

Programme Specification amendment notification

Title of Programme: BEng Honours in Aerospace, Aerospace Systems, Computer Aided, Mechanical, Manufacturing and Automotive Engineering

Programme Code: EIBENGA

As a result of the ongoing Coronavirus pandemic, the University has been required to make some revisions to this programme for the 2020/21 academic session, affecting sections C and/or D of this Programme Specification. These amendments are as follows:

Section	Amendment
D. Programme Structures, Features, Levels, Modules, and Credits	Unseen written examinations will not be returning for the semester A which typically runs from September to January each academic year. Use of alternative methods such as Online Timed Assessments and quizzes that incorporate several features to create valid assessments. There will be practice quizzes through the module prior to any assessment using the Canvas quiz.
	The School has revised the assessment structure where unseen examinations and practical sessions were key sections of the assessment. The practical sessions will still take place but not be mandatory in the assessment for the final grade in order to protect any student as a result of national Covid guidelines e.g. lockdown and self-isolation. The modules show AW which means there has been a change to Assessment Weighting where weighting is the percentage amount of the assessment, whether coursework or exam or practical, contributes to the overall grade of the module. CS means there has been a Change to the Semester the module is being taught on due to other issues.
	The table below shows the structure for the modules in Semester A 2020 2021 at all levels 4, 5 ,6 and 7 where appropriate. Table 1a in the Programme Specification module assessment structure will be replaced where applicable with the structures shown below for the affected AW and CS modules.

Level 4 2020 2021

2020-21 Programmes	Module Title	Module Code	Coursework %	Exam %	Practical %	Semester	Credit Points	DMD Change: AW = assessment weighting CS = Change Semester
EIBENGA	Engineering Mathematics	4PAM1007	100	0	0	A	15	AW

Level 5 2020 2021

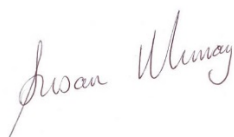
2020-21 Programmes	Module Title	Module Code	Coursework %	Exam %	Practical %	Semester	Credit Points	DMD Change: AW = assessment weighting CS = Change Semester
EIBENGA	Further Engineering Mathematics	5PAM1005	100	0	0	A	15	AW
EIBENGA	Dynamics	5ENT1114	100	0	0	A	15	AW
EIBENGA	Thermofluid Mechanics	5ENT1079	100	0	0	A	15	AW
EIBENGA	Electrical Engineering & Power Control	5ELE0058	100	0	0	A	15	AW

Level 6 2020 2021

2020-21 Programmes	Module Title	Module Code	Coursework %	Exam %	Practical %	Semester	Credit Points	DMD Change: AW = assessment weighting CS = Change Semester
EIBENGA	Stability & Control of Aircraft	6AAD0018	100	0	0	A	15	AW
EIBENGA	Mechanics & Properties of Materials	6ACM0003	100	0	0	A	15	AW
EIBENGA	Control Systems	6AAD0007	100	0	0	A	15	AW
EIBENGA	Rocket Performance & Propulsion	6AAD0026	100	0	0	A	15	AW
EIBENGA	Aero Performance and Propulsion	6ENT1132	100	0	0	A	15	AW
EIBENGA	Thermofluid Mechanics & Heat Transfer	6AAD0005	100	0	0	A	15	AW
EIBENGA	Stability & Control of Aircraft	6AAD0018	100	0	0	A	15	AW
EIBENGA	Mechanics & Properties of Materials	6ACM0003	100	0	0	A	15	AW
EIBENGA	Control Systems	6AAD0007	100	0	0	A	15	AW
EIBENGA	Rocket Performance & Propulsion	6AAD0026	100	0	0	A	15	AW
EIBENGA	Aero Performance and Propulsion	6ENT1132	100	0	0	A	15	AW
EIBENGA	Thermofluid Mechanics & Heat Transfer	6AAD0005	100	0	0	A	15	AW
EIBENGA	Power Systems	6ELE0071	100	0	0	A	15	AW

Associate Dean of School (Academic Quality Assurance):

Signature



School of Engineering and Computer Science

Title of Programme: MEng / BEng Honours in Aerospace Engineering.

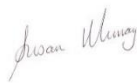
Programme Code: ENENGA

Programme Specification

This programme specification is relevant to students entering:
21 September 2020

Associate Dean of School (Academic Quality Assurance):
Susan Murray

Signature



A programme specification is a collection of key information about a programme of study (or course). It identifies the aims and learning outcomes of the programme, lists the modules that make up each stage (or year) of the programme, and the teaching, learning and assessment methods used by teaching staff. It also describes the structure of the programme, its progression requirements and any programme-specific regulations. This information is therefore useful to potential students to help them choose the right programme of study, to current students on the programme, and to staff teaching and administering the programme.

Summary of amendments to the programme:

Section	Amendment

If you have any queries regarding the changes please email AQO@herts.ac.uk

Programme Specification

BEng Honours in Aerospace Engineering
BEng Honours in Aerospace Engineering with Space Technology
BEng Honours in Aerospace Engineering with Pilot Studies
MEng Honours in Aerospace Engineering
MEng Honours in Aerospace Engineering with Space Technology
MEng Honours in Aerospace Engineering with Pilot Studies

This programme specification (PS) is designed for prospective students, enrolled students, academic staff and potential employers. It provides a concise summary of the main features of the programme and the intended 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 teaching, learning and assessment methods, learning outcomes and content for each module can be found in Definitive Module Documents (DMDs) and Module Guides.

Section 1

Awarding Institution/Body	University of Hertfordshire
Teaching Institution	University of Hertfordshire
University/partner campuses	College Lane
Programme accredited by	<i>Subject to approval</i> Royal Aeronautical Society.
Final Qualification	BEng Honours / MEng Honours
All Final Award titles (Qualification and Subject)	Aerospace Engineering Aerospace Engineering with Space Technology Aerospace Engineering with Pilot Studies Aerospace Engineering (Sandwich) Aerospace Engineering with Space Technology (Sandwich) Aerospace Engineering with Pilot Studies (Sandwich) Aerospace Engineering with Year Abroad Aerospace Engineering with Space Technology with Year Abroad Aerospace Engineering with Pilot Studies with Year Abroad Aerospace Engineering with Study Abroad Aerospace Engineering with Space Technology with Study Abroad Aerospace Engineering with Pilot Studies with Study Abroad Aerospace Systems Technology *** *** (Piloting Experience alternative award) Not accredited *** (Direct entry L6)
FHEQ level of award	6 / 7
UCAS code(s)	H410, H400 and H496 (BEng) H401, H402 and H497 (MEng)
Language of Delivery	English

A. Programme Rationale

The School offers a variety of MEng/BEng degrees. This programme specification covers Aerospace Engineering, Aerospace Engineering with Space Technology, Aerospace Engineering with Pilot Studies. The programme has been developed to (i) satisfy the QAA Engineering Benchmark requirements (ii) to fulfil the initial partial academic requirements of UK-SPEC for CEng status and (iii) meet the professional employment needs of industry.

The current curriculum is accredited until 2020 and the School is in discussion with the RAeS to ascertain if there can be a submission for a review and accreditation without a visit or if the changes to the curriculum are such that a visit is required. Accreditation is subject to approval by the RAeS.

Initially students study a common portfolio of modules covering a broad range of topics necessary for professional engineering allowing flexibility for students to change their award/pathway as they become more familiar with the opportunities available. The differentiating features of the various awards are progressively introduced as the students' progress.

BEng students with a sufficient level of achievement during levels 4 and 5 are encouraged to consider transfer to the MEng programme. Progression to the MEng programme requires eligibility for at least an upper second-class BEng Honours exit award as defined in UPR AS14.

The School has close contacts with a wide range of engineering companies and students are encouraged to take the sandwich option spending at least 36 weeks on industrial placement between levels 5 and 6. Alternatively, they may consider Study Abroad options.

Graduates can expect to gain employment either within the industries directly associated with their named award in Aerospace or in industries associated with engineering in general. These industries include small and large scale manufacturing, defence, civil and military aircraft and space. Alternatively graduates may continue their education to a post-graduate level and the University of Hertfordshire has a range of taught MSc awards or research awards that graduates may consider.

B. Educational Aims of the Programme

The programme has been devised in accordance with the University's graduate attributes of programmes of study as set out in [UPR TL03](#).

Additionally this programme aims to:

- provide a high quality education in engineering;
- provide an education for the individual which enhances his/her prospects of professional employment in engineering and business both in national and international industries;
- provide studies which are accredited by one or more of the Professional Engineering institutions;
- provide studies which develop an awareness of, and underpinning knowledge and understanding of a broad range of Aerospace Engineering areas of expertise;
- provide studies which enable the student to attain a high level of expertise in a range of topics specific to their named award.
 - Aerospace Engineering students will particularly study aerodynamics and aircraft structural design.
 - Aerospace Engineering with Space Technology students will particularly study rocket and satellite technology and space vehicle design.
 - Aerospace Engineering with Pilot Studies students will particularly study the influence of pilot performance on aircraft design.

C. Intended Learning Outcomes

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, skills and other attributes in the following areas. The programme outcomes are defined by the Engineering Council and recommended in the QAA benchmark statements for Engineering and the Frameworks for Higher Education Qualifications of UK Degree-Awarding Bodies (2019). The outcomes relate to the typical student. In addition, the SEEC Credit Level Descriptors for Higher Education (2016) have been used to provide guidance for curriculum design at each level of the programme to reflect student development. The curriculum design has also taken into account UH Graduate Attributes

	A. Knowledge & Understanding		Teaching/learning methods & strategies	Assessment strategy
	BEng	MEng		
A1	SM1b- Knowledge and understanding of the scientific principles and methodology underpinning aerospace engineering, and an understanding, to enable appreciation of the scientific and engineering context, and to support their understanding of relevant historical, current and future developments and technologies.	SM1m- A comprehensive knowledge and understanding of the scientific principles and methodology underpinning aerospace engineering, 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 their understanding of relevant historical, current and future developments and technologies.	Acquisition of knowledge and understanding is through the following approaches: Acquisition of A1 and A2 is through a combination of lectures, small group tutorials, coursework and laboratory work at levels 4 and 5 of the programme. Additional support is provided through the Mathematics Support Service. Specialist aspects of A2 are further developed at level 6.	Knowledge and understanding are assessed through combination of unseen examinations and in-course assessments in the form of laboratory reports, essays and phase tests. Some aspects of knowledge and understanding are assessed by design exercises and project reports and presentations. At level 6 some aspects of A3 are assessed by case study reports.
A2	SM2b- Knowledge and understanding of mathematical and statistical methods underpinning aerospace engineering, and to enable the application of a range of mathematical and statistical methods, tools and notations proficiently in the analysis and solution of engineering problems.	SM2m- Knowledge and understanding of mathematical and statistical methods underpinning aerospace engineering, and to enable the application of a range of mathematical and statistical methods, tools and notations proficiently and critically in the analysis and solution of engineering problems.	Acquisition of A3 is through a combination of lectures, projects and coursework throughout the programme. Staff deploy a range of teaching and learning strategies in the most appropriate way for each individual module. This will vary depending on the subject nature of a particular module and the level of study. A more didactic approach will tend to be adopted at lower levels, in particular for A1 and A2. An increasingly self-directed and interactive approach will be adopted at higher levels, particularly for A3.	
A3	SM3b- Ability to apply and integrate knowledge and understanding of other engineering disciplines to support a study of aerospace engineering.	SM3m- Ability to apply and integrate knowledge and understanding of other engineering disciplines to support a study of aerospace engineering and the ability to evaluate them critically and to apply them effectively.		
A4		SM4m – Awareness of developing technologies related to aerospace engineering	Throughout, the learner is encouraged to undertake independent study both to supplement and consolidate what is being taught/learnt and to broaden their individual knowledge and understanding of the subject.	
A5		SM5m - A comprehensive knowledge and understanding of mathematical and computational models relevant to aerospace engineering, and an appreciation of their limitations.		

		SM6m – Understanding the range of concepts from a range of areas, including some outside engineering, and the ability to evaluate them critically and to apply them in engineering projects.		
	B. Intellectual Skills for Analysis		Teaching/learning methods & strategies	Assessment strategy
	BEng	MEng		
B1	EA1b- Understanding of engineering principles and the ability to apply them to analyse of key engineering processes.	EA1m- Understanding of engineering principles and the ability to apply them to undertake critical analysis of key engineering processes.	Engineering analysis skills are developed throughout the programme by the methods and strategies outlined for section A of the intended learning outcomes above, again moving from a more didactic approach to an increasingly self-directed and interactive approach at higher levels, particularly for B2, B3 and B4. Analysis, problem solving and modelling skills are further developed through tutorial work, laboratory work, in-course exercises and project work.	Engineering analysis skills B1, B2 and B4 are assessed through unseen examination papers, laboratory reports and coursework related to in-course exercises. Engineering analysis skills B3 are assessed through project reports and presentations.
B2	EA2- Ability to identify, classify and describe the performance of systems and components through the use of analytical methods and modelling techniques.	EA2- Ability to identify, classify and describe the performance of systems and components through the use of analytical methods and modelling techniques.		
B3	EA3b- Ability to apply quantitative and computational methods in order to solve engineering problems and implement appropriate action.	EA3m- Ability to apply quantitative and computational methods, using alternative approaches, and understanding their limitations, in order to solve engineering problems and implement action.		
B4	EA4b- Understanding of, and the ability to apply, an integrated or systems approach to solving engineering problems.	EA4m- Understanding of, and the ability to apply, an integrated or systems approach to solving complex engineering problems.		
B5		EA5m – Ability to use fundamental knowledge to investigate new and emerging technologies.		
B6		EA6m – Ability to extract and evaluate pertinent data and to apply engineering analysis techniques in the solution of unfamiliar problems.		
	C. Intellectual Skills for Design		Teaching/learning methods & strategies	Assessment strategy
	BEng	MEng		

C1	D1- Understand and evaluate business, customer and user needs, including considerations such as the wider engineering context, public perception and aesthetics.	D1- Understand and evaluate business, customer and user needs, including considerations such as the wider engineering context, public perception and aesthetics.	<p>Intellectual skills for design are developed throughout the programme by the methods and strategies outlined above, again moving from a more didactic approach to an increasingly self-directed and interactive approach at higher levels, particularly for C3 and C4.</p> <p>Feedback is given to all students on all coursework produced.</p> <p>Throughout, the learner is encouraged to develop intellectual skills further by independent study.</p>	<p>C1, C2, C5 and C6 are assessed through unseen examination, coursework, project reports, technical reports and oral presentations.</p> <p>C3, C4 is assessed by review of group project work.</p>
C2	D2- 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.	D2- 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.		
C3	D3b- Work with information that may be incomplete or uncertain, and quantify the effect of this on the design.	D3m- 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.		
C4	D4- 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.	D4- 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.		
C5	D5- Plan and manage the design process, including cost drivers, and evaluate outcomes.	D5- Plan and manage the design process, including cost drivers, and evaluate outcomes.		
C6	D6- Communicate their work to technical and non-technical audiences.	D6- Communicate their work to technical and non-technical audiences.		
C7		D7m – Demonstrate wide knowledge and comprehensive understanding of design processes and methodologies and the ability to apply and adapt them in unfamiliar situations.		
C8		D8m – Demonstrate the ability to generate an innovative design for		

		products, systems, components or processes to fulfil new needs.		
	D. Economic, Legal, Social, Ethical & Environmental Context		Teaching/learning methods & strategies	Assessment strategy
	BEng	MEng		
D1	EL1b- Understanding of the need for a high level of professional and ethical production in engineering and a knowledge of professional codes of conduct.	EL1m- Understanding of the need for a high level of professional and ethical production in engineering, a knowledge of professional codes of conduct, and how ethical dilemmas can arise.	The economic, legal, social, ethical and environmental context of the role of engineers is developed in a series of project based exercises through the programme, and reinforced by a taught module at the start of the programme.	D1 to D6 are assessed by coursework, project reports, technical reports and presentations.
D2	EL2- Knowledge and understanding of the commercial, economic and social context of engineering processes.	EL2- Knowledge and understanding of the commercial, economic and social context of engineering processes.		
D3	EL3b- Knowledge and understanding of management techniques, including project management, that may be used to achieve engineering objectives.	EL3m- Knowledge and understanding of management techniques, including project and change management, that may be used to achieve engineering objectives, their limitations, and how they be applied appropriately.		
D4	EL4- Understanding of the requirement for engineering activities to promote sustainable development and ability to apply quantitative techniques where appropriate.	EL4- Understanding of the requirement for engineering activities to promote sustainable development and ability to apply quantitative techniques where appropriate.		
D5	EL5b- Awareness of the relevant legal requirements governing engineering activities, including personnel, health and safety, contracts, intellectual property rights, product safety and liability issues.	EL5m- Awareness of the relevant legal requirements governing engineering activities, including personnel, health and safety, contracts, intellectual property rights, product safety and liability issues, and an awareness that these may differ internationally.		
D6	EL6b- Knowledge and understanding of risk issues, including health and safety, environmental and commercial risk, risk assessment and risk management techniques.	EL6m- Knowledge and understanding of risk issues, including health and safety, environmental and commercial risk, risk assessment and risk		

D7		management techniques, and an ability to evaluate commercial risk. EL7m - Understanding the key drivers for business success, including innovation, calculated commercial risks and customer satisfaction.		
E. Engineering Practice			Teaching/learning methods & strategies	Assessment strategy
	BEng	MEng		
E1	P1 - Understanding of contexts in which engineering knowledge can be applied (e.g. operations and management, application and development of technology, etc.)	P1 - Understanding of contexts in which engineering knowledge can be applied (e.g. operations and management, application and development of technology, etc.)	<p>Staff deploy a range of teaching and learning strategies in the most appropriate way for each individual module. This will vary depending on the subject nature of a particular module and the level of study. A more didactic approach will tend to be adopted at lower levels, in particular for E1, E2, E3, E4 and E11.</p> <p>Acquisition of skills for E5, E6 and E7 are through a combination of formal lectures and tutorials, as well as project based work.</p> <p>An increasingly self-directed and interactive approach will be adopted at higher levels, particularly for E6, E7 and E8.</p>	<p>Engineering practice is assessed through combination of unseen examinations and in-course assessments.</p> <p>Assessments take many forms as appropriate, and include laboratory reports, demonstrations, essays and phase tests.</p>
E2	P2b - Knowledge of characteristics of particular materials, equipment, processes or products.	P2m - Knowledge of characteristics of particular materials, equipment, processes or products, with extensive knowledge and understanding of a wide range of engineering materials and components.		
E3	P3 - Ability to apply relevant practical and laboratory skills.	P3 - Ability to apply relevant practical and laboratory skills.		
E4	P4 - Understanding use of technical literature and other information sources.	P4 - Understanding use of technical literature and other information sources.		
E5	P5 - Knowledge of relevant legal and contractual issues.	P5 - Knowledge of relevant legal and contractual issues.		
E6	P6 - Understanding of appropriate codes of practice and industry standards.	P6 - Understanding of appropriate codes of practice and industry standards.		
E7	P7 - Awareness of quality issues and their application to continuous improvement.	P7 - Awareness of quality issues and their application to continuous improvement.		
E8	P8 - Ability to work with technical uncertainty.	P8 - Ability to work with technical uncertainty. P9m – A thorough understanding of current practice and its limitations,		

E9		and some appreciation of likely new developments.		
E10	P11b- Understanding of, and the ability to work in, different roles within an engineering team.	P10m – Ability to apply engineering techniques taking account of a range of commercial and industrial constraints.		
E11		P11m- Understanding of, and the ability to work in, different roles within an engineering team, and the ability to exercise initiative and personal responsibility, which may be as a team member or leader.		
	F. Transferable Skills BEng	MEng	Teaching/learning methods & strategies	Assessment strategy
F1	G1- Apply their skills in problem solving, communication, information retrieval, working with others and the effective use of general IT facilities.	G1- Apply their skills in problem solving, communication, information retrieval, working with others and the effective use of general IT facilities.	Additional general skills are developed throughout the programme by the methods and strategies outlined in above. F1 is developed through feedback on coursework reports, oral presentations and project reports. F2 is developed in a dedicated module that emphasises the role of such practice. F3 is developed through project work planning and throughout the programme. F4 is developed through group project and assignment work. Throughout, the learner is encouraged to develop transferable skills by maintaining a record of evidence and completing a personal development plan.	Additional general skills are assessed through the following approaches: F1, and F2 are assessed through coursework, individual project and technical reports and oral presentations. F3 and F4 are assessed by review of an individual's progress during individual project work.
F2	G2- Plan self-learning and improve performance, as the foundation for lifelong learning/CPD.	G2- Plan self-learning and improve performance, as the foundation for lifelong learning/CPD.		
F3	G3b- Plan and carry out a personal programmes of work, adjusting where appropriate.	G3m- Monitor and adjust a personal programme of work on an ongoing basis.		
F4	G4- Exercise initiative and personal responsibility, which may be as a team member or leader.	G4- Exercise initiative and personal responsibility, which may be as a team member or leader.		

D. Programme Structures, Features, Levels, Modules, and Credits

The BEng programme is normally offered in full-time (3 years), sandwich (4 years) or part-time (6 years) modes, and leads to the award of a BEng Degree with Honours in the student's chosen engineering discipline. If students' progress or enter on the MEng route then this will be for full-time (4 years), sandwich (5 years) or part-time (8 years).

Entry is normally at level 4 (with A-Level, or equivalent qualifications) but is possible at level 5 with suitable qualifications (e.g. an Edexcel HND in Engineering with appropriate subjects studied). Direct entry into level 6 is also possible, for example following successful completion of two years of a similar BEng or MEng degree programme at another HE institution. In this case, the final award will not be accredited. Intake is normally Semester A (September).

Professional and Statutory Regulatory Bodies

The following Bachelor's degrees are subject to approval and will be proposed for accreditation by RAes as meeting the academic requirement, in part, for Chartered Engineer registration for the cohort intakes from 2020.

Current MEng and BEng Aerospace degrees accredited from 2016 up to, and including, 2020:

BEng (Hons) Aerospace Engineering (Full Time - 3 years duration; Sandwich - 4 years duration; Part Time 6 years duration)

BEng (Hons) Aerospace Engineering with Space Technology (Full Time - 3 years duration; Sandwich - 4 years duration; Part Time 6 years duration)

BEng (Hons) Aerospace Engineering with Pilot Studies (Full Time - 3 years duration; Sandwich - 4 years duration; Part Time 6 years duration)

MEng (Hons) Aerospace Engineering (Full Time - 4 years duration; Sandwich - 5 years duration; Part Time 8 years duration)

MEng (Hons) Aerospace Engineering with Space Technology (Full Time - 4 years duration; Sandwich - 5 years duration; Part Time 8 years duration)

MEng (Hons) Aerospace Engineering with Pilot Studies (Full Time - 4 years duration; Sandwich - 5 years duration; Part Time 8 years duration)

Work-Based Learning, including Sandwich Programmes

A designated sandwich programme leads to a University award in the sandwich mode and the word "sandwich" appears on the award certificate. In order for the MEng/BEng to lead to an award in the sandwich mode, the student must undertake a period of approved work experience (industrial placement) of not less than 36 weeks, excluding holidays, normally during year 3. A maximum of two (2) separate placements can be taken neither of which should normally be less than 12 weeks in duration. As defined in UPR AS11.

The work experience will normally be completed within the United Kingdom but with approval may be completed within other countries. Progress of the student's training is monitored by visits from University academic staff. Students will be required to document this period of work in accordance with the guidelines produced by the School. Students on industrial placement will be registered on the Placement Year Module (6AAD0015)

Students who have not achieved the minimum progression requirements at the end of level 5 may be prevented from undertaking a sandwich placement. The policy relating to progression onto the placement year from level 5 is given in the School Guidelines on Industrial Placements. Additionally, students on industrial placement but who have level 4 or 5 modules to repeat, will not normally be allowed to re-enrol on these

modules until they return from industrial placement. This is to avoid a conflict between UH attendance requirements and the student's commitment to their employer.

Students who do not take the sandwich option, progressing directly to level 6, are automatically transferred to the full-time mode.

All students are required to complete a level 4 15-credit module titled "Professional Engineering" giving them information to prepare for industrial experience and work based learning. Sustainability, recyclability and advances in technology and their impact on engineers and specifically the Aerospace industry sector will be covered in the materials, design and design and build CDIO modules at all levels and explicitly researched in the project modules.

Erasmus Exchange programme ⁹subject to government regulations)

Students may opt to study all, or a single semester, of level 5 abroad as part of a reciprocal agreement with a partner university. To be eligible for an exchange option, students must have passed 120 credits at level 4 with an average of at least 60%. The remaining requirements and details are as set out in Study Abroad Options below.

Study Abroad Options

Students may also opt to take additional studies through the Year Abroad or Semester Abroad options at a partner institution in place of all or part of the sandwich placement year, i.e. between Levels 5 and 6. To be eligible for these options students will be expected to have passed 120 credits at level 4 and 120 credits at level 5 with an average of at least 60%. In order to maintain registration with UH, students studying abroad for a full year will be registered on 6ENT0001 whilst students studying abroad for a single semester will be enrolled on 6ENT1051. In recognition of the extra study, provided a full transcript of their achievement in the host academic institution is submitted to the Board of Examiners, this will lead to an award of a BEng Degree with Honours in one of the named awards as listed in Section 1 (page 2) "with Year Abroad" or "with Study Abroad" on the award.

Further Features

In order to recognise the significant programme-related extra-curricular commitment and experience that can be gained by students who participate in Formula Student, the BMFA Heavy/Electric Lift Challenge, IMechE UAS Challenge, Imagine Cup or other similar competitions, there are three zero-credit-rated elective modules that students may take. These are:

Formula Student (6ENT1043)
UAV Projects (6ENT1042)
Smart Systems Integration (6ENT1044)

They are assessed on a Pass/Fail basis. If taken, they do not contribute to degree classification, but will appear on a student's results transcript.

Programme Structure

The programme structure and progression information below (Table 1a and 1b) is provided for the Honours award. Any interim awards are identified in Table 1b. The Programme Learning Outcomes detailed above are developed and assessed through the constituent modules. Table 2 identifies where each learning outcome is assessed.

Table 1a Outline Programme Structure

Mode of study BEng Full Time: 3 years; Sandwich: 4 years and Part-time: 6 years
MEng Full time: 4 years; Sandwich: 5 years and Part-time: 8 years

Entry point Semester A

The following notations should be read in conjunction with table below:

A = Aerospace Engineering,
AST= Aerospace Engineering with Space Technology,
APS = Aerospace Engineering with Pilot Studies,

Level 4

C = compulsory module

O = optional module.

“In-course Test” refers to coursework designed as a test under controlled conditions.

Module Title	Module Code	Award			Credit Points	Language of Delivery	% Examination	% Coursework	% In-Course Test	% Practical	Semester	Year of Study	
		A	AST	APS								Full Time Mode	Part Time Mode
Engineering Mathematics for Aerospace	4ENT1168	C	C	C	15	English	60	40		-	A	1	1
Mechanical Science for Aircraft Engineering	4ENT1169	C	C	C	15	English	60	40		-	A	1	1
Aerospace Technology & Industry	4AAD0016	C	C	C	15	English		100		-	A	1	2
Introduction to Projects & Design	4ENT1170	C	C	C	15	English		60		40	A	1	2
Electrical Science for Aircraft Engineering	4ENT1171	C	C	C	15	English		50		50	B	1	1
Programming for Aircraft Engineers	4ENT1172	C	C	C	15	English		100		-	B	1	2
Aerospace Engineering Professionalism	4ENT1173	C	C	C	15	English		100		-	B	1	1
Introductory Robotics & Microcontrollers	4ENT1174	C	C	C	15	English		60		40	B	1	2

Progression to level 5 requires:

A minimum of 90 credits to remain on honours award.

Progression to non-honours level 5 with 75 credits may be permissible. The maximum study rate in such an instance would normally be 120 credits but students would be expected to remedy any failed modules from level 4 in the first instance.

Level 5

C = compulsory module

O = optional module

“In-course test” refers to coursework designed as a test under controlled conditions.

Module Title	Module Code	Award			Credit Points	Language of Delivery	% Examination	% Coursework	% In-course Test	% Practical	Semester	Year of Study	
		A	AST	APS								Full Time Mode	Part Time Mode
Fluids & Aerodynamics	5ENT1128	C	C	C	15	English	60	40		-	A	2	3
Thermodynamics for Aerospace	5ENT1129	C	C	C	15	English	-	100		-	A	2	3
Materials for Aerospace	5ENT1130	C	C	C	15	English	-	100		-	A	2	4
Practical Aerodynamics	5ENT1131	C	C	C	15	English	-	60		40	A	2	4
Control & Autopilot Systems	5ENT1132	C	C	C	15	English		100		-	B	2	3
Aircraft Structural Mechanics	5ENT1134	C	C	C	15	English	70	30		-	B	2	3
Aircraft Dynamics & Vibration	5ENT1133	C	--	--	15	English	60	40		-	B	2	4
Avionics	5ENT1067	--	C	--	15	English	-	100		-	B	2	4
Air Law, Communications & Principles of Flight	5ENT1135	--	--	C	15	English	-	100		-	B	2	4
Structural Design & CAE	5ENT1136	C	C	C	15	English	-	60		40	B	2	4

Progression to level 6 requires:

210 credit points and above to remain on Honours award.

Progression to non-honours level 6 with 180 credits may be permissible. The maximum study rate in such an instance would normally be 120 credits but students would be expected to remedy any failed modules from level 5 in the first instance.

Level 6

C = compulsory module

O = optional module

“In-course test” refers to coursework designed as a test under controlled conditions.

Module Title	Module Code	Award			Credit Points	Language of Delivery	% Examination	% Coursework	% In-Course Test	% Practical	Semester	Year of Study	
		A	AST	APS								Full Time Mode	Part Time Mode
Placement Year	6AAD0015	O	O	O	0	English	-	-	-	-	ABC	3	-
Year Abroad	6ENT0001	O	O	O	0	English	-	-	-	-	AB	3	-
Semester Abroad	6ENT1051	O	O	O	0	English	-	-	-	-	A/B	3	-
Aircraft Performance & Propulsion	6ENT1132	C	C	C	15	English	60	40			A	4	5
Flight Testing	6ENT1166	C	C	C	15	English	60	40			A	4	5
Aerospace Structures & FEA	6ENT1167	C	-	-	15	English	60	40			A	4	6
Rocket Performance and Propulsion	6AAD0026	-	C	-	15	English	60	40			A	4	6
Navigation, Human Factors & Meteorology	6ENT1169	-	-	C	15	English		100			A	4	6
Aerospace Vehicle Design	6ENT1133	C	C	C	15	English		100			B	4	5
Integrated Systems	6ENT1170	C	C	C	15	English		100			B	4	5
Advanced Aerodynamics	6ENT1171	C	-	-	15	English	60	40			B	4	6
Satellite Communications	6ENT1172	-	C	-	15	English		100			B	4	6
Aircraft General Knowledge, Flight Performance & Planning	6ENT1173	-	-	C	15	English	0	100			B	4	6
Piloting Experience	6ENT1151	-	-	C	0	English		-		100	AB		
Individual Major Project (BEng Aerospace)	6ENT1079	C	C	C	30	English	0	100			AB	4	6
Individual Major Project (MEng Aerospace)	6ENT1096	C	C	C	30	English	0	100			AB	4	6

Level 7

C = compulsory module

O = optional module

“In-course test” refers to coursework designed as a test under controlled conditions.

Module Title	Module Code	Award			Credit Points	Language of Delivery	% Examination	% Coursework	% In-Course Test	% Practical	Semester	Year of Study	
		A	AST	APS								Full Time Mode	Part Time Mode
MEng Team Project	7ENT1073	C	C	C	45	English		100			AB	4	5
Stability & Control of Aircraft	7ENT1152	C	C	C	15	English	60	40			A	4	5
FEA & Crashworthiness	7ENT1153	C	-	-	15	English	60	40			A	4	6
Space Dynamics	7ENT1154	-	C	-	15	English		100			A	4	6
Advanced Avionics	7ENT1155	-	-	C	15	English		100			A	4	6
Aeroelasticity	7ENT1135	C	C	C	15	English	60	40			B	4	5
Advanced CFD	7ENT1157	C	-	-	15	English	60	40			B	4	5
Space Systems	7ENT1158	-	C	-	15	English	60	40			B	4	6
Embedded Aerospace Systems	7AAD0037	-	-	C	15	English		100			B	4	6
Procurement & Supply Chain Management	7ENT1069	C	C	C	15	English	60	40			B	4	6

If any of the progression requirements stated above are not met then the Board of Examiners is empowered to require the student to transfer to the BEng (non-Honours). The study pattern for students transferring onto the BEng (non-Honours) route shall be agreed on a case-by-case basis with the BEng Programme Tutor or Associate Dean of School.

Honours Classification

The University has approved structure and assessment regulations common to all programmes. Full details are provided in [UPR AS14](#), Section D. However, this programme has specific regulations relating to the determination of Honours classification given under the Programme-Specific Regulations in Section 2.

Table 1b Final and interim awards available

The programme provides the following final and interim awards:

Final Award	Award Title	Minimum requirements	Available at end of Level	Programme Learning Outcomes developed (see above)
MEng (Hons) in the named award	Aerospace Engineering Aerospace Engineering with Space Technology Aerospace Engineering with Pilot Studies	480 credit points including 360 at levels 7/6/5 of which 120 must be at level 7. Additionally, students must satisfactorily complete an individual project and the MEng Team Project.	7	All programme learning outcomes for the specified named award (see Table 2)
MEng (Hons) in the named award (Sandwich)		480 credit points including 360 at levels 7/6/5 of which 120 must be at level 7. Additionally, students must satisfactorily complete an individual project, the MEng Team Project and the Placement Year module	7	All programme learning outcomes for the specified named award (see Table 2)
MEng (Hons) in the named award with Study Abroad		480 credit points including 360 at levels 7/6/5 of which 120 must be at level 7. Additionally, students must satisfactorily complete an individual project and the MEng Team Project and pass the Semester Abroad modules	7	All programme learning outcomes for the specified named award (see Table 2)
MEng (Hons) in the named award with Year Abroad		480 credit points including 360 at levels 7/6/5 of which 120 must be at level 7.	7	All programme learning outcomes for the specified named award (see Table 2)

		Additionally, students must satisfactorily complete an individual project and the MEng Team Project and pass the Year Abroad modules.		
BEng (Hons) in the named award	Aerospace Engineering	360 credit points including 240 at level 6/5 of which 120 must be at level 6	6	All programme learning outcomes for the specified named award (see Table 2)
BEng (Hons) in the named award (Sandwich)	Aerospace Engineering with Space Technology Aerospace Engineering with Pilot Studies	360 credit points including 240 at level 6/5 of which 120 must be at level 6. Additionally, students must satisfactorily complete the Placement Year module.	6	All programme learning outcomes for the specified named award (see Table 2)
BEng (Hons) in the named award with Study Abroad		360 credit points including 240 at level 6/5 of which 120 must be at level 6. Additionally, students must satisfactorily complete the Semester Abroad modules.	6	All programme learning outcomes for the specified named award (see Table 2)
BEng (Hons) in the named award with Year Abroad		360 credit points including 240 at level 6/5 of which 120 must be at level 6. Additionally, students must satisfactorily complete the Year Abroad modules.	6	All programme learning outcomes for the specified named award (see Table 2)

Interim Award	Award Title	Minimum requirements	Available at end of Level	Programme Learning Outcomes developed (see above)
University Certificate		45 credit points at level 4	4	See UPR AS11, section 13: http://sitem.herts.ac.uk/secreg/upr/AS11.htm
Certificate of Higher Education		120 credit points at level 4	4, 5	See UPR AS11, section 13: http://sitem.herts.ac.uk/secreg/upr/AS11.htm
Diploma of Higher Education		240 credit points including at least 120 at level 5	5, 6	<i>For untitled awards:</i> See UPR AS11, section 13: http://sitem.herts.ac.uk/secreg/upr/AS11.htm
BEng in the named award	Aerospace Studies Aerospace Studies with Space Technology Aerospace with Pilot Studies	For students entering directly at level 6 only, 75 UH specified credits must be at level 6. (*) (**)	6	A1, A2, A3, B1, B2, B3, B4, C1, C2, C3, C4, C5, C6, D1, D2, D3, D4, D5, D6, E1, E2, E3, E4, E5, E6, E7, E8, E11, F1, F2, F3, F4
BEng in the named award	Aerospace Engineering Aerospace Engineering with Space Technology	300 credit points including 180 at level 6/5 of which 60 must be at level 6.	6	A1, A2, A3, A4, A5, B1, B2, B3, B4, C1, C2, C3, C4, C5, C6, D1, D2, D3, D4, D5, D6, E1, E2, E3, E4, E5, E6, E7, F1, F2, F3
BEng in the named award (Sandwich)	Aerospace Engineering with Pilot Studies	300 credit points including 180 at level 6/5 of which 60 must be at level 6. Additionally, students must satisfactorily complete the Placement Year.	6	A1, A2, A3, A4, A5, B1, B2, B3, B4, C1, C2, C3, C4, C5, C6, D1, D2, D3, D4, D5, D6, E1, E2, E3, E4, E5, E6, E7, F1, F2, F3
BEng in the named award with Study Abroad		300 credit points including 180 at level 6/5 of which 60 must be at level 6. Additionally, students must satisfactorily complete the Semester Abroad modules.	6	A1, A2, A3, A4, A5, B1, B2, B3, B4, C1, C2, C3, C4, C5, C6, D1, D2, D3, D4, D5, D6, E1, E2, E3, E4, E5, E6, E7, F1, F2, F3
BEng in the named award with Year Abroad		300 credit points including 180 at level 6/5 of which 60 must be at level 6. Additionally, students must satisfactorily complete the Year Abroad modules.	6	A1, A2, A3, A4, A5, B1, B2, B3, B4, C1, C2, C3, C4, C5, C6, D1, D2, D3, D4, D5, D6, E1, E2, E3, E4, E5, E6, E7, F1, F2, F3
BEng (Hons) in the named award	Aerospace Systems Technology***	360 credit points including 240 at level 6/5 of which 120 must be at level 6	6	All programme learning outcomes for the specified named award (see Table 2).

BEng (Hons) in the named award (Sandwich)		360 credit points including 240 at level 6/5 of which 120 must be at level 6. Additionally, students must satisfactorily complete the Placement Year module.	6	All programme learning outcomes for the specified named award (see Table 2).
BEng (Hons) in the named award	Aerospace Studies Aerospace Studies with Space Technology Aerospace with Pilot Studies**	360 credit points including 240 at level 6/5 of which 120 must be at level. 6 (Minimum Engineering Council compensation requirements have not been achieved). Compliant with UH compensation requirements	6	All programme learning outcomes (see Table 2)
BEng(Hons) in the named award (Sandwich)	Aerospace Studies Aerospace Studies with Space Technology Aerospace with Pilot Studies**	360 credit points including 2S40 at level 6/5 of which 120 must be at level 6 (Minimum Engineering Council compensation requirements have not been achieved). Compliant with UH compensation requirements. Additionally, students must satisfactorily complete the individual project and the Placement Year module.	6	All programme learning outcomes (see Table 2)
BEng(Hons) in the named award with Study Abroad	Aerospace Studies Aerospace Studies with Space Technology Aerospace with Pilot Studies**	360 credit points including 240 at level 6/5 of which 120 must be at level 6 (Minimum Engineering Council compensation requirements have not been achieved). Compliant with UH compensation requirements. Additionally, students must	6	All programme learning outcomes (see Table 2)

		satisfactorily complete the individual project and the Semester Abroad modules.		
BEng(Hons) in the named award with Year Abroad	Aerospace Studies Aerospace Studies with Space Technology Aerospace with Pilot Studies**	360 credit points including 240 at level 6/5 of which 120 must be at level 6 (minimum Engineering Council compensation requirements have not been achieved). Compliant with UH compensation requirements. Additionally, students must satisfactorily complete the individual project and the Year Abroad modules.	6	<i>All programme learning outcomes (see Table 2)</i>
MEng (Hons) in the named award	Aerospace Studies Aerospace Studies with Space Technology Aerospace with Pilot Studies**	480 credit points including 360 at levels 7/6/5 of which 120 must be at level 7. Additionally, students must satisfactorily complete an MEng Individual Project and the MEng Team Project. Compliant with UH compensation requirements	7	<i>All programme learning outcomes for the named award (see Table 2)</i>
MEng (Hons) in the named award (Sandwich)	Aerospace Studies Aerospace Studies with Space Technology Aerospace with Pilot Studies**	480 credit points including 360 at levels 7/6/5 of which 120 must be at level 7. Additionally, students must satisfactorily complete an MEng Individual Project, the MEng Team Project and the Placement Year module. Compliant with UH compensation requirements	7	<i>All programme learning outcomes for the named award (see Table 2)</i>
MEng (Hons) in the named award with Study Abroad	Aerospace Studies Aerospace Studies with Space Technology	480 credit points including 360 at levels 7/6/5 of which 120 must be at level 7. Additionally, students must	7	<i>All programme learning outcomes for the named award (see Table 2)</i>

	Aerospace with Pilot Studies**	satisfactorily complete an MEng Individual Project, the MEng Team Project and the Semester Abroad modules. Compliant with UH compensation requirements.		
MEng (Hons) in the named award with Year Abroad	Aerospace Studies Aerospace Studies with Space Technology Aerospace with Pilot Studies**	480 credit points including 360 at levels 7/6/5 of which 120 must be at level 7. Additionally, students must satisfactorily complete an MEng Individual Project, the MEng Team Project and pass the Year Abroad modules. Compliant with UH compensation requirements	7	<i>All programme learning outcomes for the named award (see Table 2)</i>

Notes:

(*) in accordance with UPR AS11, the maximum APL permitted towards this interim award is 225 points at levels 4/5.

(**) this interim award is not accredited by the Professional Bodies

(***) Students who fail the 6ENT1151 Piloting Experience module cannot be considered for a degree in Aerospace Engineering with Pilot Studies. However, they can be considered for a degree in Aerospace Systems Technology (which is not currently accredited) as an Interim Award.

Programme Specific Assessment Regulations

The programme complies with the University's academic regulations (in particular, [UPR AS11](#), [UPR AS12](#) and [UPR AS14](#)) with the exception of those listed below, which have been approved by the University:

A maximum of 30 credit points can be compensated across the programme, in line with University regulations. Compensation is not permitted for individual modules worth 30 or more credit points at any level of study.

For non-honours awards, the standard University regulations on progression and compensation shall apply, and the Programme Board of Examiners shall have discretion to transfer a student onto a non-honours award where it is to the advantage of the student to do so (for example, where the criteria for progression on an accredited award have not been met).

Major projects (group and individual) i.e. BEng Individual Project, MEng Individual Project and MEng Team Project cannot be compensated.

Students who do not succeed in the Individual Major Project may be eligible to repeat and will be allocated an entirely different project.

Students exiting with a BEng Award (non Honours) shall have their degree classification determined in accordance with UPR AS14 and include the Individual Project, if completed, in the calculation of degree.

Professional Statutory Regulatory Bodies thresholds will apply for accredited awards as per the Engineering Council Compensation and Condonement notice November 2018.

BEng (Hons) accredited awards

- To comply with professional body regulations students must achieve in all 15 credit point modules, after all available attempts under the University regulations, a minimum of 30% (in any allowable attempt) at levels 4, 5 and 6, before the board of examiners will be able to consider compensation for an accredited honours degree. A maximum of 30 credit points can be compensated across the programme, in line with University regulations. Compensation is not permitted for individual modules worth 30 or more credit points at level 4, 5 and 6.

MEng (Hons) accredited awards

- To comply with professional body regulations students must achieve in all 15 credit point modules, after all available attempts under the University regulations, a minimum of 30% (in any allowable attempt) at levels 4, 5 and 6, and 40% (in any allowable attempt) at level 7, before the board of examiners will be able to consider compensation for an accredited honours degree. A maximum of 30 credit points can be compensated across the programme, in line with University regulations. Compensation is not permitted for individual modules worth 30 or more credit points at level 4, 5, 6 and 7.

Further programme-specific regulations (requiring School-level approval) are given below:

- BEng students achieving an award classification of 2:1 or above are eligible to progress to level 7 to accomplish a MEng qualification on their chosen pathway provided they completed the MEng Undergraduate Individual Project instead of BEng Undergraduate Individual Project to satisfy the learning outcomes required for the MEng course. Students will be able to indicate this preference by discussion with their Programme Leader and completing a Study Agreement form by the end of first teaching week at the start of level 6.

As specified by the accrediting bodies, a compensated pass cannot be awarded for the Individual Major Project, which must be included in the calculation of degree classification.

- Students who do not succeed in the Individual Major Project may be eligible to repeat, and will be allocated an entirely different project.

Course Code	Course Instance	Award Title	Modules (child instance codes & title)	Must be included in classification algorithm?
EIBENGAAE	A3F, A4S, A6P	BEng (Hons) Aerospace Engineering	6ENT1079-0906 Individual Major Project	Yes
EIBENGAAE	AEST3F, AEST4S, AEST6P	BEng (Hons) Aerospace Engineering with Space Technology	6ENT1079-0906 Individual Major Project	Yes
EIBENGAAE	APS3F, APS4S, APS6P	BEng (Hons) Aerospace Engineering with Pilot Studies	6ENT1079-0906 Individual Major Project	Yes

Further programme-specific regulations (requiring School-level approval) are given below:

- Students wishing to take the CAA or FAA PPL, or BMAA NPPL, Ground School Examinations are responsible for paying the examination fees.
- In order to fly solo, students must meet the medical requirements specified by the relevant regulatory body (EASA, CAA, FAA or BMAA). Where a specific medical examination is required it can be carried out by any UK CAA approved Authorised Medical Examiner (AME) and can be arranged through the flying school. However, there are several AMEs in each county and others overseas. Further details of the medical requirements for flying and the necessary medical examination can be found on the UK Civil Aviation Authority website <http://www.caa.co.uk> which must be consulted; the costs of any medical certificate shall be borne by the student. (Note that the medical requirements for flying are currently under review, so may change during the currency of this document.)
- The costs of Headsets, Charts, Navigation Equipment and other items necessary for the Aerospace Engineering with Pilot Studies pathway shall be borne by the student.

- The minimum 20 hours flying requirement associated with the 6ENT1151 Piloting Experience module shall be completed by students by the end of Semester B in their final year of study (level 6). Students should note that they may commence flying at a University-approved Flying School in the UK at any point after the commencement of their study on the programme. Students may also optionally pay for additional flying by direct arrangement with the Flying School. This might be done, for example, to top up to a PPL.

E. Management of Programme & Support for Student Learning

Management

The programme is managed and administered through:

- Dean of School;
- Associate Dean of School (AQA) who has overall responsibility for Quality Assurance;
- Associate Dean of School (L&T) who has overall responsibility for Learning & Teaching;
- Associate Dean of School (SE & P) who has overall responsibility for Student Experience and professional body accreditation.
- the Programme Leader who is responsible for chairing the programme committee and advising students on the programme as a whole;
- Programme Leaders who are responsible for the day to day management;
- an Admissions Tutor, with specific responsibility for selection;
- a programme committee that includes the above plus student representation;
- module leaders who are responsible for individual modules.

Support

Students are supported by:

- an induction week at the beginning of each new academic session;
- an extensive Learning Resources Centre, incorporating a library and computer centre;
- guided student-centred learning through the use of StudyNet;
- a student handbook that is specific to the programme;
- a Programme Leader who can advise on programme issues;
- Module teaching teams who provide academic support;
- Computer and technical laboratories facilities and technical support staff;
- a project supervisor;
- student representatives on the programme committee;
- the Study Success Hubs, includes Maths Support Service;
- the Careers, Employment and Enterprise Service that support students looking for either graduate employment or an industrial placement.
- a substantial Student Centre that provides advice on issues such as finance, University regulations, legal matters etc.;
- the Medical Centre;
- the Accommodation Office;
- the International Students Centre who organise an Overseas Student Orientation induction programme;
- printing, photocopying, laminating and document binding facilities;
- Nightline – a confidential student listening and information service in the evening when other services are not available;
- a confidential counselling service;
- University Disability Advisors;
- an Equal Opportunities Officer;
- the Students' Union.

F. Other Sources of Information

In addition to this Programme Specification, the University publishes guidance to registered students on the programme and its constituent modules:

- A Programme (or Student) Handbook;
- A Definitive Module Document (DMD) for each constituent module;
- A Module Guide for each constituent module.

The [Ask Herts](#) website provides information on a wide range of resources and services available at the University of Hertfordshire including academic support, accommodation, fees, funding, visas, wellbeing services and student societies.

As a condition of registration, all students of the University of Hertfordshire are required to comply with the University's rules, regulations and procedures. These are published in a series of documents called 'University Policies and Regulations' (UPRs). The University requires that all students consult these documents which are available on-line, on the UPR web site, at: <http://www.herts.ac.uk/secreg/upr/>. In particular, [UPR SA07](#) 'Regulations and Advice for Students' Particular Attention - Index' provides information on the UPRs that contain the academic regulations of particular relevance for undergraduate and taught postgraduate students.

In accordance with section 4(5) of the Higher Education and Research Act 2017 (HERA), the UK Office for Students (OfS) has registered the University of Hertfordshire in the register of English higher education providers. The Register can be viewed at: <https://www.officeforstudents.org.uk/advice-and-guidance/the-register/the-ofs-register/>. Furthermore, the OfS has judged that the University of Hertfordshire delivers consistently outstanding teaching, learning and outcomes for its students. It is of the highest quality found in the UK. Consequently, the University received a Gold award in the 2018 Teaching Excellence and Student Outcomes (TEF) exercise. This award was made in June 2018 and is valid for up to 3 years. The TEF panel's report and conclusions can be accessed at: <https://www.officeforstudents.org.uk/advice-and-guidance/teaching/tef-outcomes/#/provider/10007147>

G. Entry Requirements

The normal entry requirements for the programmes are as follows:

MEng entry

- 120 UCAS points.
- BBB or equivalent. Minimum of 2 A levels.
- A levels to include Maths and either Physics or Technology or engineering based subjects excluding General Studies and Critical Thinking.
- Engineering Advanced Diploma to include A level Maths as ASL component
- GCSE Maths at grade 4, English Language at grade 4 and Science at grade 4 or above.
- No BTEC qualifications accepted

BEng entry

- 104 UCAS points.
- BCC or equivalent. Minimum of 2 A levels.
- A levels to include Maths and either Physics or Technology or engineering based subjects excluding General Studies and Critical Thinking.
- BTEC Extended Diploma in Engineering DMM to include Distinction in Further Maths.
- Access to Engineering Diploma with 45 Level 3 credits at Merit to include Maths and Science or Principles units. Any additional L3 credits must be at Merit.
- Engineering Advanced Diploma to include A level Maths as ASL component.
- GCSE Maths at grade 4, English Language at grade 4 and Science at grade 4 or above.

Applications are also welcomed from those holding other qualifications including equivalent Scottish Higher or Irish Higher Certificates, International Baccalaureate, and appropriate equivalent international qualifications.

In addition to the academic fees, students studying the module 6ENT1151 Piloting Experience as part of the BEng in Aerospace Engineering with Pilot Studies will be responsible for the cost of at least 20 hours flying tuition at a UH approved flying school. Students who are unable to pay these fees may be awarded an Interim Award as stated in the Programme-Specific Regulations (Section D).

English Language Requirements

Addition to the requirements stated above, students entering the programme and whose first language is not English will be required to demonstrate a proficiency in English to IELTS 6.0 this should include a minimum score of 5.5 in each band.

Direct Entry at Second and Final Year

In accordance with University Admissions Policy to allow flexible entry at different levels, it may be possible for applicants to enter the programme at second and final year level. In all instances, candidates will be required to discuss their individual circumstances with the appropriate Admissions Tutor.

Students applying for direct entry into level 5 are required to have an Edexcel HND in an appropriate discipline with merits and distinctions in appropriate subjects which must include Mathematics plus technical or physical sciences. Equivalent European and overseas qualifications are also accepted subject to University approval.

Direct entry into level 6 is also possible, for example following successful completion of two years of a similar BEng or MEng degree programme at another HE institution with either a GPA of 4 from 5, 8 from 10 or a 2:1 performance across the years of study.

Level 4 of this programme includes provision to Hertfordshire International College (HIC), through parallel HIC modules. HIC students, having completed Level 4, may articulate onto this programme at Level 5. In order to do so, they must have successfully completed 120 credits of study at Level 4.

Level 4 of this programme includes provision for progression to level 4 for Extended Engineering and Technology Degree Programme (Initial Year) students. Progression to level 4 requires 120 credits and attainment of certain tariff grades and there is a requirement by some Engineering Professional Bodies (notably the IMechE) that the Individual Major Project must be passed at the first attempt to gain an accredited award.

The programme is subject to the University's Principles, Policies and Regulations for the Admission of Students to Undergraduate and Taught Postgraduate Programmes (in [UPR SA03](#)), along with associated procedures. These will take account of University policy and guidelines for assessing accredited prior certificated learning (APCL) and accredited prior experiential learning (APEL).

If you would like this information in an alternative format please contact: the School Administration Manager

If you wish to receive a copy of the latest Programme Annual Monitoring and Evaluation Report (AMER) and/or the External Examiner's Report for the programme, please email a request to aqo@herts.ac.uk

MEng / BEng with Honours in Aerospace Engineering

Table 2: Development of Intended Programme Learning Outcomes in the Constituent Modules

The following maps identify where the programme learning outcomes are assessed in the constituent modules. They provide

- i. an aid to academic staff in understanding how individual modules contribute to the programme aims
- ii. a checklist for quality control purposes and
- iii. a means to help students monitor their own learning, personal and professional development as the programme progresses.

MEng / BEng with Honours in Aerospace Engineering

		Programme Learning Outcomes (as identified in section 1 and the following page)																																												
		Knowledge and Understanding						Intellectual Skills for Analysis						Intellectual Skills for Design						Economic, Legal, Social, Ethical and Environmental						Engineering Practice						Transferable Skills														
		BEng			MEng			BEng			MEng			BEng			MEng			BEng			MEng			BEng			MEng			BE ng	BE ng													
		A1	A2	A3	A4	A5	A6	B1	B2	B3	B4	B5	B6	C1	C2	C3	C4	C5	C6	C7	C8	D1	D2	D3	D4	D5	D6	D7	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	F1	F2	F3	F4			
Module Title	Module Code	SM1	SM2	SM3	SM4m	SM5m	SM6m	EA1	EA2	EA3	EA4	EA5m	EA6m	D1	D2	D3	D4	D5	D6	D7m	D8m	EL1	EL2	EL3	EL4	EL5	EL6	EL7m	P1	P2	P3	P4	P5	P6	P7	P8	P9m	P10m	P11	G1	G2	G3	G4			
Engineering Mathematics for Aerospace	4ENT1168		X						X																																					
Mechanical Science for Aircraft Engineering	4ENT1169							X	X	X																																				
Aerospace Technology & Industry	4AAD0016	X																				X																								
Introduction to Projects & Design	4ENT1170										X													X																X	X					
Electrical Science for Aircraft Engineering	4ENT1171	X		X				X	X															X			X	X																		X
Programming for Aircraft Engineers	4ENT1172									X																									X											
Aerospace Engineering Professionalism	4ENT1173																		X			X	X	X	X	X				X	X	X				X	X	X								X
Introductory Robotics & Microcontrollers	4ENT1174			X				X	X	X				X	X	X	X	X	X					X			X	X						X		X										
Fluids & Aerodynamics	5ENT1128	X						X	X																																					
Thermodynamics for Aerospace	5ENT1129	X						X	X																																					
Materials for Aerospace	5ENT1130							X																					X																	
Practical Aerodynamics	5ENT1131		X					X	X	X	X			X	X	X	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X								X	
Control & Autopilot Systems	5ENT1132		X					X	X	X																																				
Aircraft Structural Mechanics	5ENT1134							X	X	X																																				
Aircraft Dynamics & Vibration	5ENT1133	X						X	X																																					
Structural Design & CAE	5ENT1136			X	X			X	X					X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X								X	
Aircraft Propulsion & Performance	6ENT1132	X						X	X	X																			X																	
Flight Testing	6ENT1166	X	X					X	X	X	X					X																														
Aerospace Structures & FEA	6ENT1167					X		X	X	X				X		X																														
Aerospace Vehicle Design	6ENT1133			X	X							X	X	X	X	X	X	X					X											X	X	X	X								X	
Integrated Systems	6ENT1170					X																																								
Advanced Aerodynamics	6ENT1171			X				X	X	X				X	X	X																														
Individual Major Project (BEng)	6ENT1079									X	X	X	X	X	X	X	X	X								X		X	X		X														X	
Individual Major Project (MEng)	6ENT1096									X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X		X														X	
MEng Team Project	7ENT1073		X		X			X	X	X		X		X	X	X	X	X												X	X	X	X	X	X	X	X	X								X
Stability & Control of Aircraft	7ENT1152	X	X			X	X			X																																				
FEA & Crashworthiness	7ENT1153	X	X					X	X	X																																				
Aeroelasticity	7ENT1135	X	X			X		X	X	X				X		X	X																												X	
Advanced CFD	7ENT1158	X	X					X	X	X																																				
Procurement & Supply Chain Management	7ENT1069																										X	X	X	X	X	X														

MEng / BEng with Honours in Aerospace Engineering with Pilot Studies

		Programme Learning Outcomes (as identified in section 1 and the following page)																																									
		Knowledge and Understanding						Intellectual Skills for Analysis				Intellectual Skills for Design						Economic, Legal, Social, Ethical and Environmental						Engineering Practice						Transferable Skills													
		BEng			MEng			BEng		MEng		BEng			MEng			BEng			ME	BEng						MEng		BE ng	BE ng												
		A1	A2	A3	A4	A5	A6	B1	B2	B3	B4	B5	B6	C1	C2	C3	C4	C5	C6	C7	C8	D1	D2	D3	D4	D5	D6	D7	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	F1	F2	F3	F4
Module Title	Module Code	SM1	SM2	SM3	SM4m	SM5m	SM6m	EA1	EA2	EA3	EA4	EA5m	EA6m	D1	D2	D3	D4	D5	D6	D7m	D8m	EL1	EL2	EL3	EL4	EL5	EL6	EL7m	P1	P2	P3	P4	P5	P6	P7	P8	P9m	P10m	P11	G1	G2	G3	G4
Engineering Mathematics for Aerospace	4ENT 1168		X						X																							X											
Mechanical Science for Aircraft Engineering	4ENT 1169							X	X	X																						X											
Aerospace Technology & Industry	4AAD0016	X									X								X			X						X			X									X			
Introduction to Projects & Design	4ENT 1170																	X								X					X										X	X	
Electrical Science for Aircraft Engineering	4ENT 1171	X		X				X	X																X				X	X												X	
Programming for Aircraft Engineers	4ENT 1172									X																					X												
Aerospace Engineering Professionalism	4ENT 1173																	X				X	X	X	X	X						X	X	X			X	X	X	X			
Introductory Robotics & Microcontrollers	4ENT 1174			X				X	X	X				X	X	X	X	X	X			X	X				X		X	X	X					X			X				
Fluids & Aerodynamics	5ENT 1128	X						X	X																																		
Thermodynamics for Aerospace	5ENT 1129	X						X	X																																		
Materials for Aerospace	5ENT 1130							X																						X													
Practical Aerodynamics	5ENT 1131			X				X	X	X	X	X	X	X	X	X	X	X	X			X	X					X	X	X	X	X	X	X	X	X	X	X	X	X			X
Control & Autopilot Systems	5ENT 1132	X	X					X	X	X																																	
Aircraft Structural Mechanics	5ENT 1134							X	X	X																																	
Air Law, Communications & Principles of Flight	5ENT 1135																					X				X						X											
Structural Design & CAE	5ENT 1136			X	X			X	X			X	X	X	X	X	X	X	X	X	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X			X
Aircraft Propulsion & Performance	6ENT 1132	X						X	X	X																			X														
Flight Testing	6ENT 1166	X	X					X	X	X	X					X																											
Navigation, Human Factors & Meteorology	6ENT 1169			X																												X											
Aerospace Vehicle Design	6ENT 1133			X	X							X	X	X	X	X	X	X		X					X		X								X	X	X	X				X	
Integrated Systems	6ENT 1170					X																																					
Aircraft General Knowledge, Flight Performance & Planning	6ENT 1173																														X	X											X
Piloting Experience	6ENT 1151					X														X																							
Individual Major Project (B Eng)	6ENT 1079								X	X	X	X	X	X	X	X	X	X										X	X	X	X	X	X	X	X							X	
Individual Major Project (M Eng)	6ENT 1096								X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						X	
MEng Team Project	7ENT 073		X		X			X	X	X		X		X	X	X	X	X	X		X	X		X	X		X			X	X	X	X	X	X	X	X	X	X			X	
Stability & Control of Aircraft	7ENT 1152	X	X			X	X			X																																	
Advanced Avionics	7ENT 1155									X																					X												
Aeroelasticity	7ENT 1135	X	X			X		X	X	X				X		X	X					X														X							
Embedded Aerospace Systems	7AAD0037									X																					X												
Procurement & Supply Chain Management	7ENT 1069																					X	X	X	X	X	X								X								

Section 2

Programme management

Relevant QAA subject benchmarking statements
Type of programme
Date of validation/last periodic review
Date of production/ last revision of PS
Relevant to level/cohort
Administrative School

Aerospace Engineering

Undergraduate / Integrated Masters

November 19

April 2020

Level 4 entering September 2020

School of Engineering & Computer Science

Table 3 Course structure

Course details		
Course code	Course description	HECOS
EIBENGAAE	BEng (Hons) Aerospace Engineering	100115
EIMENGAAE	MEng (Hons) Aerospace Engineering	100115