University of Hertfordshire UH

School of Physics, Engineering & Computer Science

Title of Programme: Modular Masters in Manufacturing and Supply Chain Management

Programme Code: ECMSCMMSC

Programme Specification

This programme specification is relevant to students entering:
01 September 2021

Associate Dean of School (Academic Quality Assurance):
Dr Mariana Lilley

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

Date	Section	Amendment
31.03.2021	D	**7ENT1127** adjusted from 50% exam/ 50% coursework to 100% coursework* in the academic year 2021/22, due to the covid pandemic.
31.03.2021	D	**7ENT1128** adjusted from 50% exam/ 50% coursework to 100% coursework* in the academic year 2021/22, due to the covid pandemic.
31.03.2021	D	**7AAD0062** adjusted from 60% exam/ 40% coursework to 100% coursework* in the academic year 2021/22, due to the covid pandemic.

31.03.2021	D	**7ENT1065** adjusted from 60% exam/ 40% coursework to 100% coursework* in the academic year 2021/22, due to the covid pandemic.
31.03.2021	D	**7ENT1125** adjusted from 60% exam/ 40% coursework to 100% coursework* in the academic year 2021/22, due to the covid pandemic.
31.03.2021	D	**7ENT1069** adjusted from 60% exam/ 40% coursework to 100% coursework* in the academic year 2021/22, due to the covid pandemic.

* Learning outcomes for this module will be assessed via 100% coursework using alternative modes of assessment. Alternative modes of assessment include, but are not limited to, take home coursework and online timed assessments.

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

Programme Specification
MSc Manufacturing Management
MSc Supply Chain Management

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	Refer to Section D
Final Award (Qualification)	MSc
All Final Award titles (Qualification and Subject)	Manufacturing Management Supply Chain Management
FHEQ level of award	7
Language of Delivery	English

A. Programme Rationale

This programme consists of two specialists Masters awards with an expectation that students will have studied a related engineering discipline to a Bachelor's level or equivalent, as opposed to a conversion masters philosophy aimed at students from a non-engineering background. The MSc awards are normally studied over three semesters with the final semester being a 60-credit point individual project.

The MSc has two starting points. This has been adopted to meet the demand from international students whose previous studies were conducted with a different academic year to the normal September to September year operated in the UK. The consequence of this is that the modules that make up the MSc curriculum need to be independent of each other as the two intake groups of students will not necessarily take modules in the same order. Students entering in semester B will therefore complete their studies over an 18-month period rather than 12 months. It is also possible for a student to study these awards on a part-time basis over a three-year period.

The successful postgraduates of the programme will acquire the knowledge and understanding, intellectual, practical and transferable skills necessary for the analysis and synthesis of problems in engineering and manufacturing through a combination of experimental, simulation, research methods and case studies. They can expect to gain work in a range of disciplines within a variety of industries from specialist technical roles to positions of management responsibility.

On the MSc Manufacturing Management, the development of skills and advancement of knowledge focus on:

- the broad areas of business, operations management, information systems, product development and quality systems;
- design orientated tasks, including analysis and synthesis, to develop relevant and applicable procedures and processes to resolve technical and ultimately business problems;

- critical review of the present knowledge base, its applicability, usage and relevance to enhance product and enterprise performance
- Students may gain employment in the Aerospace and Automotive industry sectors or other FMCG areas.

On the MSc Supply Chain Management, the development of skills and advancement of knowledge focus on:

- the broad areas of business, operations management, operations research, procurement and supply chain management, financial control, manufacturing information systems, manufacturing strategy; legal aspects of supply chain; and human resources management;
- case studies, including analysis and synthesis, contribution to profitability, understanding of purchasing, procurement and logistics;
- critical review of strategic value, procurement and supply chain management
- Students may gain employment in any sector including aerospace, automotive, pharmaceutical, distribution and logistics sector and other FMCG industries.

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 quality education at postgraduate level in the disciplines of aerospace, automotive, mechanical, manufacturing management/technology and operations and supply chain management;
- provide an educational opportunity and experience to graduates and/or those with appropriate previous experience which enhances their prospects of professional employment with industry;
- provide a variety of awards of study through which the postgraduate may demonstrate competence, knowledge, skills and understanding, in and of, selected disciplines in the field of engineering, management and technology;
- provide the students with the knowledge and understanding to equip them for a career in technical and engineering management;
- provide and equip the students with theory and the practice of process and technology management, system design and implementation

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 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/learning methods & strategies	Assessment
Manufacturing Management (MMGM) and Supply Chain Management (SCM) A1 Understanding of business practice and the limitations within an engineering specialisation A2 Understand the roles in an engineering team and personal responsibilities A3mm Relevant techniques for commercial and professional engineering practice in the context of Manufacturing Management. A3scm Relevant techniques for commercial and professional engineering practice in the context of Supply Chain management. A4 Operations management techniques and processes in manufacturing and service sectors. A5 Resource management planning and systems implications. A6 The analytical techniques employed in management and process control. A7 Relevant techniques for commercial and professional engineering practice in the context of Supply Chain Management.	Acquisition of knowledge and understanding is through a combination of lectures, seminars, group discussions and assignments. 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.	Knowledge and understanding are assessed through a series of case studies, assignments, project reports and unseen examinations

Intellectual skills:	Teaching/learning methods & strategies	Assessment
Manufacturing Management (MMGM) and Supply Chain Management (SCM) B1 MMGM: Analyse and solve Manufacturing Management problems using appropriate techniques. B1 SCM: Analyse and solve Supply Chain Management problems. B2 Design/model/analyse relevant engineering systems/subsystems. B3 Critically review and select appropriate research methods to solve engineering and commercial problems. B4 MMGM: Evaluate external influences and develop skills in ethical operations and show insight on the commercial and social context. B4 SCM: Evaluate external influences and develop skills in ethical operations and show insight on the commercial and social aspects in the context of Supply Chain Management. B5 Identify the influence of resource related issues on operations and business. B6 Design appropriate management systems and processes.	Intellectual skills are developed throughout the programme by the methods and strategies outlined in section A, above. Analysis, problem solving, and modelling skills are further developed through case studies, class discussion, in-course exercises, assignments and exams. Throughout, the learner is encouraged to develop intellectual skills further by independent study	Intellectual skills B1-B6 are assessed through case studies, experiential work, tutorials, assignment and examinations. These are supported by work centred on analysis and synthesis, problem solving, in technical and managerial contexts.

Practical skills:	Teaching/learning methods & strategies	Assessment
Manufacturing Management (MMGM) and Supply Chain Management (SCM) C1 MMGM: Apply appropriate experimental, analytical and modelling techniques to a range of manufacturing problems and draw conclusions. C1 SCM: Apply appropriate experimental, analytical and modelling techniques to a range of business applications and draw conclusions. C2 Plan and manage project, considering commercial, industrial and resource constraints. C3 Appropriate evaluation of the resource constraint implications on management decision making. C4 Plan the effective implementation of appropriate management systems and processes.	Practical skills are developed throughout the programme through a series of case studies, experimental and simulation exercises, project reports and viva. Skills are developed through the programme of study and associated written reports and submissions. C2 is developed throughout the programme of the study, with one-to-one supervision during the individual project.	Practical skills C1-C4 are formerly assessed through assignment work on case studies and the individual project
Transferable skills:	**Teaching/learning methods & strategies**	**Assessment**
Manufacturing Management (MMGM) and Supply Chain Management (SCM) D1 Communicate information effectively, orally and/or in writing. D2 Manage time and resources effectively. D3 Work effectively individually and/or within a team. D4 Solve problems in a logical and coherent manner. D5 Learn effectively and independently, in preparation for lifelong learning.	Transferable skills are developed throughout the programme by using group discussions and report writing and require students to manage their own time for achieving targets. Skills developed through coursework reports, oral presentations, research methods and the project report. Skill D2 is developed through meeting deadlines for scheduled assignments and the individual project. Skills D3 and D4 are developed throughout most modules; through lectures, group work, assessments and the individual project. Skill D5 is encouraged and developed by the nature of the programme of study and the acquisition of transferable skills.	Transferable skills D1-D5 are assessed through assignment work and the project.

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

The programme is offered in full-time and part-time modes.

Full-time students may enter the programme for a Semester A entry option 1 start in September when it runs over one calendar year or Semester A entry option 2 when it will run for a period of 18 months. Semester B entry in January runs over 18 months. Identical modules will be studied on both September and January intakes. Students on the September and January intakes complete their projects in Semesters C, A or B respectively.

Semester A Entry Option 1 is to include an early start project module in a study pattern of A, B then C.
Semester A Entry Option 2 is to select a longer study time in a study pattern of A, B then A.
Semester B Entry study time is a pattern B, A then B.

In a part-time mode, the programme is normally offered in 3 years with identical modules studied with the full-time students.

Entry is normally at Masters Level 7 with related degree qualifications.

Accreditation of prior learning (APEL/APCL) is available for this programme. Students wishing to claim APL must document their relevant prior learning in detail and must provide full evidence for their prior achievement of the learning outcomes of this programme.

The Programme Learning Outcomes detailed in section C are developed and assessed through the constituent modules. Table 2 (at the end of this document) identifies where each learning outcome is developed and assessed.

Professional and Statutory Regulatory Bodies

Accreditation is a mark of assurance that the degree meets the standards set by the Engineering Council in the UK Standard for Professional Engineering Competence (UK-SPEC). Some employers recruit preferentially from accredited degrees, and an accredited degree is likely to be recognised by other countries that are signatories to international accords.

Previous awards have recognition by the Institute of Manufacturing (IManf) and graduates of this programme are entitled to "Fellow membership of The Institute of Manufacturing" and, once they can demonstrate 2 years' work experience in Manufacturing Management, they will be entitled to apply for the award of "Certified Manufacturing Practitioner". The same recognition is being sought for the following awards for the 2021 intake**:**

MSc Manufacturing Management
MSc Supply Chain Management

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 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
See pages 9 and 10

Mode of study: Full-time/Part-time

Part time: A typical study pattern for a 3-year part-time student would be 60 credit points of taught modules in the first year, a further 60 credit points of taught modules in the second year and the project in the final year. The order of the modules is agreed in consultation with the Programme Leader with a maximum of 75 credit points within any one academic year.

Entry point: A or B

Note: Semester B entry students study the same modules as semester A entry students, except the MSc individual Project is studied in Semester B of the second year rather than semester C.

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

MMGM = Manufacturing Management
SCM = Supply Chain Management
c = compulsory module

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Entry Point – Semester A

To progress to the project stage, the candidates are expected to have successfully completed a minimum of 90 credits.
The award of a Masters Degree requires 180 credit points passed at level 7, including the MSc Individual Project.

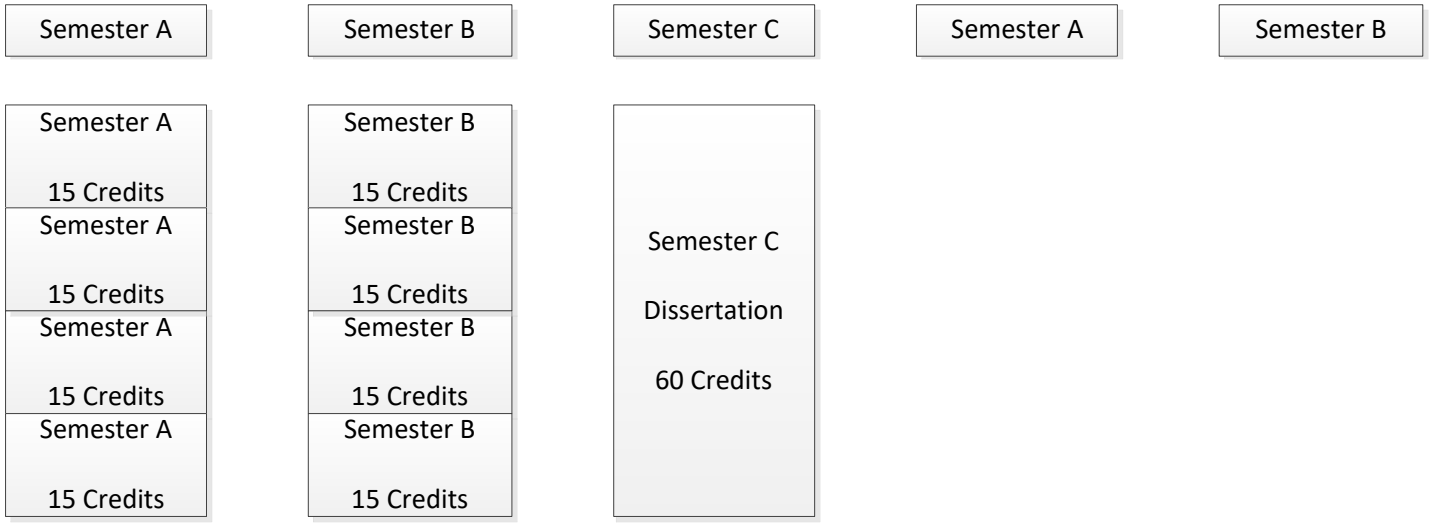
Module Title	Module Code	Award		Credit Pts.	Language of Delivery	% exam	% ICA	% Practical	Semester.	Year of Study	
		MMGM	SCM							Full Time Mode	Part Time Mode
Human Resources Management	7AAD0062	c	c	15	English	0	100	0	A	1	1
Financial Control	7ENT1065	c	c	15	English	0	100	0	A	1	2
Inventory Management	7ENT1124		c	15	English	0	100	0	A	1	2
Smart Manufacturing	7ENT1125	c		15	English	0	100	0	A	1	1
Sustainable Business of Engineering	7ENT1126	c	c	15	English	0	100	0	A	1	1
Procurement & Supply Chain Management	7ENT1069	c	c	15	English	0	100	0	B	1	2
Operations Research & Logistics	7ENT1127	c	c	15	English	0	100	0	B	1	2
Lean Manufacturing & Services	7ENT1128	c	c	15	English	0	100	0	B	1	1
Advanced Materials & Manufacturing Technology	7ENT1129	c		15	English	0	100	0	B	1	1
Legal Aspects of Supply Chain	7LAW0155		c	15	English	0	100	0	B	1	1
MSc Individual Project	7ENT1130	c	c	60	English	0	100	0	C, B, A	2	3

Entry Point – Semester B

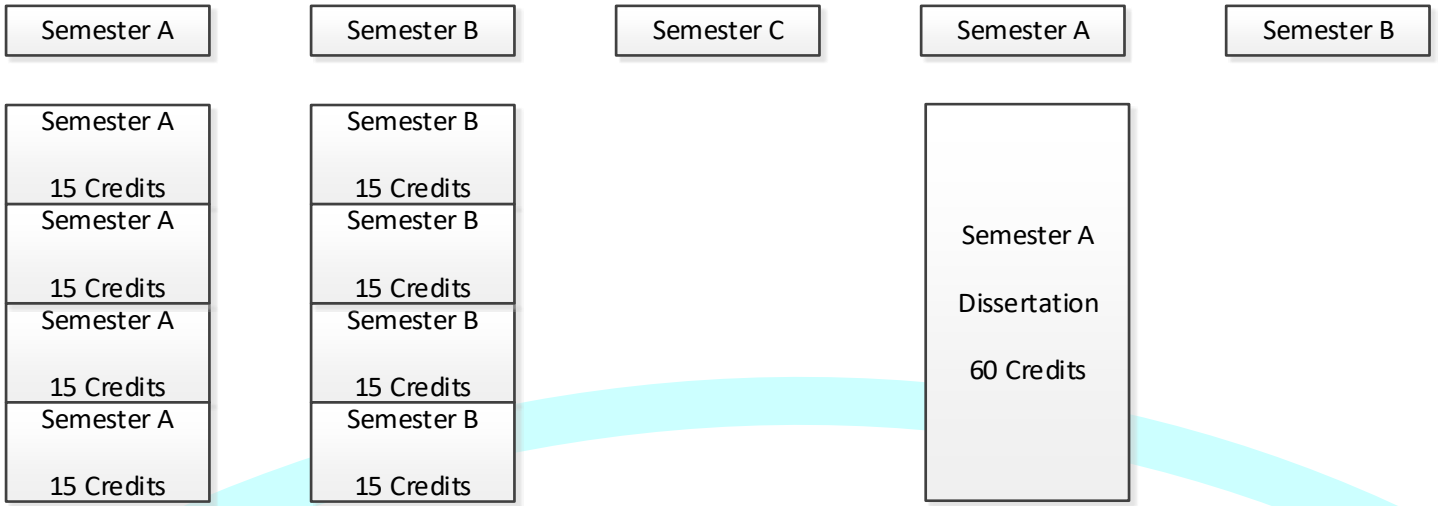
To progress to the project stage, the candidates are expected to have successfully completed a minimum of 90 credits.
The award of a Masters Degree requires 180 credit points passed at level 7, including the MSc Individual Project

Module Title	Module Code	Award		Credit Pts.	Language of Delivery	% exam	% ICA	% Practical	Semester.	Year of Study	
		MMGM	SCM							Full Time Mode	Part Time Mode
Procurement & Supply Chain Management	7ENT1069	c	c	15	English	0	100	0	B	1	2
Operations Research & Logistics	7ENT1127	c	c	15	English	0	100	0	B	1	2
Lean Manufacturing & Services	7ENT1128	c	c	15	English	0	100	0	B	1	1
Advanced Materials & Manufacturing Technology	7ENT1129	c		15	English	0	100	0	B	1	1
Legal Aspects of Supply Chain	7LAW0155		c	15	English	0	100	0	B	1	1
Human Resources Management	7AAD0062	c	c	15	English	0	100	0	A	1	1
Financial Control	7ENT1065	c	c	15	English	0	100	0	A	1	2
Inventory Management	7ENT1124		c	15	English	0	100	0	A	1	2
Smart Manufacturing	7ENT1125	c		15	English	0	100	0	A	1	1
Sustainable Business of Engineering	7ENT1126	c	c	15	English	0	100	0	A	1	1
MSc Individual Project	7ENT1130	c	c	60	English	0	100	0	C, B, A	2	3

MSc (Semester A Entrant) – Full Time Structure Option 1



MSc (Semester A Entrant) – Full Time Structure Option 2



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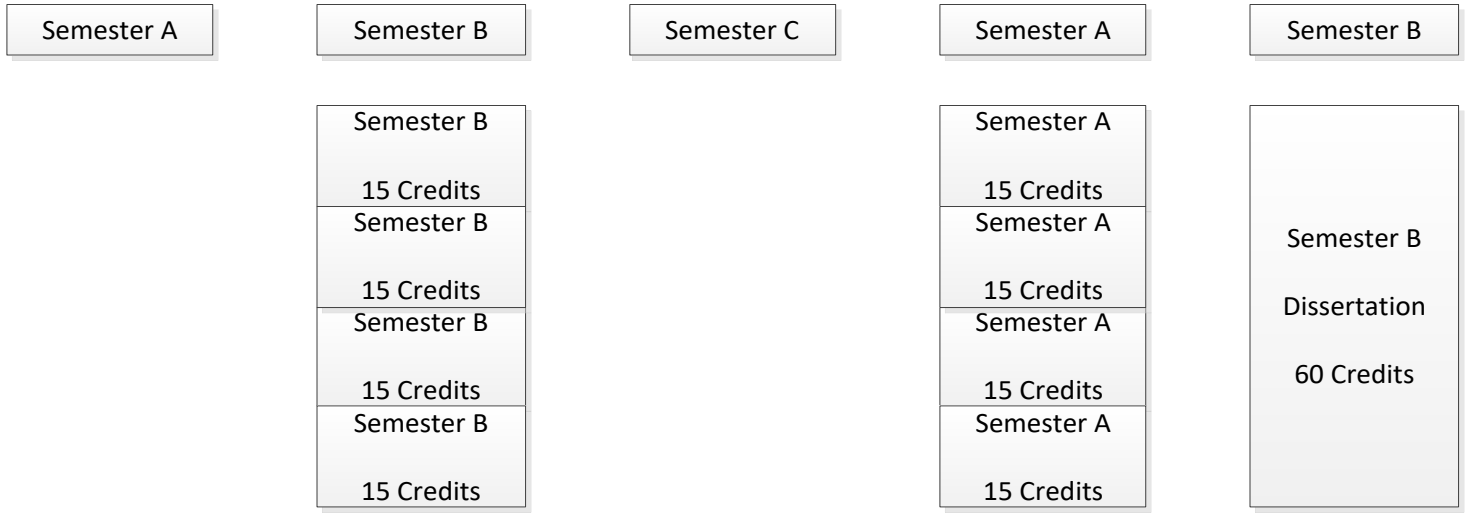
MSc (Semester B Entrant) – Full Time Structure



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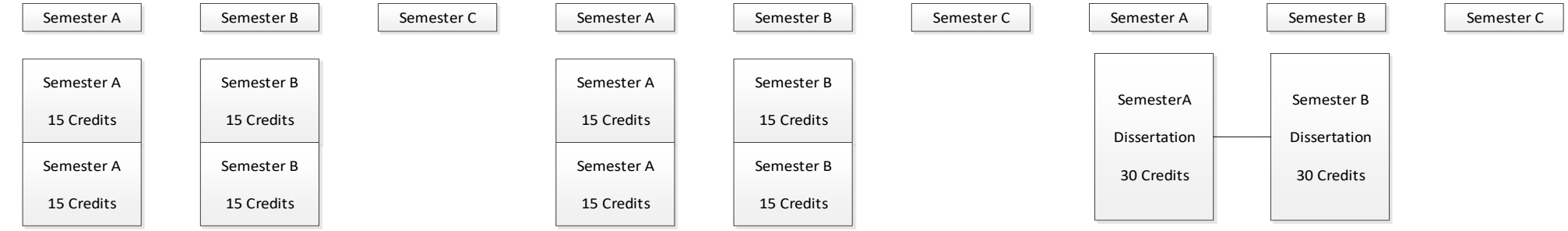
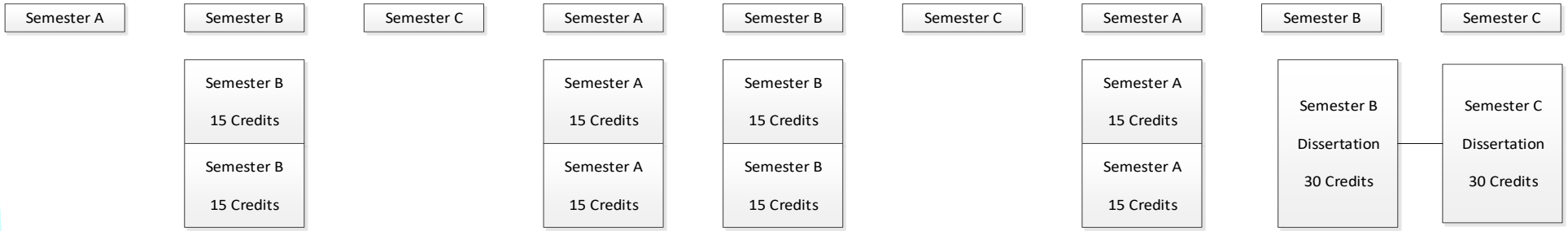
MSc (Semester A Entrant) Part Time Structure



MSc (Semester B Entrant) Part Time Structure



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Honours classification

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

The award of an MSc requires 180 credit points passed at level 7, including the Master's project.

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 (normally):	Programme Learning Outcomes developed (see above)
MSc in named award	Manufacturing Management Supply Chain Management	180 credit points	3 Semesters	All programme learning outcomes (see Table 2)
Interim Award	**Award Title**	**Minimum requirements**	**Available at end of Level**	**Programme Learning Outcomes developed (see above)**
Postgraduate Diploma	Manufacturing Management Supply Chain Management	120 credit points	2, 3 Semesters	List all relevant learning outcomes, e.g. A1, A3, A4, A5, B1, B2, C1, C3, D1, D2, D3, D4
Postgraduate Certificate	Untitled	60 credit points	1-2 Semesters	For untitled awards: See UPR AS11, section 13: http://sitem.herts.ac.uk/secreg/upr/AS11.htm

Masters and Diploma awards can be made "with Distinction" or "with Commendation" where criteria as described in UPR AS14, Section D and the students' handbook are met.

Programme-specific assessment regulations

The programme is compliant with the University's academic regulations (in particular, UPR AS11, UPR AS12/UPR AS13 and UPR AS14) with the exception of those listed below, which have been specifically approved by the University:

A maximum of 30 credit points can be compensated across the programme, in line with university regulations.

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;

- 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 which include a Mathematics Drop-in Centre;
- 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;
- 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;
- 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

For current entry tariff point requirements, please refer to the relevant page for the Course on the University website or on the online prospectus.

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: School Hutton Hub Student Administration Service hhaq@herts.ac.uk

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

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.

MSc Manufacturing Management

Part 1: Programme learning outcomes

		Programme Learning Outcomes (as defined in section 1 and below)																				
		Knowledge & Understanding							**Individual Skills**						**Practical Skills**				**Transferable Skills**				
Module title	**Code**	**A1**	**A2**	**A3manm**	**A4**	**A5**	**A6**	**A7**	**B1manm**	**B2**	**B3**	**B4manm**	**B5**	**B6**	**C1manm**	**C2**	**C3**	**C4**	**D1**	**D2**	**D3**	**D4**	**D5**
Human Resource Management	7AAD0062	X		X		X				X			X	X			X	X			X		
Financial Control	7ENT1065	X					X			X			X		X	X			X				
Procurement & Supply Chain Management	7ENT1069			X		X	X	X					X	X		X	X			X	X		X
SMART Manufacturing	7ENT1125				X				X	X		X			X	X	X					X	
Sustainable Business of Engineering	7ENT1126	X	X	X	X	X		X		X	X				X	X	X	X	X	X	X		X
Operations Research & Logistics	7ENT1127				X	X	X		X	X	X	X	X		X				X		X	X	
Lean Manufacturing & Services	7ENT1128				X	X		X				X				X	X	X					
Advanced Materials and Manufacturing Technology	7ENT1129				X		X				X												X
Individual Masters Project	7ENT1130		X				X		X	X	X	X		X	X	X			X			X	X

Key to Programme Learning Outcomes

Knowledge and Understanding

A1 Understanding of business practice and the limitations within an engineering specialisation
A2 Understand the roles in an engineering team and personal responsibilities
A3mm Relevant techniques for commercial and professional engineering practice in the context of Manufacturing Management.
A4 Operations management techniques and processes in manufacturing and service sectors.
A5 Resource management planning and systems implications.
A6 The analytical techniques employed in management and process control.
A7 Relevant techniques for commercial and professional engineering practice in the context of Supply Chain Management.

Intellectual Skills

B1 MMGM: Analyse and solve Manufacturing Management problems using appropriate techniques.
B2 Design/model/analyse relevant engineering systems/subsystems.
B3 Critically review and select appropriate research methods to solve engineering and commercial problems.
B4 MMGM: Evaluate external influences and develop skills in ethical operations and show insight on the commercial and social context.
B5 Identify the influence of resource related issues on operations and business.
B6 Design appropriate management systems and processes.

Practical Skills

C1 MMGM: Apply appropriate experimental, analytical and modelling techniques to a range of manufacturing problems and draw conclusions.
C2 Plan and manage project, considering commercial, industrial and resource constraints.
C3 Appropriate evaluation of the resource constraint implications on management decision making.
C4 Plan the effective implementation of appropriate management systems and processes.

Transferable Skills

D1 Communicate information effectively, orally and/or in writing.
D2 Manage time and resources effectively.
D3 Work effectively individually and/or within a team.
D4 Solve problems in a logical and coherent manner.
D5 Learn effectively and independently, in preparation for lifelong learning.

MSc Manufacturing Management

Part 2: Mapping to AHEP3 learning outcomes

		AHEP3 Learning Outcomes (as defined in Appendix 6)																		
		Science & mathematics			Engineering analysis			Design			Economic, social, ethical, and environmental context						Engineering practice			
Module title	**Code**	**SM1fl**	**SM2fl**	**SM3fl**	**EA1fl**	**EA2fl**	**EA3fl**	**D1fl**	**D2fl**	**D3fl**	**ET1fl**	**ET2fl**	**ET3fl**	**ET4fl**	**ET5fl**	**ET6fl**	**EP1fl**	**EP2fl**	**EP3fl**	**EP4fl**
Human Resource Management	7AAD0062	X		X	X		X		X				X					X		X
Financial Control	7ENT1065			X		X	X		X	X				X	X	X				
Procurement & Supply Chain Management	7ENT1069		X				X	X			X	X	X				X		X	X
Smart Manufacturing	7ENT1125	X		X						X	X	X	X					X		
Sustainable Business of Engineering	7ENT1126		X	X					X		X	X	X	X	X	X	X		X	X
Operations Research & Logistics	7ENT1127	X		X		X			X						X					X
Lean Manufacturing & Services	7ENT1128		X					X		X		X	X							
Advanced Materials and Manufacturing Technology	7ENT1129	X	X			X			X								X		X	
Individual Masters Project	7ENT1130			X	X				X		X		X	X		X		X		
	Total	**4**	**4**	**6**	**2**	**3**	**3**	**2**	**6**	**3**	**4**	**4**	**6**	**3**	**3**	**3**	**3**	**2**	**3**	**4**

MSc Supply Chain Management

Part 1: Programme learning outcomes

		Programme Learning Outcomes (as defined in section 1 and below)																					
		Knowledge & Understanding							Individual Skills						Practical Skills				Transferable Skills				
Module title	**Code**	**A1**	**A2**	**A3scm**	**A4**	**A5**	**A6**	**A7**	**B1scm**	**B2**	**B3**	**B4scm**	**B5**	**B6**	**C1scm**	**C2**	**C3**	**C4**	**D1**	**D2**	**D3**	**D4**	**D5**
Human Resource Management	7AAD0062	X		X		X				X			X	X			X	X			X		
Financial Control	7ENT1065	X					X			X			X		X	X			X				
Procurement & Supply Chain Management	7ENT1069			X		X	X	X					X	X		X	X			X	X		X
Inventory Management	7ENT1124			X	X		X	X	X	X		X		X			X						
Sustainable Business of Engineering	7ENT1126	X	X	X	X	X		X		X	X				X	X	X	X	X	X	X		X
Operations Research & Logistics	7ENT1127				X	X	X		X	X	X	X	X		X				X		X	X	
Lean Manufacturing & Services	7ENT1128				X	X		X				X				X	X	X					
Individual Masters Project	7ENT1130		X				X		X	X	X	X		X	X	X			X			X	X
Legal Aspects of Supply Chain	7LAW0155			X	X			X	X			X	X			X	X		X			X	

Knowledge and Understanding

A1 Understanding of business practice and the limitations within an engineering specialisation
A2 Understand the roles in an engineering team and personal responsibilities
A3scm Relevant techniques for commercial and professional engineering practice in the context of Supply Chain Management.
A4 Operations management techniques and processes in manufacturing and service sectors.
A5 Resource management planning and systems implications.
A6 The analytical techniques employed in management and process control.
A7 Relevant techniques for commercial and professional engineering practice in the context of Supply Chain Management.

Intellectual Skills

B1scm Analyse and solve problems using appropriate techniques.
B2 Design/model/analyse relevant engineering systems/subsystems.
B3 Critically review and select appropriate research methods to solve engineering and commercial problems.
B4scm Evaluate external influences and develop skills in ethical operations and show insight on the commercial and social aspects in the context of Supply Chain Management.
B5 Identify the influence of resource related issues on operations and business.
B6 Design appropriate management systems and processes.

Practical Skills

C1scm Apply appropriate experimental, analytical and modelling techniques to a range of manufacturing problems and draw conclusions.

C2 Plan and manage project, considering commercial, industrial and resource constraints.

C3 Appropriate evaluation of the resource constraint implications on management decision making.

C4 Plan the effective implementation of appropriate management systems and processes.

Transferable Skills

D1 Communicate information effectively, orally and/or in writing.
D2 Manage time and resources effectively.
D3 Work effectively individually and/or within a team.
D4 Solve problems in a logical and coherent manner.
D5 Learn effectively and independently, in preparation for lifelong learning.

MSc Supply Chain Management

Part 2: Mapping to AHEP3 learning outcomes

		AHEP3 Learning Outcomes (as defined in Appendix 6)																		
		Science & mathematics			Engineering analysis			Design			Economic, social, ethical, and environmental context						Engineering practice			
Module title	**Code**	**SM1fl**	**SM2fl**	**SM3fl**	**EA1fl**	**EA2fl**	**EA3fl**	**D1fl**	**D2fl**	**D3fl**	**ET1fl**	**ET2fl**	**ET3fl**	**ET4fl**	**ET5fl**	**ET6fl**	**EP1fl**	**EP2fl**	**EP3fl**	**EP4fl**
Human Resource Management	7AAD0062	X		X	X		X		X				X					X		X
Financial Control	7ENT1065			X		X	X		X	X				X	X	X				
Procurement & Supply Chain Management	7ENT1069		X				X	X			X	X	X				X		X	X
Inventory Management	7ENT1124	X			X	X	X			X		X					X		X	
Sustainable Business of Engineering	7ENT1126		X	X					X		X	X	X	X	X	X	X		X	X
Operations Research & Logistics	7ENT1127	X		X		X			X						X					X
Lean Manufacturing & Services	7ENT1128		X					X		X		X	X							
Individual Masters Project	7ENT1130			X	X				X		X		X	X		X		X		
Legal Aspects of Supply Chain	7LAW0155		X	X				X		X		X	X					X		
	Total	**3**	**4**	**6**	**3**	**3**	**4**	**3**	**5**	**4**	**3**	**5**	**6**	**3**	**3**	**3**	**3**	**3**	**3**	**4**

Section 2

Programme management

Relevant QAA subject benchmarking statements	Engineering
Type of programme	Taught postgraduate
Date of validation/last periodic review	February 20
Date of production/ last revision of PS	April 21/ March 20
Relevant to level/cohort	Level 7 entering September 2021
Administrative School	School of Engineering and Computer Science

Table 3 Course structure

Course details		
Course code	Course description	HECOS
EIMASTADMA	MSc Manufacturing Management	100209

Course details		
Course code	Course description	HECOS
ECSCMMSC	MSc Supply Chain Management	100209