Template C4

Programme Specification

Title of Course: *BEng(Hons) Aviation Engineering*

Date first produced	31/07/2017
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Version number	19
Faculty	Faculty of Engineering, Computing and the Environment
Cross-disciplinary	
School	School of Engineering
Department	Department of Aerospace and Aircraft Engineering
Delivery Institution	Kingston University

This Programme Specification is designed for prospective students, current students, academic staff and 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 they take full advantage of the learning opportunities that are provided. More detailed information on the learning outcomes and content of each modules can be found in the course VLE site and in individual Module Descriptors.

SECTION 1: GENERAL INFORMATION

Award(s) and Title(s):	BEng(Hons) Aviation Engineering
Exit Award(s) and Title(s):	Certificate of Higher Education in Aviation Engineering Diploma of Higher Education in Aviation Engineering BEng Aviation Engineering
Course Code *For each pathway and mode of delivery*	UFAVE1AVE20
UCAS code *For each pathway*	To be arranged

Award(s) and Title(s):	BEng (Hons) Aviation Engineering with Foundation year
Exit Award(s) and Title(s):	CertHE in Aviation Engineering with Foundation Year DipHE in Aviation Engineering with Foundation Year BEng in Aviation Engineering with Foundation Year
Course Code *For each pathway and mode of delivery*	UFAVE1AVE55
UCAS code *For each pathway*	

Award(s) and Title(s):	BEng (Hons) Aviation Engineering with Professional Placement
Exit Award(s) and Title(s):	CertHE in Aviation Engineering with Professional Placement DipHE in Aviation Engineering with Professional Placement BEng in Aviation Engineering with Professional Placement
Course Code *For each pathway and mode of delivery*	USAVE1AVE45
UCAS code *For each pathway*	

Award(s) and Title(s):	BEng (Hons) Aviation Engineering with Foundation Year and Professional Placement

Exit Award(s) and Title(s):	CertHE in Aviation Engineering with Foundation Year and Professional Placement DipHE in Aviation Engineering with Foundation Year and Professional Placement BEng in Aviation Engineering with Foundation Year and Professional Placement
Course Code *For each pathway and mode of delivery*	USAVE1AVE56
UCAS code *For each pathway*	

Awarding Institution:	Kingston University
Teaching Institution:	Kingston University
Location:	Kingston University
Language of Delivery:	English
Delivery mode:	Primarily campus based (up to 20% of scheduled L&T hours delivered online)
Learning mode(s):	Full-time With professional placement With foundation year
Minimum period of registration:	Full-time - 3 With professional placement - 4 With foundation year - 4
Maximum period of registration:	Full-time - 6 With professional placement - 7 With foundation year - 8
Entry requirements	Kingston University typically uses a range of entry requirements to assess an applicant's suitability for our courses. Most course requirements are based on UCAS Tariff points, usually stipulated as a range, and are sometimes coupled with minimum grades in specific relevant subjects. We may also use interview, portfolio and performance pieces to assess an applicant's suitability for the course. We recognise that every person's journey to Higher Education is different and unique and in some cases we may take into account work experience and other non-standard pathways onto University level study. Additionally, all non-UK applicants must meet our English language requirements.

	Please see our course pages on the Kingston University website for the most up to date entry requirements
Regulated by	The University and its courses are regulated by the Office for Students.
Programme Accredited by:	RAeS
Approved Variants:	There are no variants to the Undergraduate Modular Scheme (UMS)
Is this Higher or Degree Apprenticeship course?	No

SECTION 2: THE COURSE

A. Aims of the Course

The general aims of the course are:
- To equip graduates with the engineering, design, management, business and general skills required to become aerospace professionals, as well as enable them to follow careers in related professional disciplines.
- To align with the current edition of the UK Standard for Professional Engineering Competence (UK-SPEC) and to meet the academic requirements for Incorporated Engineering (IEng) Membership of the Royal Aeronautical Society (RAes) by ensuring that the course is accredited by that body.

More specific aims of the course are:
- Produce aerospace graduates who are equipped with the technical knowledge, understanding and skills; and behaviours required to be competent in the job roles within the aerospace sector.
- To prepare graduates with an ability to solve design problems and the technical skills needed to realise these solutions in the fields of aircraft operation and maintenance.
- To equip students with a broader set of professional skills and attitudes that will enable them to manage their continuous professional development when they leave the university; and to encourage them to be lifelong learners.
- Provide students with the requisite skills and knowledge to progress to higher level study and work towards becoming aerospace managers of the future.
- To furnish graduates with a firm grasp of sustainability, ethics, risks, legal obligations and economics.

B. Programme Learning Outcomes

The programme learning outcomes are the high-level learning outcomes that will have been achieved by all students receiving this award. They have been aligned to the levels set out in 'Sector Recognised Standards in England' (OFS 2022).

Programme Learning Outcomes					
	Knowledge and Understanding On completion of the course students will be able to:		**Intellectual Skills** On completion of the course students will be able to		**Subject Practical Skills** On completion of the course students will be able to
A1	Apply their knowledge and understanding of essential facts, concepts, theories and principles associated with aviation engineering and the underpinning mathematics and science.	B1	Recognise, evaluate and analyse problems; identify and investigate possible solutions and make sound decisions regarding the solution to adopt and/or the course of action to be taken.	C1	Apply aircraft engineering principles to design and implement operational procedures and solve logistical problems through the use of engineering analysis.
A2	Demonstrate a knowledge and understanding of aircraft maintenance operations and project planning.	B2	Locate, collect, collate, interpret and critically evaluate arguments, assumptions, abstract concepts and data (that may be incomplete), and use it to make judgements, and to frame appropriate questions to help achieve a solution.	C2	Use workshop and laboratory equipment safely for manufacture and experimental investigation.
A3	Demonstrate a clear understanding of the legal obligations pertaining to aircraft engineers, the rules and regulations under which they must work and the need to always consider aviation safety.	B3	Communicate clearly and succinctly orally, graphically and in writing having due regard for the receiving audience and intellectual property rights.	C3	Apply numerical and statistical methods to operational and commercial data to improve safety, procedures and gain a commercial advantage in the aviation industry and the wider transport sector.
A4	Demonstrate understanding of the economical, ethical and sustainability challenges facing aviation and recognise the wider	B4	Manage their own personal and professional development by identifying gaps and/or shortfalls in their knowledge,	C4	Use a range of office, engineering and aircraft industry related IT equipment and

	benefit of aviation to developing economies.		understanding and skills and taking the necessary action to rectify it.		software confidently and effectively.
A5	Apply business methods to assess the economic and financial aspects of air transport and/or engineering projects.			C5	Work independently or as part of a team to initiate, investigate, plan, manage and drive projects to a successful conclusion and produce the associated documentation (proposals, plans, reports, presentations).

C. Future Skills Graduate Attributes

In addition to the programme learning outcomes, the programme of study defined in this programme specification will engage students in developing their Future Skills Graduate Attributes:
1. Creative Problem Solving
2. Digital Competency
3. Enterprise
4. Questioning Mindset
5. Adaptability
6. Empathy
7. Collaboration
8. Resilience
9. Self-Awareness

D. Outline Programme Structure

Full details of each module will be provided in module descriptors and in the module canvas pages.

BEng(Hons) Aviation Engineering

Level 4							
BEng(Hons) Aviation Engineering							
Core modules	**Module code**	**Credit Value**	**Level**	**Teaching Block**	**Pre-requisites**	**Full Time**	**Part Time**
Aviation Science and Flight Mechanics	AE4022	30	4	Year Long		1	
Engineering Mathematics and Computing	AE4023	30	4	Year long		1	
Engineering Mechanics: Statics, Dynamics and Materials	AE4024	30	4	Year Long		1	

Navigate for Aviation Operations	AE4027	30	4	Year Long		1	

Exit Awards at Level 4

Students exiting the course at this point who have successfully completed 120 credits at level 4 or above are eligible for the award of Certificate of Higher Education.

Level 5							
BEng(Hons) Aviation Engineering							
Core modules	**Module code**	**Credit Value**	**Level**	**Teaching Block**	**Pre-requisites**	**Full Time**	**Part Time**
Aerodynamics, Composite Material and Computed Aided Design	AE5049	30	5	Year long		2	
Airworthiness, Control and Aircraft Systems	AE5050	30	5	Year Long		2	
Data-Driven Safety Management in Aviation	AE5051	30	5	Year Long		2	
Explore with Professional Development for Aviation Operations	AE5052	30	5	Year Long		2	
Optional Modules							
Industrial Placement	ME5023	120	5	Year Long		3	

Exit Awards at Level 5

Students exiting the programme at this point who have successfully completed 120 credits at level 5 or above are eligible for the award of Diploma of Higher Education.

Level 6							
BEng(Hons) Aviation Engineering							
Core modules	**Module code**	**Credit Value**	**Level**	**Teaching Block**	**Pre-requisites**	**Full Time**	**Part Time**

Air Transport Economics	AE6601	30	6	Year Long		3	
Aircraft Maintenance Operations (Group Design Solution)	AE6025	15	6	TB2		3	
Aircraft Performance, Materials Failure and Structural Analysis	AE6027	30	6	Year long		3	
Apply with Aircraft Maintenance	AE6005	15	6	TB1		3	
Individual Project – I (Ref: IEng)	AE6017	30	6	Year Long		3	

Exit Awards at Level 6

Students exiting the programme without completing the full 120 credits but have successfully completed 60 credits at level 6 or above are eligible for the award of an Ordinary Degree.

BEng (Hons) Aviation Engineering with Foundation year

BEng (Hons) Aviation Engineering with Professional Placement

BEng (Hons) Aviation Engineering with Foundation Year and Professional Placement

E. Teaching, Learning and Assessment

This course uses a range of teaching and assessment methods which have been designed to support students' learning and achievement of the learning outcomes. The course has been developed with reference to the Kingston University Academic Framework which sets out core principles relating to Course and Credit Structure (including Module delivery Structure and Pattern, and Learning Hours and Learning Formats); Curriculum Design (inclusion of Learning Design Principles and Inclusive Curriculum); and Future Skills.
Teaching and Learning on the course consist of Scheduled Learning and Teaching and Guided Independent Study (self-managed time). Scheduled Learning and

Teaching includes the following, and the format for each module is set out in the module specification:

- Laboratory Sessions
- Lectures
- Seminars
- Tutorials
- Workshops
- Placements

Guidance for students on the use of independent study time is communicated through the 'Succeed in your module' section on the Canvas Virtual Learning Environment and through other communications during the course.

In addition to the core Scheduled Learning and Teaching activities for the course, the University may offer students additional optional opportunities for learning. Examples of these include Study abroad and Work-based learning.

The course will provide students with the opportunity to develop their knowledge and skills relating to at least two United Nations Sustainable Development Goals (UN SDGs). We are committed to empowering students with the knowledge, skills and opportunities to understand and address the UN SDGs: each course is thus also required to prepare students for at least two of the SDGs (not including Quality Education, which all courses must deliver).

F. Support for Students and their Learning

Students are supported through a range of services that provide academic and wider support. These include:

- A Module Leader for each module
- A Course Leader to help students understand the course structure
- Personal Tutors to provide academic and personal support
- Technical support to advise students on IT and the use of software
- Student Voice Committee – to ensure the views of students are heard
- Canvas – Kingston University's Virtual Learning Environment
- Student support facilities that can provide advice on issues such as finance, regulations, legal matters, accommodation, international student support
- Disabled student support
- The Kingston Students' Union
- Student Development and Graduate Success

G. Ensuring and Enhancing the Quality of the Course

The University has policies and procedures for evaluating and improving the quality and standards of its provision. These include:

- Continuous Monitoring of courses through the Kingston Course Enhancement Programme (KCEP)
- Student evaluation including Module Evaluation Questionnaires (MEQs), the National Student Survey (NSS)
- Internal and external moderation of graded assignments

H. External Reference Points

External reference points which have informed the design of the course. These could include:
- PSRB standards
- QAA Subject benchmarks
- Other subject or industry standards

I. Development of Course Learning Outcomes in Modules

This table maps where programme learning outcomes are **summatively** assessed across the **core** modules for this course. It provides an aid to academic staff in understanding how individual modules contribute to the course aims, a means to help students monitor their own learning, personal and professional development as the course progresses and a checklist for quality assurance purposes.

Module Code		Level 4				Level 5					Level 6				
		AE4024	AE4022	AE4027	AE4023	ME5023	AE5049	AE5050	AE5052	AE5051	AE6027	AE6005	AE6017	AE6601	AE6025
Knowledge & Understanding	A1	S						S						S	
	A2				S									S	
	A3				S					S		S	S		
	A4									S			S		
	A5													S	
	B1									S			S		

Skill	Code	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Intellectual Skills	B2										S		S		
	B3												S	S	
	B4							S				S		S	
Practical Skills	C1	S								S	S		S		
	C2														
	C3	S								S				S	
	C4									S			S	S	
	C5				S			S				S	S	S	

Students will be provided with formative assessment opportunities throughout the course to practise and develop their proficiency in the range of assessment methods utilised.

Additional Information