

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 2023

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

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

Mlilley

Date	Section	Amendment
23.03.23	D	The programme no longer offers a part-time option.

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
Teaching Institution
University of Hertfordshire
University of Hertfordshire

University/partner campuses College Lane Programme accredited by Not applicable

Final Award (Qualification) MSc

All Final Award titles MSc Manufacturing Management (Qualification and Subject) MSc Supply Chain Management

FHEQ level of award 7

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.

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

Diversity and Inclusion

Our programmes are purposefully designed to enable all students to engage meaningfully with the curriculum by being accessible and representative. We will support students to shape their learning experience, removing barriers and enabling them to succeed. The curriculum explicitly includes multiple and representative perspectives, valuing collective identities and individual diversity. Learning, teaching and assessment activities help students to understand how they can enhance outcomes both for themselves and for others. All students belong to a learning community, and during their studies we really want to hear their voices, encourage them to listen to others, and express themselves.

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.

Graduate Attributes

Our graduates will be capable and professional, creative and enterprising, and will build their social and global awareness throughout. In addition to their subject expertise and proficiency, as a University of Hertfordshire graduate, they will be:

- Professionally focused
- Globally minded
- Sustainability driven
- Digitally capable and confident
- Inclusive and collaborative
- · Evidence based and ethical

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 (2021) 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 A3- Relevant techniques for commercial and professional engineering practice in the context of Manufacturing Management. A3 (MMGM)- Relevant techniques for commercial and professional engineering practice in the context of Manufacturing Management. A3 (SCM)- Relevant techniques for commercial and professional engineering practice in the context of Supply Chain 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. Teaching/learning methods &	Knowledge and understanding are assessed through a series of case studies, assignments, project reports and unseen examinations Assessment
intellectual skilis:	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.	Intellectual skills are developed through 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	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.



exams.

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.	Throughout, the learner is encouraged to develop intellectual skills further by independent study.	
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 through 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 assessed through assignment work on case studies and the individual project
Transferable skills:	Teaching/learning methods & strategies	Assessment
D1- Communicate information effectively, orally and/or in writing. D2- Manage time and resources effectively.	Transferable skills are developed through the programme by using group discussions and report writing and require students to	Transferable skills D1-D5 are assessed through assignment work and the project.



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.

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.

Throughout, the learner is encouraged to develop transferable skills by maintaining a record of evidence and completing a personal development plan.

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

The programme is offered in full-time mode.

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. In summary:

- Semester A entry, Option 1: presents an earlier start project module in a study pattern of Semesters A (September), B (January) and C (May).
- Semester A entry, Option 2: presents a longer study time in a study pattern of Semesters A, B and A.
- Semester B entry: presents a pattern of study of Semesters B, A and B.

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

The programme structure and progression information below (Table 1a and 1b) are 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.

Professional and Statutory Regulatory Bodies Not applicable.

Work-Based Learning, including Sandwich Programmes Not applicable.



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

Mode of study Full-time

Entry point Semester A (September)

To progress to the project stage, candidates are expected to have studied 120 credits and passed at least 60 credits. The award of a Masters Degree requires 180 credit points passed at level 7, including the MSc Individual Project. For those students studying MSc Individual Project 7ENT1130 in Semester A, Semester C is a vacation period.

Manufacturing Management

Compulsory Modules Module Title	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Human Resources Management	7AAD0062	15	0	0	100	0	Α
Financial Control	7ENT1065	15	0	60	40	0	Α
Smart Manufacturing	7ENT1125	15	0	0	100	0	Α
Sustainable Business of Supply Chain Logistics	7ENT2003	15	0	0	100	0	Α
Procurement & Supply Chain Management	7ENT1069	15	0	60	40	0	В
Operations Research & Logistics	7ENT1127	15	0	50	50	0	В
Lean Manufacturing & Services	7ENT1128	15	0	50	50	0	В
Advanced Materials & Manufacturing Technology	7ENT1129	15	0	0	100	0	В
MSc Individual Project	7ENT1130	60	0	0	100	0	C or A

Supply Chain Management

Compulsory Modules Module Title	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Human Resources Management	7AAD0062	15	0	0	100	0	Α
Financial Control	7ENT1065	15	0	60	40	0	Α
Inventory Management	7ENT1124	15	0	0	100	0	Α
Sustainable Business of Supply Chain Logistics	7ENT2003	15	0	0	100	0	Α
Procurement & Supply Chain Management	7ENT1069	15	0	60	40	0	В
Operations Research & Logistics	7ENT1127	15	0	50	50	0	В
Lean Manufacturing & Services	7ENT1128	15	0	50	50	0	В
Legal Aspects of Supply Chain	7LAW0155	15	0	0	100	0	В
MSc Individual Project	7ENT1130	60	0	0	100	0	C or A



Entry Point - Semester B

Mode of study Full-time

Entry point Semester B (January)

To progress to the project stage, candidates are expected to have studied 120 credits and passed at least 60 credits. The award of a Masters Degree requires 180 credit points passed at level 7, including the MSc Individual Project

Manufacturing Management

Compulsory Modules Module Title	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Procurement & Supply Chain Management	7ENT1069	15	0	60	40	0	В
Operations Research & Logistics	7ENT1127	15	0	50	50	0	В
Lean Manufacturing & Services	7ENT1128	15	0	50	50	0	В
Advanced Materials & Manufacturing Technology	7ENT1129	15	0	0	100	0	В
Human Resources Management	7AAD0062	15	0	0	100	0	Α
Financial Control	7ENT1065	15	0	60	40	0	Α
Smart Manufacturing	7ENT1125	15	0	0	100	0	Α
Sustainable Business of Supply Chain Logistics	7ENT2003	15	0	0	100	0	Α
MSc Individual Project	7ENT1130	60	0	0	100	0	В

Supply Chain Management

Compulsory Modules Module Title	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Procurement & Supply Chain Management	7ENT1069	15	0	60	40	0	В
Operations Research & Logistics	7ENT1127	15	0	50	50	0	В
Lean Manufacturing & Services	7ENT1128	15	0	50	50	0	В
Legal Aspects of Supply Chain	7LAW0155	15	0	0	100	0	В
Human Resources Management	7AAD0062	15	0	0	100	0	Α
Financial Control	7ENT1065	15	0	60	40	0	Α
Inventory Management	7ENT1124	15	0	0	100	0	Α
Sustainable Business of Supply Chain Logistics	7ENT2003	15	0	0	100	0	Α
MSc Individual Project	7ENT1130	60	0	0	100	0	В

Table 1b Final and interim awards available

The programme provides the following final and interim awards:



		Minimum	Available at end of	Programme Learning Outcomes developed
Final Award	Award Title	requirements	(normally):	(see above)
			(Horriany).	/
MSc	Manufacturing	180 credit points,	3	All programme learning outcomes (see Table
	Management	which must	Semesters	2)
		include the		
		individual project		
MSc	Supply Chain	180 credit points,	3	All programme learning outcomes (see Table
	Management	which must	Semesters	2)
		include the		
		individual project		

			Available at	
		Minimum	end of	Programme Learning Outcomes developed
Interim Award	Award Title	requirements	Level	(see above)
Postgraduate	Manufacturing	120 credit points	2, 3	A1, A3, A4, A5, B1, B2, B6, C1, C3, D1, D2,
Diploma	Management		Semesters	D3, D4
Postgraduate	Supply Chain	120 credit points	2, 3	A1, A3, A4, A5, B1, B2, B6, C1, C3, D1, D2,
Diploma	Management		Semesters	D3, D4
Postgraduate	Untitled	60 credit points	1-2	See UPR AS11, section 13:
Certificate			Semesters	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, <u>UPR AS11, UPR AS12</u> and <u>UPR AS14</u>) with the exception of those listed below, which have been specifically approved by the University:

Not applicable.

Further points of clarification and interpretation relevant to this specific programme are given below:

Not applicable.

E. Management of Programme & Support for student learning

Management

The programme is managed and administered through:

- Dean of School;
- · Associate Dean (Academic Quality Assurance);
- Associate Dean (Learning, Teaching and Student Experience);
- A Programme Leader, who has overall responsibility for the effective operationalization of the programme, and ensuring that academic standards are maintained and an effective student learning experience is provided;
- An Admissions Tutor, with specific responsibility for selection;
- Module Leaders who are responsible for individual modules;
- A programme committee, that includes student representation;



• A designated administrative team to deal with day-to-day administration associated with the modules within the programme.

Support

Students are supported by:

- An induction week at the beginning of each new academic session;
- Overseas Orientation;
- A project supervisor;
- You will have a Personal Tutor who will be an important point of contact, able to help you gain a good understanding of the School and programme you are studying;
- A substantial Student Centre that provides advice on issues such as finance, University regulations, legal matters, accommodation, and international student support;
- Office of Dean of Students, Student Wellbeing (incorporating Counselling, Mental Health and Disability Support), Chaplaincy, and Day Nursery;
- Canvas, a versatile on-line inter-active intranet and learning environment;
- · Guided student-centred learning on Canvas module sites;
- Access to extensive digital and print collections of information resources;
- Attractive modern study environments in 2 Learning Resources Centres;
- Student Success Hubs, which include a Mathematics Drop-in Centre;
- Medical Centre;
- University Disability Advisors;
- An Equality Office;
- Careers Enterprise and Employment Services;
- Hertfordshire Student's Union:
- Dedicated programme site.

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;

The <u>Ask Herts</u> 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/.

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 <u>UPR SA03</u>), 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 External Examiner's Report for the programme, please email a request to aqo@herts.ac.uk



MSc Manufacturing 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.

					P	rogra	mme	Lear	ning Ou	ıtcom	es (a	s identi	fied ir	n sect	ion 1 ar	nd the	e follo	wing	page)			
			Kno	wledge 8	& Und	erstar	nding			Int	ellect	ual Skil	ls		Pra	actica	l Skil	ls	7	rans	ferabl	le Skil	lls
Module Title	Module Code	A1	A2	A3 MMG M	A4	A5	A6	A7	B1 MMG M	B2	В3	B4 MMG M	B5	В6	C1 MMG M	C2	C3	C4	D1	D2	D3	D4	D5
Human Resource Management	7AAD0062	Х		Х		Х				Х			Х	Х			Х	Х			Х		
Financial Control	7ENT1065	Х					Х			Х			Х		Х	Х			Х				
Procurement & Supply Chain Management	7ENT1069			Х		Х	Х	Х					Х	Х		Х	Х			Х	Х		Х
SMART Manufacturing	7ENT1125				Х				Х	Х		Х			Х	Χ	Х					Х	1
Sustainable Business of Supply Chain Logistics	7ENT2003	Х	Х	Х	Х	Х		Х		Х	Х				Х	Х	Х	Х	Х	Х	Х		Х
Operations Research & Logistics	7ENT1127				Х	Х	Х		Х	Χ	Х	Х	Х		Х				Х		Х	Х	1
Lean Manufacturing & Services	7ENT1128				Х	Χ		Х				Х				Χ	Х	Х					
Advanced Materials and Manufacturing Technology	7ENT1129				Х		Х				Х												Х
Individual Masters Project	7ENT1130		Χ				Χ		Х	Х	Х	Х		Х	Х	Χ			Х			Х	Х



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.
- A3. MMGM: 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: Mapping to AHEP3 learning outcomes

	Al	HEP3 Learning	Outcomes (as defined in Appendix 6)	
Science &	Engineering		Economic, social, ethical, and	Engineering practice
mathematics	analysis	Design	environmental context	

Module Title	Module Code	SM1fl	SM2fl	SM3fl	EA1fl	EA2fl	EA3fl	D1fl	D2fl	D3fl	ET1fl	ET2fl	ET3fl	ET4fl	ET5fl	ET6fl	EP1fl	EP2fl	EP3fl	EP4fl
Human Resource Management	7AAD0062	Х		Х	Х		Х		Х				Х					Х		Х
Financial Control	7ENT1065			Х		Х	Χ		Х	Х				Х	Χ	Х				
Procurement & Supply Chain Management	7ENT1069		Х				Х	Х			Х	Х	Х				Х		Х	Х
SMART Manufacturing	7ENT1125	Х		Х						Х	Х	Х	Х					Х		
Sustainable Business of Supply Chain Logistics	7ENT2003		Х	Х					Х		Х	Х	Х	Х	Х	Х	Х		Х	Х
Operations Research & Logistics	7ENT1127	Х		Х		Х			Х						Х					Х
Lean Manufacturing & Services	7ENT1128		Х					Х		Х		Х	Х							
Advanced Materials and Manufacturing Technology	7ENT1129	Х	Х			Х			Х								Х		Х	
Individual Masters Project	7ENT1130			Х	Χ				Х		Х		Х	Х		Х		Х		



MSc Supply Chain Management: Programme learning outcomes

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	A 3	A4	A5	A6	A 7	B1	B2	В3	B4	B5	B6	C1	C2	C3	C4	D1	D2	D3	D4	D5
				SCM					SCM			SCM			SCM								
Human Resource Management	7AAD0062	Χ		Х		Χ				Χ			Х	Χ			Χ	Х			Х		
Financial Control	7ENT1065	Х					Х			Х			Х		Х	Х			Х				
Procurement & Supply Chain Management	7ENT1069			Х		Х	Х	Х					Х	Х		Х	Х			Х	Х		Х
Inventory Management	7ENT1124			Х	Х		Х	Х	Χ	Х		Х		Х			Х						
Sustainable Business of Supply Chain Logistics	7ENT2003	Х	Х	Х	Х	Х		Х		X	Х				Х	Х	Х	Х	Х	Х	Х		Х
Operations Research & Logistics	7ENT1127				Χ	Χ	Χ		Х	Χ	Х	Х	Х		Х				Х		Х	Χ	
Lean Manufacturing & Services	7ENT1128				Х	Х		Х				Х				Х	Х	Х					
Individual Masters Project	7ENT1130		Х				Χ		Х	Χ	Х	Х		Χ	Х	Χ			Х			Χ	Х
Legal Aspects of Supply Chain	7LAW0155			Х	Χ			Χ	Х			Х	Χ			Χ	Χ		Χ			Χ	



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.
- A3. SCM: 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

- B1. SCM: 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. SCM: Evaluate external influences and develop skills in ethical operations and show insight on the commercial and social 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

- C1. SCM: 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: Mapping to AHEP3 learning outcomes

							Al	HEP3	Lear	ning	Outco	mes (a	s defin	ed in A	ppendi	ix 6)				
			cience athemat			ngineeri analysi:			Desig	n			mic, so vironme		nical, ar ontext	nd	E	ngineeri	ng practio	е
Module Title	Module Code	SM1fl	SM2fl	SM3fl	EA1fl	EA2fl	EA3fl	D1fl	D2fl	D3fl	ET1fl	ET2fl	ET3fl	ET4fl	ET5fl	ET6fl	EP1fl	EP2fl	EP3fl	EP4fl
Human Resource Management	7AAD0062	Х		Х	Х		Х		Х				Х					Х		Х
Financial Control	7ENT1065			Χ		Х	Х		Х	Х				Х	Х	Х				
Procurement & Supply Chain Management	7ENT1069		Х				Х	Х			Х	Х	Х				Х		Х	Х
Inventory Management	7ENT1124	Х			Х	Х	Х			Х		Х					Х		Х	
Sustainable Business of Supply Chain Logistics	7ENT2003		Х	Х					Х		Х	Х	Х	Х	Х	Х	Х		Х	Х
Operations Research & Logistics	7ENT1127	Х		Х		Х			Х						Х					Х
Lean Manufacturing & Services	7ENT1128		Х					Х		Х		Х	Х							
Individual Masters Project	7ENT1130			Х	Х				Χ		Х		Х	Х		Х		Х		
Legal Aspects of Supply Chain	7LAW0155		Х	Х				Х		Х		Х	Х					Х		



Table 3: Development of Graduate Attributes in the Constituent Modules

This map identifies where the Graduate Attributes are delivered in the constituent modules. It provides (i) an aid to academic staff in understanding how individual modules contribute to the development of the Graduate Attributes (ii) a checklist for quality control purposes and (iii) a means to help students monitor their own personal and professional development as the programme progresses. [Note that there is no requirement for the Graduate Attributes to be assessed through

these modules] NB. Each module should develop at least one of the graduate attributes, and each graduate attribute should be developed in at least one module, ideally more. There should be a good spread across the programme without every attribute being developed in the majority of modules. Delete the D from the boxes where they do not apply. DELETE THIS COMMENT

D = Delivered

Module Title	Module Code	Professionally Focused	Globally Minded	Sustainability Driven	Digitally capable & confident	Inclusive and collaborative	Evidenced based and Ethical
		D	D	D	D	D	D
		D	D	D	D	D	D
		D	D	D	D	D	D
		D	D	D	D	D	D
		D	D	D	D	D	D
		D	D	D	D	D	D
		D	D	D	D	D	D
		D	D	D	D	D	D
		D	D	D	D	D	D
		D	D	D	D	D	D
		D	D	D	D	D	D
		D	D	D	D	D	D
		D	D	D	D	D	D
		D	D	D	D	D	D
		D	D	D	D	D	D
		D	D	D	D	D	D



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

Language of Delivery

Engineering

Taught postgraduate

February 20 March 2023

Level 7 entering September 2023

School of Physics, Engineering & Computer Science

English

Table 4 Course structure

Course Code	Course Description	HECOS
EIMASTADMA	MSc Manufacturing Management	100209
ECSCMMSC	MSc Supply Chain Management	100209

