Programme Specification

Engineering Management [GCET]

Version: 2022-23, v0.2, 06 Mar 2023

Contents

Section 1: Key Programme Details

Part A: Programme Information

Programme title: Engineering Management [GCET]

Highest award: MSc Engineering Management

Interim award: PGCert Engineering Management

Interim award: PGDip Engineering Management

Awarding institution: UWE Bristol

Affiliated institutions: Not applicable

Teaching institutions: UWE Bristol

Study abroad: No

Year abroad: No

Sandwich year: No

Credit recognition: No

School responsible for the programme: FET Dept of Engineering Design & Mathematics, Faculty of Environment & Technology

Contributing schools: Not applicable

Professional, statutory or regulatory bodies: Not applicable

Apprenticeship: Not applicable

Mode of delivery: Full-time, Part-time

Entry requirements: For the current entry requirements see the UWE public website.

For implementation from: 01 September 2019

Programme code: H19D12

Section 2: Programme Overview, Aims and Learning Outcomes

Part A: Programme Overview, Aims and Learning Outcomes

Overview: This postgraduate degree is designed to provide access to employment with high earning potential in a professional engineering environment and is accessible to graduates from engineering or business disciplines. Through deepening the students understanding of the discipline of engineering and business management, and focusing on the application of knowledge in a real-world context, this programme is particularly relevant to the needs of organisations operating in the technology and engineering sectors.

Educational Aims: The Engineering Business Management programme aims to:

Provide opportunities for graduates from a range of backgrounds to develop themselves to meet the industry need for future managers who have both a mix of technology and business skills and knowledge within the engineering and technology sector;

Provide a multi-disciplinary learning environment that will enable graduates to develop managerial capabilities and vision to face the challenges of the future, through engagement with academic expertise. Their understanding of real-world business practice will be enhanced through seminars delivered by experienced external speakers;

Support graduates to gain a comprehensive understanding of global challenges, in order to respond with change initiatives and strategies that strengthens organisation competitiveness;

Prepare graduates for progression to study doctoral degrees in engineering business management research;

Develop critical thinking, problem-solving transferable and continuous learning skills

that will be valuable to graduates in their employability and in accelerating their career progression;

Provide appropriate facilities and resources from both the Faculty of Environment and Technology and the Faculty of Business and Law to deliver a high-quality teaching and learning experience for students, as appropriate.

Programme Learning Outcomes:
On successful completion of this programme graduates will achieve the following learning outcomes.

Knowledge and Understanding

A1.   Interpret and critically evaluate the contribution of innovation, technology, leadership, and system thinking in responding to dynamic changes in the technology and engineering business environment

A2.   Apply business and management techniques to address realistic technology/engineering challenges drawn from a variety of real-world application

A3.   Understand the nature of conflict in a multi-functional technology business environment. Balancing operational objectives with organisational priorities and maintaining a clear "line of sight" to the customer needs and their perception of value

A4.   Demonstrate strategic management thinking and critical examination of business recommendations and decisions in various functions and contexts for sustainable competitiveness of an engineering/technology business

A5.   Demonstrate inclusive knowledge and understanding of the key management theories, models and frameworks required for managers in the technology and engineering sector

A6.   Assimilate and apply multi-disciplinary knowledge to tackle current organisational, industrial and/or global challenges

Intellectual Skills

B1.   Develop enhanced practical skills in the management of technology and engineering business capabilities

B2.   Develop leadership characteristics to advise on strategic operational and management issues for engineering and technology firms

B3.   Analyse recent developments in engineering/technology industry and their strategic operation and management impacts

B4.   Critically evaluate information and demonstrate effective decision-making based on the outcomes evaluation

B5.   Translate real-world challenges into relevant business intelligence with clear vision for the route of creating new capabilities to increase/enhance competitiveness to safeguard long-term success

Subject/Professional Practice Skills

C1.   Apply technology and business management skills/knowledge to complex and unfamiliar problems situations and to provide effective recommendations to multidisciplinary problems

C2.   Apply both management and engineering concepts, ideas and theories in a variety of contexts such as operation strategy, technology innovation, project management, and strategic decision making

C3.   Use professional management language, frameworks and methods in the description and analysis of technology and engineering application and problems

C4.   Demonstrate effective professional team skills and receive feedback from peers in order to achieve mutual goals

C5.   Acknowledge others' perspectives, experience, creativity, and contributions to problems and be able to debate, adopt and adapt to external knowledge and information

C6.   Analyse data, use technology and business information in a real-world context in order to develop appropriate business solutions

Transferable Skills and other attributes

D1.   Communicate effectively using professional English, both orally and through written reports

D2.   Demonstrate the ability to effectively manage oneself and time to deliver agreed outcomes and meet deadlines

D3.   Deliver a substantial individual project and exercise decision making seeking practical recommendations where application of knowledge is essential to optimal solutions for multifaceted problem

D4.   Work in multidisciplinary teams and take responsibility for individual and shared objectives, understanding the benefits and complications inherent within team working

D5.   Take a logical and systematic approach to problem formulation, solution and decision making

D6.   Demonstrate the ability to learn independently and embrace the concept of life-long learning

D7.   To be able to critically review available professional and academic literature that is relevant to the subject discipline and use this to enhance understanding of their discipline

D8.   To be able to communicate professional and academic requirements in a manner that is meaningful to all relevant levels and functions in the real-world context

Part B: Programme Structure

Year 1
Part time students must take 60-90 credits in Year 1. Part Time students are able to spread their optional modules over both years of the programme if they wish.
Full time students must take 180 credits in Year 1.

Interim awards (Part Time and Full Time):
Certificate of Higher Education Engineering Management 60 credits of which must include:
UFMF78-15-M
UFMF77-15-M
UFMFTQ-15-M

Interim awards (Full Time):
Postgraduate Diploma of Higher Education Engineering Business Management 120 credits of which must include:
UFMF78-15-M
UFMF77-15-M
UFMFTQ-15-M

Year 1 Compulsory Modules (Full Time)
Full time students must take 150 credits from the modules in Compulsory Modules (Full Time).

Module Code	Module Title	Credit

UFMFTF-60-M	Dissertation (Masters) 2022-23	60
UFMF77-15-M	Engineering Project Management 2022-23	15
UFMFTQ-15-M	Finance for Non-Financial Managers 2022-23	15
UFMFJM-15-M	Process Design and Management 2022-23	15
UFMF78-15-M	Strategic Analysis of Technical Operations 2022-23	15
UFMFBM-30-M	Sustainable Engineering for Global Challenges 2022-23	30

Year 1 Compulsory Modules (Part Time)
Part time students must take 60 credits from the modules in Compulsory Modules (Part Time).

Module Code	Module Title	Credit
UFMF77-15-M	Engineering Project Management 2022-23	15
UFMFTQ-15-M	Finance for Non-Financial Managers 2022-23	15
UFMFJM-15-M	Process Design and Management 2022-23	15
UFMF78-15-M	Strategic Analysis of Technical Operations 2022-23	15

Year 1 Optional Modules (Full Time)
Full time students must take 30 credits from the modules in Optional Modules (Full Time).

Module Code	Module Title	Credit
UFMF74-15-M	Advanced Manufacturing 2022-23	15
UFMFRQ-15-M	Logistics and Supply Chain Management 2022-23	15

UFMEE8-15-M	Principles of Lean Engineering 2022-23	15
UFMFSQ-15-M	Product Design and Development 2022-23	15
UFMF9B-15-M	Simulation 2022-23	15

Year 1 Optional Modules (Part Time)
Part time students must take 0-30 credits from the modules in Optional Modules (Part Time).

Module Code	Module Title	Credit
UFMF74-15-M	Advanced Manufacturing 2022-23	15
UFMFRQ-15-M	Logistics and Supply Chain Management 2022-23	15
UFMEE8-15-M	Principles of Lean Engineering 2022-23	15
UFMFSQ-15-M	Product Design and Development 2022-23	15
UFMF9B-15-M	Simulation 2022-23	15

Year 2
Part time students must take 90-120 credits in Year 2

Interim awards: Postgraduate Diploma of Higher Education Engineering Management 120 credits of which must include:
UFMF78-15-M
UFMF77-15-M
UFMFTQ-15-M

Year 2 Compulsory Modules (Part Time)
Part time students must take 90 credits from the modules in Compulsory Modules (Part Time).

Module Code	Module Title	Credit
UFMFTF-60-M	Dissertation (Masters) 2023-24	60
UFMFBM-30-M	Sustainable Engineering for Global Challenges 2023-24	30

Year 2 Optional Modules

Part Time students must take 0-30 credits from optional Modules.

Module Code	Module Title	Credit
UFMF74-15-M	Advanced Manufacturing 2023-24	15
UFMFRQ-15-M	Logistics and Supply Chain Management 2023-24	15
UFMEE8-15-M	Principles of Lean Engineering 2023-24	15
UFMFSQ-15-M	Product Design and Development 2023-24	15
UFMF9B-15-M	Simulation 2023-24	15

Part C: Higher Education Achievement Record (HEAR) Synopsis

The programme is aimed at postgraduate students who are able to apply their professional management knowledge and skills in an engineering and technology context.

A successful graduate will be highly analytical, strategic and able to provide leadership in the way they articulate their knowledge in the context of 21st century global challenges facing multinational organisations and SMEs. On completion, graduates will have experienced individual and group projects, demonstrating an ability to work independently and in a team. Graduates will be professionals who understand their strengths and able to work across different business cultures and manage complex international relationships.

Part D: External Reference Points and Benchmarks

QAA UK Quality Code for HE:

Framework for higher education qualifications (FHEQ)

Subject benchmark statements

Qualification characteristics for Foundation degrees and Master's degrees

QAA Subject Benchmark statement for Engineering (2015)

QAA Subject Benchmark statement for Business and Management (2015)

Strategy 2020

University policies

Staff research projects

Any relevant PSRB requirements

Any occupational standards

Part E: Regulations

Approved to University Regulations and Procedures.