

Please select a School

Title of Programme: BSc (Hons) Engineering with Management

Programme Code: ECUAEWM

For Collaborative: Franchise at University Campus St Albans

Programme Specification

This programme specification is relevant to students entering:
02 September 2019

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 <Insert award and full title>

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 Campus St Albans
University/partner campuses	University Campus St Albans
Programme accredited by	Not Applicable
Final Qualification	BSc (Hons)
All Final Award titles (Qualification and Subject)	Engineering with Management
FHEQ level of award	6
UCAS code(s)	N/A
Language of Delivery	English

A. Programme Rationale

The course is distinctive in that it enables students with a HND to progress directly to degree studies from either a mechanical or electrical engineering HND. It also brings together components of mechanical and electrical systems through the study of mechatronic systems. It promotes the technological problem-solving ability of engineering and the planning abilities of management in order to oversee the operational performance of engineering projects. It develops and extends knowledge and understanding further providing opportunities for students to work on live projects and to utilise information systems and to manage production in an engineering context. There is a focus on applying technology to engineering problems as well as developing an understanding of engineering practice and processes within a professional engineering environment.

Successful completion of the BSc (Hons) Engineering with Management Top-up course would allow graduates to access postgraduate taught master's degrees. It also helps prepare students for wider roles in the future that may encompass a managerial or supervisory responsibility as well.

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 students with the knowledge and skills needed to progress in the Engineering field
- Provide students with the agility and capabilities to develop their career and to open up new opportunities for development
- Prepare students for professional recognition with the relevant professional body.

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 referenced to the QAA benchmark statements for Engineering (2015) the programme learning outcomes listed here are

sourced from the Engineering Councils publication 'The Accreditation of Higher Education Programmes' 3rd Edition, 2014 and satisfy the and the Frameworks for Higher Education Qualifications of UK Degree-Awarding Bodies (2014) and relate to the typical student. Additionally, the SEEC Credit Level Descriptors for Further and Higher Education (2016) have been used as a guiding framework for curriculum design.

Knowledge and Understanding	Teaching and learning methods	Assessment strategy
<p>A1- The scientific principles underpinning relevant current technologies, and their evolution in relation to the mechanical, electrical and electronic context</p> <p>A2- Mathematics and an awareness of statistical methods necessary to support application of key engineering principles and to underpin the educational context.</p> <p>A3 -The commercial, economic and social context of engineering processes that impact upon the engineering context including sustainability limitations; commercial; ethical; relevant codes of practice and professional standards; health and safety; security and risk issues; and intellectual property</p> <p>A4 - Awareness of quality issues and their application to continuous improvement</p> <p>A5 - Management techniques that support the achievement of engineering objectives</p>	<p>Acquisition of knowledge and understanding (A1- A5) is through a combination of lectures, small group work, technology enhanced learning and laboratory work. 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 and to develop social and global awareness in the context of the valuable contribution engineering can make to society</p>	<p>Knowledge and understanding (A1-A5) are assessed through a combination of assessed in course assessments in the form of laboratory reports, essays, presentations and unseen examinations.</p>
Intellectual skills	Teaching and learning methods	Assessment strategy
<p>B1- Monitor, interpret and apply the results of analysis and modelling in order to bring about continuous improvement</p> <p>B2- Apply quantitative methods and the results of engineering analysis to solve engineering problems and to</p>	<p>Intellectual skills (B1-B5) are developed through the methods and strategies outlined in section A, above. Analysis, problem solving and modelling skills are further developed through, laboratory work, technology enhanced learning, tutorial work, practical assignments and in-course assessments.</p>	<p>Intellectual skills (B1 to B5) are assessed through, practical assignments and coursework related to in-course exercises, case study reports, presentations, unseen examination papers, laboratory reports and project reports.</p>

<p>recommend appropriate actions</p> <p>B3- Ability to apply an integrated or systems approach to engineering problems through know-how of the relevant technologies and their application working with information that may be incomplete or uncertain.</p> <p>B4 - Define engineering problems, in the context of wider social and business needs and manage the design process including cost drivers and evaluation outcomes.</p> <p>B5 - The ability to apply professional and ethical considerations and professional codes of conduct.</p>	<p>Throughout, the learner is encouraged to develop intellectual skills further by independent study. Together these approaches to achieving the learning outcomes engage students in research and enquiry, informed by ethical practices and enhance independent student learning.</p>	
<p>Practical skills</p> <p>C1- Ability to apply relevant practical skills and information from technical literature</p> <p>C2- Use of computer-based engineering tools</p> <p>C3 - Apply problem-solving skills, technical knowledge to create or adapt design solutions that are fit for purpose including operation, maintenance, reliability etc</p>	<p>Teaching and learning methods</p> <p>Practical skills are developed through (C1-C3) are developed through laboratory work and associated written reports.</p> <p>Throughout, the learner is expected to consolidate their development of practical computing skills by use of computers available in the learning resources centres.</p>	<p>Assessment strategy</p> <p>Practical skills (C1-C3) are assessed through a combination of coursework, using the methods described in sections A and B above</p>
<p>Transferable skills</p> <p>D1- Apply their skills in problem solving, communication, , information retrieval, and teamwork to real life engineering problems</p> <p>D2 - Plan self-learning, exercise personal responsibility and improve performance, as part of own continuous professional development</p> <p>D3 - Communicate work to technical and non-technical audiences</p>	<p>Teaching and learning methods</p> <p>Transferable skills are developed through (D1-D3).</p> <p>Throughout, the learner is encouraged to develop transferable skills by maintaining a record of evidence and completing a personal development plan.</p>	<p>Assessment strategy</p> <p>Transferable skills (D1 to D3) are assessed through a range of assignments built into the curriculum assessment strategy, in coursework, on-line and computer-based activities, oral presentations, reflective accounts and reports.</p>

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

The programme is offered in part-time mode, and leads to the award of a BSc (Hons) Engineering with Management.

Entry is normally at Level 6 with an HND. Intake is normally Semester A (September)

Professional and Statutory Regulatory Bodies

N/A

Work-Based Learning, including Sandwich Programmes

N/A

Erasmus Exchange programme

N/A

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 part time

Entry point Semester A

Level 6

	Module Code	Credit Points	Language of Delivery	% Examination	% Coursework	% Practical	Semesters
Compulsory Modules							
Module Title							
Engineering Project Management	6FTC1348	30	English	40	60	-	A
Advanced Manufacturing Technology	6FTC1346	30	English	40	60	-	B
Mechatronics	6FTC1347	30	English	40	60	-	C
Industrial Project	6FTC1349	30	English	0	100	-	BC

The award of an Honours degree requires 120 credit points passed.

Honours classification

The University has approved structure and assessment regulations common to all programmes. Full details are provided in [UPR AS14](#), Section D.

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)
BSc (Hons)	Engineering with Management	120 must be at level 6	6	All programme learning outcomes (see Table 2)

Interim Award	Award Title	Minimum requirements	Available at end of Level	Programme Learning Outcomes developed (see above)
BSc	Engineering with Management	90 must be at level 6	6	A1, A2, A3, A4, C1, C2, C3, B1, B2, D1, D2, D3

Programme-specific assessment regulations

The programme complies with the University's academic regulations (in particular, [UPR AS11](#), [UPR AS12/UPR AS13](#) (*delete as applicable*) and [UPR AS14](#)) with the exception of those listed below, which have been approved by the University:

Module Pass criteria

To pass a module, students have to achieve a minimum mark of 30% for each element of assessment and also an overall mark of 40%.

E. Management of Programme & Support for student learning.

Management

The programme is managed and administered through:

- A programme lead to help students understand the programme structure
- A programme lead and module leaders to provide academic and pastoral support

Support

Students are supported by:

- An induction programme at the beginning of each new cohort entry
- A designated administrator based at UCSA
- A designated UH-based programme administrator and Collaborative Partnership Lead tutor
- The use of student support services at both Oaklands College and the University of Hertfordshire including advice on finance, University regulations, legal matters, chaplaincy, counselling, disability, learning support, and careers
- Canvas, a versatile on-line virtual learning environment
- Student voice mechanisms including programme representation, student forum and programme committee.
- Questionnaire responses collected via Module Feedback Questionnaire (MFQ).
- Use of a wide range of current Learning Resources both at Oaklands College and the University of Hertfordshire, including digital and print information, and computer and Wi-Fi access
- Use of both the University of Hertfordshire and Oaklands College Student Unions
- Access for students to a Study Skills Support Tutor (UCSA)
- Access for staff and students to designated Canvas support and training (UCSA)

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.

For information on a huge range of resources and services relating to topics such as accommodation, fees and funding, visas and student societies etc. 'Ask Herts' <https://ask.herts.ac.uk/> provides answers to a huge variety of questions relating to the University.

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 programme are:

A mechanical or electrical engineering HND. Students will normally have been expected to have attained a Merit grade overall.

All International students are required to demonstrate an English language capability of IELTS 6.0 or equivalent with 5.5 in each band.

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:
Senior 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

BSc (Hons) Engineering with Management

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

This map identifies where the programme learning outcomes are assessed in the constituent modules. It provides (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.

		Programme Learning Outcomes (as identified in section 1 and the following page)																	
		Knowledge & Understanding					Intellectual Skills					Practical Skills			Transferable Skills				
		Module Title	Module Code	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
Level 6	Engineering Project Management	6FTC1348	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	Advanced Manufacturing Technology	6FTC1346	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	Mechatronics	6FTC1347	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	Industrial Project	6FTC1349	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

KEY TO PROGRAMME LEARNING OUTCOMES

Knowledge and Understanding

- A1. The scientific principles underpinning relevant current technologies, and their evolution in relation to the mechanical / electrical and electronic context
- A2. Mathematics and an awareness of statistical methods necessary to support application of key engineering principles and to underpin the educational context
- A3. The commercial, economic and social context of engineering processes that impact upon the engineering context including sustainability limitations; commercial; ethical; relevant codes of practice and professional standards; health and safety; security and risk issues; and intellectual property
- A4. Awareness of quality issues and their application to continuous improvement

Intellectual Skills

- B1. Monitor, interpret and apply the results of analysis and modelling in order to bring about continuous improvement
- B2. Apply quantitative methods and the results of engineering analysis to solve engineering problems and to recommend appropriate actions

Practical Skills

- C1. Ability to apply relevant practical skills and information from technical literature
- C2. Use of computer-based engineering tools
- C3. Apply problem-solving skills, technical knowledge to create or adapt design solutions that are fit for purpose including operation, maintenance, reliability etc.

Transferable Skills

- D1. Apply their skills in problem solving, communication, , information retrieval, and teamwork to real life engineering problems
- D2. Plan self-learning, exercise personal responsibility and improve performance, as part of own continuous professional development

- B3. Ability to apply an integrated or systems approach to engineering problems through know-how of the relevant technologies and their application working with information that may be incomplete or uncertain.
 - B4. Define engineering problems, in the context of wider social and business needs and manage the design process including cost drivers and evaluation outcomes.
 - B5. The ability to apply professional and ethical considerations and professional codes of conduct.
- D3. Communicate work to technical and non- technical audiences

Section 2

Programme management

Relevant QAA subject benchmarking statements	Engineering
Type of programme	Undergraduate
Date of validation/last periodic review	March 19
Date of production/ last revision of PS	March 2019
Relevant to level/cohort	Choose a level entering September 2019
Administrative School	School of Engineering & Computer Science

Table 3 Course structure

Course details		
Course code	Course description	JACS/ HECOS
ENUAEM	BSc (Hons) Engineering with Management (top-Up), UCSA	H100/ N200