C	1
SESA3030	Aerospace Control Systems	7.5/15	C	1
SESA3039	Advanced Astronautics	7.5/15	C	1
SESA3041	Spacecraft Systems Engineering and Design	7.5/15	C	1
	Theme-specific option	7.5/15	T	2

Theme-specific options (T):

Module Code	Module Title

SESA3037	Concurrent Spacecraft Design
SESA3038	Space Environment

Part IV Modules at levels 7 totalling 60 ECTS/120 CATS
Compulsory modules (C), *Theme-specific modules* (T), *Optional modules* (O)

Module Code	Module Title	Credit Points ECTS/CATS	Choice Type	Semester
FEEG6013	**Group Design Project (core)**	22.5/45	C	1,2
MANG6318	Advanced Management	7.5/15	C	2
SESM6047	FEA in Solid Mechanics	7.5/15	T	1
	Theme-specific option	7.5/15	T	1/2
	Theme-specific option	7.5/15	T	1/2
	Option	7.5/15	O	1/2

Semester 1 Theme-specific options (T):

Module Code	Module Title
SESA6059	Spacecraft Structural Design
SESA6071	Spacecraft Propulsion

Semester 2 Theme-specific options (T):

Module Code	Module Title
SESA6076	Spacecraft Orbital Mechanics and Control
SESA6081	Spacecraft Instrumentation

Options (O) may be unselected theme-specific modules or theme-specific modules from other themes (subject to prerequisites) or interdisciplinary modules (e.g. Human Factors in Engineering, Management, Modern Languages, etc.).
Only 7.5 ECTS (15 CATS) of options can be selected from modules originating from outside the School of Engineering. All modules must be at level 7. See Appendix 1b for a full list of modules.

Appendix 1b:

List of level 6 and level 7 modules available:

Modules are categorised as Compulsory (C), Theme Specific (T) or Optional (O). Note that theme-specific modules may be taken as options by students following other themes, subject to satisfying any pre-requisites.

Level 6 Modules

Module Code	Module Title	ECTS/ CATS Credit Points	Choice Type	Semester
FEEG3001	Finite Element Analysis in Solid Mechanics	7.5/15	T	1
FEEG3003	Individual Project	15/30	C	1,2
FEEG3004	Human Factors in Engineering	7.5/15	O	1
FEEG3005	Semester Abroad module Option 1 (Semester 1)	30/60	T	1
FEEG3006	Semester Abroad module Option 1 (Semester 2)	30/60	T	2
FEEG3007	Semester Abroad module Option 2 (Semester 1)	15/15	T	1
FEEG3008	Semester Abroad module Option 2 (Semester 2)	22.5/45	T	2
FEEG3011	Introduction to Turbulence and Mixing	7.5/15	O	2
SESA3026	Aircraft Structural Design	7.5/15	C	2
SESA3029	Aerothermodynamics	7.5/15	C	1
SESA3030	Aerospace Control Systems	7.5/15	C	1
SESA3033	Wing Aerodynamics	7.5/15	T	2
SESA3037	Concurrent Spacecraft Design	7.5/15	O	2
SESA3038	Space Environment	7.5/15	O	2
SESG3019	UG Ambassador Scheme	7.5/15	O	1
SESG3024	Manufacturing & Materials	7.5/15	T	1
SESM3028	Biomaterials	7.5/15	T	2
SESM3029	Engineering Design with Management	7.5/15	T	2
SESM3030	Control & Instrumentation	7.5/15	O	1
SESM3031	Automobile Systems	7.5/15	O	1
SESM3032	Heat Transfer and Applications	7.5/15	O	2
SESM3033	Orthopaedic Biomechanics	7.5/15	O	1

Level 6 External to Faculty Modules

Module Code	Module Title	ECTS Credit Points	Choice Type	Semester
LAWS3130	Industrial Law	7.5/15	T	1
MANG3048	Management Science for Engineers	7.5/15	T	1
MANG3049	Accounting & Finance for Engineers	7.5/15	T	2
MATH3081	Operational Research	7.5/15	O	1
MATH3082	Optimisation	7.5/15	O	2
MATH3083	Advanced Partial Differential Equations	7.5/15	O	1

Language Studies

The Centre for Language Study offers various language modules. These are offered at seven stages of proficiency, summarised below:

Stage 1 = complete beginner
Stage 2 = post GCSE
Stage 3 = post AS/A level
Stage 4 = good A Level standard
Stage 5 = A level plus one year of study
Stage 6 = A level plus two years of study
Stage 7 = virtually native speaker

Module Code	Module Title	Choice Type	Semester
LANGXXXX	Language	O	1,2

Note: Students are not permitted to take language modules in their native language, or one in which they are already fluent.

Level 7 Modules

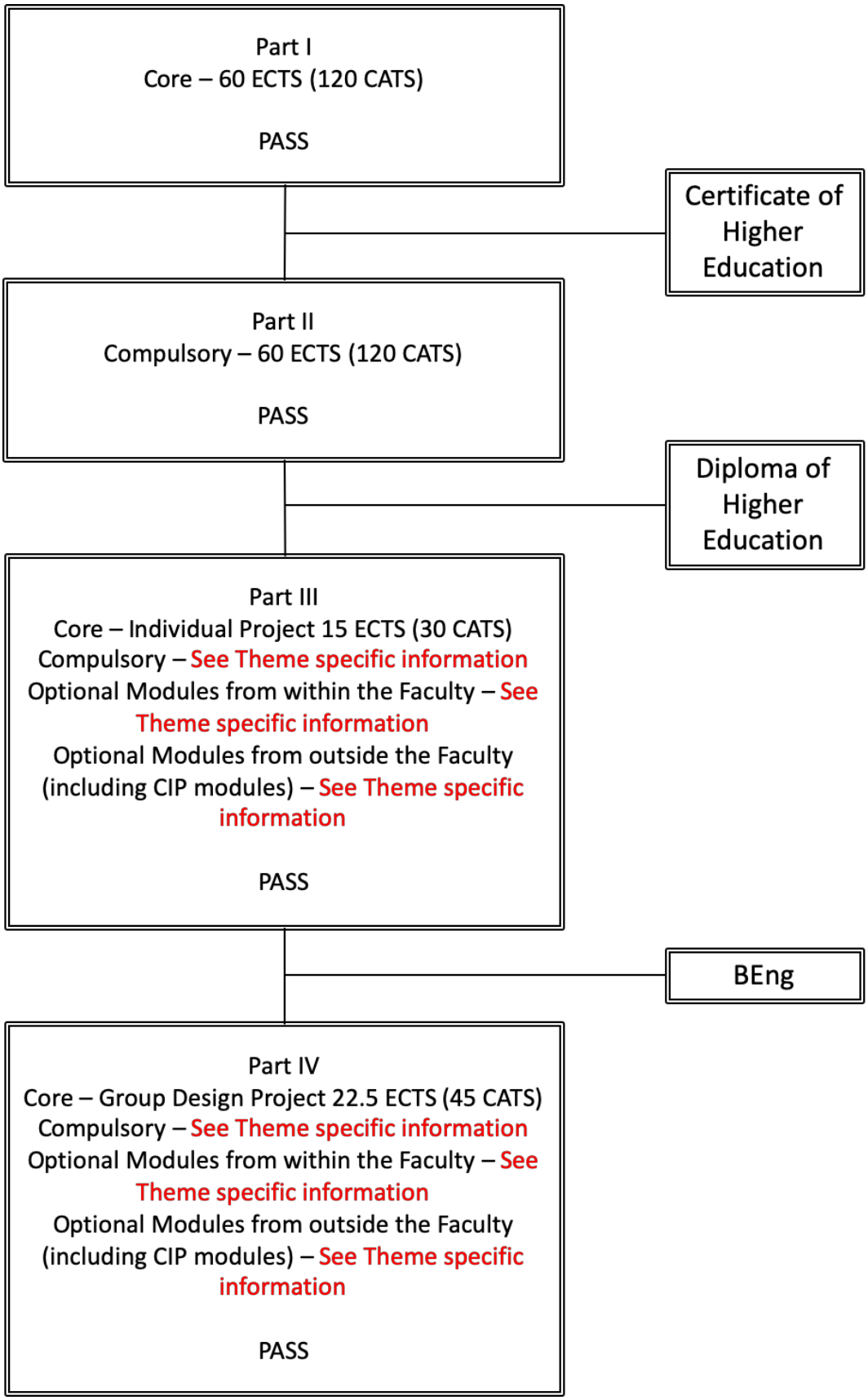
Module Code	Module Title	ECTS/ CATS Credit Points	Choice Type	Sem
SESM6047	Finite Element Analysis in Solid Mechanics	7.5/15	T	1
FEEG6002	Advanced Computational Methods I	7.5/15	T	1
FEEG6005	Applications of CFD	7.5/15	T	1
FEEG6006	Systems Reliability	7.5/15	T	1
FEEG6007	Principles of Photovoltaics, Fuel Cells and Batteries	7.5/15	O	1
FEEG6008	Advances in Photovoltaics, Fuel cells and Batteries	7.5/15	O	2
FEEG6009	Design Search & Optimisation	7.5/15	T	2
FEEG6010	Advanced Finite Element Analysis	7.5/15	T	2
FEEG6013	Group Design Project	22.5/45	C	1,2
FEEG6033	Semester Abroad module Option 2 (Semester 1)	15/30	T	1
FEEG6034	Semester Abroad module Option 2 (Semester 2)	7.5/15	T	2
SESG6042	Microstructural Engineering for Transport Applications	7.5/15	T	1
FEEG6004	Aeroacoustics	7.5/15	O	2
SESA6059	Spacecraft Structural Design	7.5/15	T	1
SESA6061	Turbulence: Physics & Modelling	7.5/15	T	1
SESA6064	Aircraft Structures	7.5/15	T	2
SESA6069	Avionics	7.5/15	T	2
SESA6066	Biological Flow	7.5/15	O	2
SESA6067	Flow Control	7.5/15	O	1
SESA6070	Experimental Techniques for Aerodynamics	7.5/15	T	1
SESA6071	Spacecraft Propulsion	7.5/15	T	1
SESA6072	Race Car Aerodynamics	7.5/15	T	2
SESA6073	Powered Lift	7.5/15	T	2
SESA6074	Hypersonic & High Temperature Gas Dynamics	7.5/15	T	2
SESA6075	Aircraft Propulsion	7.5/15	T	1
SESA6076	Spacecraft Orbital Mechanics and Control	7.5/15	T	2
SESA6077	Aeroelasticity	7.5/15	O	1
SESA6081	Spacecraft Instrumentation	7.5/15	T	2
SESG6036	Advanced Control Design	7.5/15	O	2
SESG6039	Composites Engineering Design & Mechanics	7.5/15	T	1
SESG6040	Failure of Materials & Components	7.5/15	T	2
SESG6044	Microstructural & Surface Characterisation	7.5/15	T	1,2
SESM6037	Automotive Propulsion	7.5/15	O	2
SESM6032	Sustainable energy systems, resources and usage	7.5/15	O	1
SESM6038	Computational methods in biomedical engineering design	7.5/15	O	2
SESS6067	Renewable Energy from Environmental Flows: Wind, Waves and Tide	7.5/15	O	2

Level 7 External to Faculty Modules

Module Code	Module Title	ECTS/ CATS Credit Points	Choice Type	Sem
MANG6028	Corporate Finance	7.5/15	T	1

MANG6045	Consultancy Skills	3.75/7.5	T	1
MANG6130	Strategic Management	3.75/7.5	T	1
MANG6143	Project Risk Management	7.5/15	T	2
MANG6247	Information Systems Management & Strategy	7.5/15	T	1
MANG6292	Operations Management	3.75/7.5	T	2
MANG6293	Project Management	3.75/7.5	T	2
MANG6318	Advanced Management	7.5/15	T	2
MATH6141	Numerical Methods	7.5/15	T	1

Appendix 2: Programme Structure



Appendix 3: Part 1 Summative Assessment Structure

The table below shows the summative assessment structure:

Schedule A			
	Approximate Timing	**Pass Mark**	**Repeat Assessment mode**
Multiple Choice Exam: Engineering Fundamentals	Semester 2 exam period. 2 hours	60%	Internal & External
Long Answer Exam: Engineering Problem Solving	Semester 2 exam period. 2 hours	40%	Internal & External
Discipline Specific Assessment	Semester 2 exam period	40%	Internal & External
Mathematics Exam	Semester 2 exam period. 2 hours	40%	Internal & External
Schedule B			
	Timing	**Pass Mark**	**Repeat Assessment mode**
Assessment in Design	End of Semester 2	40%	Internal only
Laboratory Report	End of Semester 2	40%	Internal only
Technical Essay	End of Semester 2	40%	Internal & External

In order to pass Part I and progress to Part II you will need to pass all of the following summative assessments:

- A **technical essay**
- A **lab report** based on one of the lab classes you take as part of your modules.
- A **Summative Design Assessment** that you will undertake as part of your Design module.
- A **Mathematics Exam** on the material you study in MATH1054.
- A **Discipline-Specific Assessment** of the content of you discipline-specific module. This will be set towards the end of semester 2 and may take the form of an exam or a piece of coursework.
- A **Multiple Choice Exam** to test your knowledge of engineering fundamentals from FEEG1002 Mechanics Structures & Materials (Statics 1, Statics 2 and Materials), and FEEG1003 Thermofluids.
- A **Long Answer Exam** to test your ability to solve problems using the concepts from FEEG1002 (Statics 1, Dynamics), FEEG1003 and FEEG1004

The regulations relating to failure in these assessments may be found in Section VI of the University Calendar

Appendix 4:

Additional Costs

Students are responsible for meeting the cost of essential textbooks, and of producing such essays, assignments, laboratory reports and dissertations as are required to fulfil the academic requirements for each programme of study. In addition to this, students registered for this programme typically also have to pay for the items listed in the table below.

In some cases you'll be able to choose modules (which may have different costs associated with that module) which will change the overall cost of a programme to you. Details of such costs will be listed in the Module Profile. Please also ensure you read the section on additional costs in the University's Fees, Charges and Expenses Regulations in the University Calendar available at www.calendar.soton.ac.uk.

Main Item	Sub-section	Programme Specific Costs
Approved Calculators		Students will require a scientific calculator. This will need to be purchased by the student. Candidates may use calculators in the examination room only as specified by the University and as permitted by the rubric of individual examination papers. The University specifies permissible models and these may be purchased from any source.
Stationery		You will be expected to provide your own day-to-day stationary items, e.g. pens, pencils, notebooks, etc.). • The third year module FEEG3003 Individual Project requires you to print an Al portrait poster on paper. The typical cost for this is in the range £5 to £20.
T**extbooks**		Where a module specifies core texts these should generally be available on the reserve list in the library. However due to demand, students may prefer to buy their own copies. These can be purchased from any source. Some modules suggest reading texts as optional background reading. The library may hold copies of such texts, or alternatively you may wish to purchase your own copies. Although not essential reading, you may benefit from the additional reading materials for the module.
Equipment and Materials	Design equipment and materials:	We provide a wide range of resources to support project based modules and activities and these will allow you to complete your assessed exercises to the highest standard. However, you may wish to customise your project by purchasing additional resource e.g. alternative manufacturing materials, electronic components, etc. You may also incur additional costs for printing e.g. large format drawings.

Main Item	Sub-section	Programme Specific Costs
	Laboratory Equipment and Materials:	Students are required to source and purchase their own batteries for the Odometry Exercise in week 6 and should be prepared to spend up to £50 per group of their own money. Receipts should be retained as expenditure may be subject to auditing. (FEEG2001) Students should be prepared to spend up to £100 per group of their own money in relation to the purchase of components for the Semester 2 Group Design Project. Receipts should be retained as expenditure may be subject to auditing (FEEG2001)
IT	Computer Discs	
	Software Licenses	
	Hardware	
Clothing	Lab Coats	
	Protective Clothing: Hard hat; safety boots; hi-viz vest/jackets;	
Printing and Photocopying Costs		In some cases, coursework and/or projects may be submitted electronically. Where it is not possible to submit electronically students will be liable for printing costs. Students are expected to cover the costs associated with the printing of drawings and graphic presentations. These are typically expected to be of the order of £20 - 50 per student. The third year module FEEG3003 Individual Project requires you to print an Al portrait poster on paper at a typical cost of £20.
Travel and subsistence	Accommodation and Travel	For additional costs related to travel and subsistence for the Industrial Placement Year, please refer to the module profile for FEEG 3009.
Optional Visits (e.g. museums, galleries)		Some modules may include additional optional visits. You will normally be expected to cover the cost of travel and admission, unless otherwise specified in the module profile. For costs related to study abroad please see the relevant module profile.

Revision History

October 2004 (N.D. Sandham)
October 2005 (N.D. Sandham)
September 2006 (N.D. Sandham)
September 2007 (A Bhaskar)
April 2008 (A Bhaskar)
February 2012 (A Barney)
July 2013 (G.T. Roberts)_(CQA 23/11/13)
June 2014 (G.T. Roberts)
April 2015_CQA
CQA addition of disclaimer August 2015
January 2016 addition of Semester Abroad options
August 2016 CQA textual edits and addition of Industrial Placement Year
July/August 2017 – module changes, textual edits and addition of part 1 summative assessment information
Updated to reflect 201819 version and removal of Admissions Criteria – CQA March 2018
Updated Faculty name to Faculty of Engineering and Physical Sciences July 2018
March 2019 (S.J.I. Walker)