Template C4

Kingston University London

Programme Specification

Title of Course: *MSc Automotive Engineering*

Date first produced	01/03/2018
Date last revised	10/07/2025
Date of implementation of current version	01/09/2025
Version number	15
Faculty	Faculty of Engineering, Computing and the Environment
Cross-disciplinary	
School	School of Engineering
Department	Department of Mechanical 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):	MSc Automotive Engineering
Exit Award(s) and Title(s):	PGCert Automotive Engineering PGDip Automotive Engineering
Course Code *For each pathway and mode of delivery*	N/A N/A
UCAS code *For each pathway*	H425

Award(s) and Title(s):	MSc Automotive Engineering with Professional Placement
Exit Award(s) and Title(s):	PGCert Automotive Engineering with Professional Placement PGDip Automotive Engineering with Professional Placement
Course Code *For each pathway and mode of delivery*	
UCAS code *For each pathway*	

Awarding Institution:	Kingston University
Teaching Institution:	Kingston University
Location:	Roehampton Vale Campus, Kingston
Language of Delivery:	English
Delivery mode:	Primarily campus based (up to 20% of scheduled L&T hours delivered online)
Learning mode(s):	Full-time Part-time With Professional Placement
Minimum period of registration:	Full-time - 1 Part-time - 2 With Professional Placement - 2
Maximum period of registration:	Full-time - 2 Part-time - 4 With Professional Placement - 3

Entry requirements	Kingston University typically uses a range of entry requirements to assess an applicant's suitability for our courses. Most postgraduate taught course requirements are based on having been awarded a relevant undergraduate degree and are normally coupled with minimum grades expectation of 2:2, specific courses in certain areas may have a stricter grade requirement. We may also use interview, portfolio and performance pieces to assess a person's suitability for some courses. We recognise that every person's journey to a postgraduate taught 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:	Institution of Mechanical Engineers (Pending Accreditation)
Approved Variants:	To comply with Engineering Council regulations, a maximum of 20 credits can be compensated within this programme
Is this Higher or Degree Apprenticeship course?	No

SECTION 2: THE COURSE

A. Aims of the Course

The main aims of the MSc Automotive Engineering

- Equip students with multi-disciplinary knowledge and skills necessary to apply the principles of specialised subjects within the automotive industry.
- Enhance the skills and knowledge required to enable students to contribute effectively to the automotive and other related industries and give them the professional capability to hold responsible positions within these industries.
- Develop the personal attributes and skills expected of a graduate with a master's degree and to give them a secure foundation for their personal, intellectual, and professional development.
- Provide continuing professional development and updating for established automotive engineers.
- Implant an enquiring, analytical and creative approach to both personal and professional activities which leads to the critical and responsible use of informed and independent judgement.
- To enable the students to gain detailed relevant skills, specialist knowledge and experience which they can develop throughout their working life.
- Equip students with multi-disciplinary knowledge and skills necessary to apply the principles of specialised subjects within the automotive, commercial vehicle, motorcycle and hybrid and electric fields.
- Enable graduates to apply specialised knowledge and skills to the analysis of industrial problems and provide novel solutions in a range of areas of the automotive engineering industry.

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 automotive engineering principles and practical techniques to the solution of problems.	B1	Learn independently, and be able to critically evaluate, analyse and communicate research and data collection/analysis.	C1	Apply advanced technologies and modern techniques to a wide range of automotive applications, including hybrid and electric powertrain.
A2	Apply advanced technologies and modern techniques to a wide range of automotive applications, including hybrid and electric powertrain.	B2	Analyse problems and issues, taking due account of any incompleteness of data or information, and arrive at well-reasoned and supportable conclusions.	C2	Demonstrate an in-depth understanding of vehicle aerodynamics, test and simulation techniques and apply appropriate methods in the solution of differing problems.
A3	Apply a detailed understanding of the various test and development techniques employed in automotive engineering, their application, and benefits.			C3	Select and use appropriate software tools for the design and analysis of automotive components, sub systems and complete vehicles.
A4	Demonstrate knowledge of the principles of entrepreneurship and detailed requirements for the management, quality, safety, and environmental issues in respect to engineering projects.			C4	Select and apply appropriate tools and techniques for the improvement of quality in products. Demonstrate an in-depth understanding of standards and homologation requirements.

				C5	Demonstrate an ability to select and effectively use a wide range of methods, software tools and techniques in solving specific automotive engineering problems.
				C6	Apply an in-depth understanding of the automotive business environment and apply operation and financial management techniques and good practices in a range of contexts.

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.

MSc Automotive Engineering

Level 7							
MSc Automotive Engineering							
Core modules	**Module code**	**Credit Value**	**Level**	**Teaching Block**	**Pre-requisites**	**Full Time**	**Part Time**
Advanced Control Systems	ME7025	15	7	TB1		1	2
Automotive Aerodynamics and Structural Analysis	ME7022	15	7	TB1	None	1	1
Design of Autonomous Systems	ME7027	30	7	Tb2	None	1	2
Dissertation	ME7743	60	7	TB3	None	1	2
Electrification Technology in	ME7019	15	7	TB2	None	1	2

Automotive Industry							
Research Techniques, Innovation & Sustainability	ME7742	30	7	TB1	None	1	1
Optional Modules							
Advanced CAD\/CAM Systems	ME7740	15	7	TB2		1	2
Machine Learning	ME7026	15	7	TB2		1	2
Professional Placement	ME7900	120	7	Year Long		2	3

Exit Awards at Level 7

Students exiting the programme with 60 level 7 credits are eligible for the award of Postgraduate Certificate.
Students exiting the programme with 120 level 7 credits are eligible for the award of Postgraduate Diploma.

MSc Automotive Engineering with 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 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 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 7**								
		ME7022	**ME7019**	**ME7742**	**ME7743**	**ME7027**	**ME7740**	**ME7026**	**ME7025**	**ME7900**
Knowledge & Understanding	A1									
	A2									
	A3					S			S	
	A4									
Intellectual Skills	B1									
	B2									
Practical Skills	C1									
	C2									
	C3									

	C4									
	C5									
	C6									

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