



PROGRAMME SPECIFICATION

Part 1: Information		
Awarding Institution	University of The West of England	
Teaching Institution	University of The West of England	
Delivery Location	Frenchay, UWE Bristol Global College of Engineering and Technology, Muscat	
Study abroad / Exchange / Credit recognition		
Faculty responsible for programme	Environment and Technology	
Department responsible for programme	Engineering Design and Mathematics	
Professional Statutory or Regulatory Body Links		
Highest Award Title	MSc Engineering Management	
Default Award Title	MSc Engineering Management	
Interim Award Titles	PG Diploma Engineering Management PG Certificate Engineering Management	
UWE Progression Route		
Mode of Delivery	Full Time, Part Time	
ISIS code/s	UCAS:	JACS:
	ISIS: H9N212	HESA:
For implementation from	Sept 2019	

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Part 2: Description

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 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.

The programme provides students with the opportunity to develop their skills and employability through interaction with external speakers from industry and through developing high-level skills in analysis, report-writing and communication. Graduates will be equipped to access employment in a wide variety of professional contexts, and/or to commence doctoral level study. Engineering and technology managers are employed throughout the economy, for example; *Engineering Project Manager, Supply Chain Consultant, Investment Strategy Engineer, Applications Engineer, Finance Risk Consultant, Business Analyst/Consultant, and Trade Analyst.*

The Engineering 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 management 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 management research;
- Develop analytical, problem-solving transferable skills that will be valuable to graduates in their employability and in accelerating their career progression.
- Provide appropriate facilities and resources to deliver a high-quality teaching and learning experience for students, as appropriate.

Programme requirements for the purposes of the Higher Education Achievement Record (HEAR)

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.

Regulations

Approved to [University Regulations and Procedures](#)

Part 3: Learning Outcomes of the Programme

A. Knowledge and Understanding (subject specific)

1. *Interpret and critically evaluate the contribution of innovation, technology, leadership, and system thinking in responding to dynamic changes in the technology and engineering environment*
2. *Apply management techniques to address realistic technology/engineering challenges drawn from a variety of real-world application.*
3. *Understand the nature of conflict in a multi-functional technology business environment and balance operational objectives with organisational priorities and maintaining a clear "line of sight" to the customer needs and their perception of value.*
4. *Demonstrate strategic management thinking and critical examination of business recommendations and decisions in various functions and contexts for sustainable competitiveness of an engineering/technology sector.*
5. *Demonstrate inclusive knowledge and understanding of the key management theories, models and frameworks required for managers in the technology and engineering sector.*
6. *Assimilate and apply multi-disciplinary knowledge to tackle current organisational, industrial and/or global challenges.*

B. Intellectual Skills (generic)

1. *Develop enhanced practical skills in the management of technology and engineering capabilities*
2. *Develop leadership characteristics to advise on strategic and operational management issues for engineering and technology firms.*
3. *Analyse recent developments in engineering/technology industry and their strategic operation and management impacts*
4. *Critically evaluate information and demonstrate effective decision-making based on the outcomes evaluation*
5. *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.*

C. Subject/Professional/Practical Skills (subject specific)

1. *Apply technology and management skills/knowledge to complex and unfamiliar problems situations and to provide effective recommendations to multidisciplinary problems.*
2. *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.*
3. *Use professional management language, frameworks and methods in the description and analysis of technology and engineering*

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Part 3: Learning Outcomes of the Programme

application and problems.

4. *Demonstrate effective professional team skills and receive feedback from peers in order to achieve mutual goals.*
5. *Acknowledge others' perspectives, experience, creativity, and contributions to problems and be able to debate, adopt and adapt to external knowledge and information.*
6. *Analyse data, use technology and business information in a real-world context in order to develop appropriate business solutions.*

D. Transferable Skills and other attributes (generic)

1. *Communicate effectively using professional English, both orally and through written reports.*
2. *Demonstrate the ability to effectively manage oneself and time to deliver agreed outcomes and meet deadlines.*
3. *Deliver a substantial individual project and exercise decision making seeking practical recommendations where application of knowledge is essential to optimal solutions for multifaceted problem.*
4. *Work in multidisciplinary teams and take responsibility for individual and shared objectives, understanding the benefits and complications inherent within team working.*
5. *Take a logical and systematic approach to problem formulation, solution and decision making.*
6. *Demonstrate the ability to learn independently and embrace the concept of life-long learning.*
7. *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.*
8. *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.*

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Part 3: Learning Outcomes of the Programme							
		UFMFFBM-30-M Sustainable Engineering for Global Challenges	UFMF78-15-M Strategic Analysis of Technical Operation	UFMFJM-15-M Process Design and Management	UFMF77-15-M Engineering Project Management	UFMFTQ-15-M Finance for non-Financial Managers	UFMFTF-60-M Dissertation (Masters)
Learning Outcomes:							
A) Knowledge and understanding of:							
1 Interpret and critically evaluate the contribution of innovation, technology, leadership, and system thinking in responding to dynamic changes in the technology and engineering environment	X	X					X
2 Apply management techniques to address realistic technology/engineering challenges drawn from a variety of real-world application.	X	X			X		X
3 Understand the nature of conflict in a multi-functional technology business environment and balance operational objectives with organisational priorities and maintaining a clear “line of sight” to the customer needs and their perception of value.				X			X
4 Demonstrate strategic management thinking and critical examination of business recommendations and decisions in various functions and contexts for sustainable competitiveness of an engineering/technology sector.	X	X					
5 Demonstrate inclusive knowledge and understanding of the key management theories, models and frameworks required for managers in the technology and engineering sector.	X	X	X			X	

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Part 3: Learning Outcomes of the Programme						
6 Assimilate and apply multi-disciplinary knowledge to tackle current organisational, industrial and/or global challenges.	X	X				X
(B) Intellectual Skills						
1 Develop enhanced practical skills in the management of technology and engineering capabilities				X	X	X
2 Develop leadership characteristics to advise on strategic and operational management issues for engineering and technology firms.	X	X	X			X
3 Analyse recent developments in engineering/technology industry and their strategic operation and management impacts		X	X			X
4 Critically evaluate information and demonstrate effective decision-making based on the outcomes evaluation	X	X			X	X
5 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.	X	X			X	X
(C) Subject/Professional/Practical Skills						
1 Apply technology and management skills/knowledge to complex and unfamiliar problems situations and to provide effective recommendations to multidisciplinary problems.	X	X		X		X
2 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.	X	X		X		X
3 Use professional management language, frameworks and methods in the description and analysis of technology and engineering application and problems.	X	X	X			
4 Demonstrate effective professional team skills and receive feedback from peers in order to achieve mutual goals.	X	X		X		
5 Acknowledge others' perspectives, experience, creativity, and contributions to problems and be able to debate, adopt and adapt to external knowledge and information.	X	X		X		X
6 Analyse data, use technology and business information in a real-world context in order to develop appropriate business solutions.	X	X			X	
(D) Transferable skills and other attributes						
1 Communicate effectively using professional English, both orally and through written reports.	X	X	X	X		X
2 Demonstrate the ability to effectively manage oneself					X	X

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Part 3: Learning Outcomes of the Programme							
	and time to deliver agreed outcomes and meet deadlines.						
	3 Deliver a substantial individual project and exercise decision making seeking practical recommendations where application of knowledge is essential to optimal solutions for multifaceted problem.						X
	4 Work in multidisciplinary teams and take responsibility for individual and shared objectives, understanding the benefits and complications inherent within team working.	X	X		X		
	5 Take a logical and systematic approach to problem formulation, solution and decision making.	X	X		X		X
	6 Demonstrate the ability to learn independently and embrace the concept of life-long learning.						X
	7 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.	X					X
	8 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.	X	X				X

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Part 4: Programme Structure

This structure diagram demonstrates the student journey from Entry through to Graduation for a typical full and part time student including:

- level and credit requirements
- interim award requirements
- module diet, including compulsory and optional modules

Full time:

ENTRY		Compulsory Modules	Optional Modules	Awards
	Year 1	<ul style="list-style-type: none"> • UFMFBM-30-M Sustainable Engineering for Global Challenges • UFMF78-15-M Strategic Analysis of Technical Operations • UFMFJM-15-M Process Design and Management • UFMF77-15-M Engineering Project Management • UFMFTQ-15-M Finance for non-Financial Managers • UFMFTF-60-M Dissertation (Masters) 	30 credits from: <i>(subject to availability)</i> <ul style="list-style-type: none"> • UFMFRQ-15-M Logistics and Supply Chain Management • UFMFSQ-15-M Product Design and Development • UFMEE8-15-M Principles of Lean Engineering • UFMF74-15-M Advanced Manufacturing • UFMF9B-15-M Simulation 	Interim awards: Certificate of Higher Education Engineering Management 60 credits of which must include: UFMF78-15-M UFMF77-15-M UFMFTQ-15-M Postgraduate Diploma of Higher Education Engineering Management 120 credits of which must include: UFMF78-15-M UFMF77-15-M UFMFTQ-15-M

Part time:

ENTRY		Compulsory Modules	Optional Modules	Awards
	Year 1	<ul style="list-style-type: none"> • UFMF78-15-M Strategic Analysis of Technical Operations • UFMF77-15-M Engineering Project Management • UFMFTQ-15-M Finance for non-Financial Managers • UFMFJM-15-M Process Design and Management 	30 credits from: <i>(subject to availability)</i> <ul style="list-style-type: none"> • UFMFRQ-15-M Logistics and Supply Chain Management • UFMFSQ-15-M Product Design and Development • UFMEE8-15-M Principles of Lean Engineering • UFMF74-15-M Advanced Manufacturing • UFMF9B-15-M Simulation 	Interim awards: Certificate of Higher Education Engineering Management 60 credits of which must include: UFMF78-15-M UFMF77-15-M UFMFTQ-15-M
	Year 2	<ul style="list-style-type: none"> • UFMFBM-30-M Sustainable Engineering for Global Challenges • UFMFTF-60-M Dissertation (Masters) 		Interim awards: Postgraduate Diploma of Higher Education Engineering Management 120 credits of which must include: UFMF78-15-M UFMF77-15-M UFMFTQ-15-M

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Part 5: Entry Requirements

The University's Standard Entry Requirements apply:

We normally require a honours degree at 2:2 or above in an engineering, science or business related discipline.

We would strongly encourage applicants who do not meet the normal entry requirement, but who do have relevant qualifications or professional experience to apply. Such applicants will be considered on a case by case basis. In your application, you should describe in detail your professional experience and qualifications.

Part 6: Reference Points and Benchmarks

Set out which reference points and benchmarks have been used in the design of the programme:

[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

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First Approval Date				
Revision Approval Date	6 th March 2019	Version	2	Link to RIA (ID 4988)
	21 st Oct 2019		3	Link to Business Case (ID 5096)
Next Periodic Curriculum Review due date				
Date of last Periodic Curriculum Review				