



Course Specification Part A

MSc Engineering Management EECT069

**School of Mechanical, Aerospace, and Automotive Engineering
Faculty of Engineering, Environment and Computing
Academic Year: 2021/22**

Please note: This specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if s/he takes full advantage of the learning opportunities that are provided.

We regularly review our course content, to make it relevant and current for the benefit of our students. For these reasons, course modules may be updated.

More detailed information on the learning outcomes, content, and teaching, learning and assessment methods of each module can be found in the Module Information Directory (MID), student module guide(s) and the course handbook.

The accuracy of the information contained in this document is reviewed by the University and may be verified by the Quality Assurance Agency for Higher Education.

Coventry University's accreditation with CMI is currently ongoing for the relevant modules and is regularly reviewed and monitored by the CMI through their quality systems. Whilst Coventry University anticipates that these reviews will continue to be successful, if they were to be unsuccessful, the relevant module in this course would no longer be accredited and we would notify applicants and students of this change as soon as possible.

1. Introduction

This MSc course seeks to prepare students to be successful senior managers in engineering companies in highly competitive international environments.

To help deliver this, a very important distinguishing feature of this course is that it has been designed to incorporate three alternative pathways that allow the student to select a route that is clearly focused on their anticipated or current career path in a manufacturing company. The selection of one from three pathways (Engineering Business Management, Technical, or Operations) adds specific career-focused content to the core modules that all students take.

The unique benefits of this course are that it:

- Can be tailored to meet students' career aspirations in terms of a business, technical or operations focus
- Provides students with an opportunity to apply for a variety of roles in manufacturing companies
- Does not require several years of prior experience in their chosen field as an entry qualification.

Incorporating the critical perspectives of entrepreneurship, wealth generation, and internationalisation the syllabus addresses key areas of engineering and business management theory within an international context. This is undertaken through grounding these in real-life practice through research, case studies and applied work, with an emphasis on planning, directing and coordinating international operations in the engineering sector.

In addition to management content, the course has a strong engineering focus, and students will benefit from the industrial experience of academics who have worked as senior executives, operations managers, project managers or supply chain managers in such companies as General Electric, Ford and Rolls Royce, and who truly understand engineering management issues.

As part of this course you will undertake a professional development module which is currently accredited by the Chartered Management Institute (CMI). Upon successful completion of the module, you will gain the CMI Level 7 Certificate in Strategic Management and Leadership Practice at no additional cost.

For students in today's competitive employment markets having work experience can significantly enhance employment prospects. For this reason, the course offers students the opportunity to undertake a work placement, extending the main provision to a two-year course. The work placement could be International or UK with a focus which may be industry or research. Following a selection process within the first semester and subject to securing an approved placement opportunity, students would move onto the two-year course. International students who are interested in a work placement will be supported in completing an application for extending their Tier 4 visa by international student support services. Upon completion of their placement, students will return to complete the course and the final project for the full award.

Research informed teaching is the norm. An Activity Led Learning (ALL) approach (student centred) is promoted within the course, with group work introduced to develop transferable skills helping students to be industry-ready.

The course is forward-looking, incorporates computer simulation within the syllabus, and has a very high student satisfaction rating.

2 Available Award(s) and Modes of Study

Title of Award	Mode of attendance	UCAS Code	FHEQ Level
MSc Engineering Management	Full time 1 year	N/A	7
Fall back awards: PgD Engineering Management PgC Engineering management	2 years with Work Placement Part time 2 years		

3 Awarding Institution/Body	Coventry University
4 Collaboration	None
5 Teaching Institution and Location of delivery	Coventry University
6 Internal Approval/Review Dates	Date of review: (04/2019) Date for next review: (Academic year 2024/25)
7 Course Accredited by	
8 Accreditation Date and Duration	
9 QAA Subject Benchmark Statement(s) and/or other external factors	This course complies with the QAA National Framework: QAA Subject Benchmark Statement for Engineering (Master's Degree 2015) and QAA Subject Benchmark Statement for Business Management (Master's Degree 2015). Additionally, the course has been designed in line with the accreditation requirements of the IMechE.
10 Date of Course Specification	March 2021
11 Course Director	Richard Anderson

12 Outline and Educational Aims of the Course

This MSc in Engineering Management aims to provide students with a comprehensive understanding of key aspects of these areas and to develop knowledge, skills and expertise that can be applied to the wealth generating engineering sector. The educational experience also aims to develop students' intellectual and personal skills, and give them the capability to undertake a practical research study and publish results. This will prepare students to pursue careers and be leaders in the global manufacturing industry.

The Aims of the course are to:

1. Prepare students to make significant contributions to their profession, the economy and society
2. Enable students to develop their analytical, communication, and team working skills, and to exercise responsibility and sound management approaches.
3. Provide students with a transformative learning experience through activity-led learning, underpinned by research inspired teaching
4. Provide students with the opportunity to deal with complex issues, demonstrate self-direction and develop transferable skills as the foundation of lifelong learning and continuous professional development.
5. Create an educational environment that enables students to explore the current and emerging technologies, applications and digital tools used in global manufacturing industries
6. Provide the opportunity for students to advance their engineering proficiency, and develop new skills and knowledge
7. Mentor students to act ethically and professionally in the process of creating wealth in a culturally diverse and highly competitive global economy

These Aims are developed into the course Learning Outcomes which comply with the QAA National Framework: QAA Subject Benchmark Statement for Engineering (Master's Degree 2015) and QAA Subject Benchmark Statement for Business Management (Master's Degree 2015), together with accreditation requirements for the IMechE.

13 Course Learning Outcomes

On successful completion of the course a student will be able to:

1. Critically appraise the social, political, economic, and environmental impact of a manufacturing company in the context of ethical and responsible management practices.
2. Discriminate between different leadership practices and the associated alternatives for effective communication and team management approaches, to enable a culturally sensitive approach towards a manufacturing company's stakeholders.
3. Critically evaluate the role of managers in their task of ensuring that a manufacturing company creates sustainable value through their ability to think strategically and explore potential solutions to complex and ambiguous management, technical or operations problems.
4. Explore, critically evaluate, and apply a range of sector/pathway-specific models and concepts within a practical setting.
5. Develop the necessary study and research skills to support the analytical, critical, and reflective requirements of the written, oral and group working aspects of assignments, and of the individual dissertation, thereby addressing academic requirements as well as enhancing employability.
6. Critically evaluate the principles for leading and developing people and entrepreneurial practice in strategic contexts.

14 Course Structure and Requirements, Levels, Modules, Credits and Awards

The course structure is as set out below. There are 7 mandatory modules, and three pathways each comprising three different modules with the student selecting one of the pathways.

Common Modules

(mandatory)

7036MAA Financial Decision Making
7017MAA Engineering Project Management
7094MAA Global Engineering Strategy
7123MAA Digital Engineering and Industry 4.0
7028MAA Research Methods and Project Introduction
7050CRB Entrepreneurial Practice
7030MAA Masters Dissertation

Engineering Business Management Pathway

(optional)

7097MAA Entrepreneurship
and Innovation for Engineers
7026MAA Supply Chain Management
7027MAA Sustainability and the
Environment

Technical Pathway

(optional)

7040MAA Design Principles and Practice
7101MAA Future & Advanced Manufacturing
Materials and Technologies
7090MAA Automation and Robotics

Operations Pathway

(optional)

7098MAA Global
Lean & Agile
7061MAA Management of
Quality
7099MAA Optimisation
& Simulation

This combination of Course title/extent of engineering content/career-focussed selectable pathways is unique across UK Universities.

The course is delivered using a modular approach over two teaching semesters of 16 weeks each with the third semester devoted to the CMI module and the dissertation. The course is a 1-year full-time course, with September and January intakes. The following table is a typical delivery pattern for this course based on the Teach-Teach-Project Cycle being used during the entry year. Personalised timetables will be issued to students prior to their course start date.

Semester	Engineering Business Management Pathway	Technical Pathway	Operations Pathway
A	7017MAA	7017MAA	7017MAA
A	7036MAA	7036MAA	7036MAA
A	7026MAA	7090MAA	7098MAA
A	7123MAA	7123MAA	7123MAA
B	7094MAA	7094MAA	7094MAA
B	7097MAA	7101MAA	7061MAA
B	7027MAA	7040MAA	7099MAA
B	7028MAA	7028MAA	7028MAA
C	7050CRB	7050CRB	7050CRB
C	7030MAA	7030MAA	7030MAA

The pathway-specific modules are highlighted in grey.

Part-time students are expected to create a study plan by attending modules with the full-time students, typically two modules per semester. This will be in discussion with the Course Director.

The course structure complies with the requirements defined in the University's [Postgraduate](#) Principles of Course Design document. Modules within the course, the level at which they are taught and their credit value are outlined in the table below.

Work Placement

During semester 1, students who have expressed an interest in undertaking a work placement should begin the application process for placement opportunities. Students have the responsibility for securing a placement, but they will be supported throughout the application process by a specialist employer engagement team. The university will work with employers to identify opportunities. Subject to securing a placement, the International Student Support team will work with international students to obtain UK study visa extensions. Visas required to work in other countries will be the responsibility of the student.

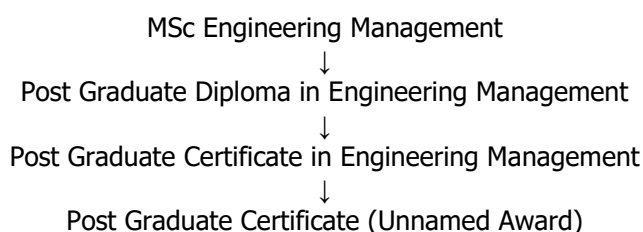
The course is structured so that students complete two semesters of taught modules and then spend three semesters on placement. During this time students would be enrolled onto modules 7102CEM Extended Masters Work Placement A, 7103CEM Extended Masters Work Placement B and 7104CEM Extended Masters Work Placement C. The modules are zero credit and do not contribute to the classification or name of the award but must be passed to complete the placement. Upon completion of the work placement, students are expected to return to Coventry to complete the final semester during which time they undertake their project module. Successful completion of the Work Placement is reflected in the final student transcript.

Credit level	Module Code	Title	Credit Value	Mandatory/ Optional	Course Learning Outcomes
Subject to securing an appropriate placement opportunity and fulfilling the selection requirements, students will be transferred to the two-year course and the Work Placement modules listed below are to be taken.					
7	7102CEM	Extended Masters Work Placement A	0	Optional	
7	7103CEM	Extended Masters Work Placement B	0	Optional	
7	7104CEM	Extended Masters Work Placement C	0	Optional	

The work placement is to be taken over three semesters and prior to the final semester of the course.

Cascade of Awards:

Awards for Taught Masters programmes may be made with Distinction or with Merit as per the Academic Regulations.



The requirements for each of the awards listed are:

- **MSc Engineering Management:** the full curriculum (180 credits). Students must successfully pass all modules to be eligible for the award.
- **PgDip in Engineering Management:** 120 credits from the programme specification.
- **PgCert Engineering Management** 60 credits from the programme specification.

Modules within the course, their status (whether mandatory or options), the levels at which they are studied, and their credit value are identified in the table below.

Credit level	Module Code	Title	Credit Value	Mandatory/ Optional	Course Learning Outcomes
Mandatory Modules					
7	7036MAA	Financial Decision Making	15	M	1, 3, 4
	7017MAA	Engineering Project Management	15	M	2, 3, 4, 5
	7094MAA	Global Engineering Strategy	15	M	1, 2, 3, 4, 5
	7123MAA	Industry 4.0 and the Engineering Digital Environment	15	M	1, 3, 4, 5
	7028MAA	Research Methods and Project Introduction	15	M	1, 4, 5
	7050CRB	Entrepreneurial Practice	10	M	6
	7030MAA	Masters Dissertation	50	M	1, 3, 4, 5
And, Eng. Bus. Mgt. Pathway, or					
7	7097MAA	Entrepreneurship and Innovation for Engineers	15	O	2, 3, 4, 5
	7026MAA	Supply Chain Management	15	O	2, 3, 4, 5

	7027MAA	Sustainability and the Environment	15	0	1, 2, 3, 4, 5
Technical Pathway, or					
7	7040MAA	Design Principles and Practice	15	0	4, 5
	7101MAA	Future & Advanced Manufacturing Materials and Technologies	15	0	3, 4, 5
	7090MAA	Automation and Robots	15	0	3, 4, 5
Operations Pathway					
7	7098MAA	Global Lean and Agile	15	0	3, 4, 5
	7061MAA	Management of Quality	15	0	2, 4, 5
	7099MAA	Optimisation and Simulation	15	0	3, 4, 5

CMI Certificate:

Students who successfully complete the module and meet the CMI learning outcomes will gain a Level 7 Certificate in Strategic Management and Leadership Practice based on the following CMI units: Leading and Developing People to Optimise Performance (unit 702); Entrepreneurial Practice (unit 711).

Students who successfully complete this module will be awarded Foundation Chartered Manager status and be able to use the designation 'fCMgr' after their name.

15 Criteria for Admission and Selection Procedure

The entry criteria for the programme correspond to the QAA Benchmark Statements (2015).

An applicant for the programme will normally be expected to possess at least one of the following:

- A minimum of a second class honours degree in any engineering related subject or Management studies.
- A relevant professional qualification of an equivalent level.
- A lower qualification plus appropriate and relevant experience at a professional level.
- Satisfactory, independent evidence of working for several years in a position that would normally be occupied by an honours graduate, in a relevant area, which would lead to gaining benefit from the course.

Students whose first language is not English must demonstrate proficiency in the English language equivalent to IELTS 6.5. Alternatively students may be admitted with IELTS 6.0 if they attend a compulsory pre-session English course, operated by Coventry University, before joining their Masters programme.

Applicants who do not have the above entry requirements will still be considered on their individual merits where alternative and additional evidence of aptitude, such as extensive practical experience is evident via the university RPEL/RPL policy. Admissions tutors can offer further advice on this.

Recognised Prior Learning (RPL) is in accordance with University regulations as set out in the regulations for taught postgraduate courses. The accreditation for Recognised Prior Experiential Learning (RPEL) will only be awarded for achievements equivalent to Masters' level. Module exemptions can be awarded with evidence that the module outcomes have been achieved through previous study or experience at the discretion of the Course Director.

The programme is subject to the general University admission procedures and access policies. A wide range of academic backgrounds is deemed suitable for entry to the programme. If felt appropriate, applicants may be offered an opportunity to undertake a preliminary programme of study prior to enrolling on the programme.

16 Academic Regulations and Regulations of Assessment

This Course conforms to the standard [University Academic Regulations](#) Postgraduate Mode R

17 Indicators of Quality Enhancement

The Course is managed by the Mechanical Aerospace and Automotive Engineering Board of Study of the Faculty of Engineering Environment and Computing.

The Programme Assessment Board (PAB) for Mechanical Automotive and Manufacturing Engineering PG is responsible for considering the progress of all students and making awards in accordance with both the University and course-specific regulations.

The assurance of the quality of modules is the responsibility of the Boards of Study which contribute modules to the course.

External Examiners have the opportunity to moderate all assessment tasks and a sample of assessed work for each module. They will report annually on the course and/or constituent modules and their views are considered as part of the Course Quality Enhancement Monitoring (CQEM). Details of the CQEM process can be found on the Registry's web site.

Students are represented on the Student Forum, Board of Study and Faculty/School Board, all of which normally meet two or three times per year.

Student views are also sought through module and course evaluation questionnaires.

The QAA's Higher Education Review undertaken in February 2015 confirmed that Coventry University meets the UK expectations regarding the:

- setting and maintenance of the academic standards of awards
- quality of student learning opportunities
- quality of the information about learning opportunities
- enhancement of student learning opportunities

This Engineering Course has been designed in accordance with the:

- QAA Engineering Subject Benchmark statement [February 2015]
- UK Standards for Professional Engineering Competence [Third Edition]
- Engineering Council Accreditation of Higher Education Programmes

The School engages in a wide variety of research and attracts governmental and industry funding and engages with industry through advisory boards to inform curriculum design.

18 Additional Information

Enrolled students have access to additional key sources of information about the course and student support. This information can be found in the:

- Student Handbook
 - Course Handbook
 - Module Guides
 - Aula Course & Module Webs
 - Module Information Directory
 - EEC Student Portal <https://share.coventry.ac.uk/students/EC/Pages/Home.aspx>
 - Coventry University Student Portal <https://share.coventry.ac.uk/students/Pages/Index.aspx>
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