

Programme Specification for Postgraduate Programme Leading to: MSc Engineering Management



Applicable for all postgraduate students starting in 2018

Version No.	Date	Notes – Q&S USE ONLY	AO
2018-2019 v1	30 August 2018	Block MN5555 Advanced Manufacturing Measurement renamed MN5610 Advanced Measurement Systems and Data Analysis.	JP

Postgraduate Taught Programme	
1. Awarding institution	Brunel University London
2. Teaching institution(s)	Brunel University London
3. Home college/department/division	College of Engineering, Design and Physical Sciences/ Department of Mechanical and Aerospace Engineering
4. Contributing college/department/division /associated institution	LBIC for Alternative Level 4 (see section 25)
5. Programme accredited by	Institution of Mechanical Engineers (IMechE)
6. Final award(s) and FHEQ Level of Award	MSc Engineering Management FHEQ level 7
7. Programme title	MSc Engineering Management
8. Programme type (Single honours/joint)	N/A
9. Normal length of programme (in months) for each mode of study	FT – 1 year (equivalent to 52 weeks) Where students commence their programme at Level 4 in LBIC, the normal length stated above will vary as follows: Level 4 April commencement (with placement): + 6 months Level 4 June commencement (without placement): + 4 months DL - 3 years
10. Maximum period of registration for each mode of study	Normal length of programme plus two years up to a maximum of five years
11. Variation(s) to September start	None for Standard Levels; See document “Validated Programme Element Specification for LBIC Generic Pre-Masters (with and without work placement) for Alternative Level entry points DL January and September
12. Modes of study	FT/DL
13. Modes of delivery	Standard/Distance Learning
14. Intermediate awards, titles and FHEQ Level of Award	Postgraduate Certificate in Engineering Management - FHEQ Level 7 Postgraduate Diploma in Engineering Management - FHEQ Level 7
15. UCAS Code	N/A
16. JACS Code	H900
17. Route Code	H900PENGMT

18. Relevant subject benchmark statements and other external and internal reference points used to inform programme design	QAA UK Quality Code for Higher Education which includes the English Framework for Higher Education Qualifications within Part A on Setting and Maintaining Academic Standards QAA Subject Benchmark Statement (Engineering) Brunel 2030 Brunel Placement Learning Policy, as published under the 'Placements' section of the ' Managing Higher Education Provision with Others ' page. Engineering Council, UK-SPEC document "Chartered Engineer and Incorporated Engineer Standard"
19. Admission Requirements	Details of entry requirements are provided on the University's and College website. Levels of English for non-native speakers are outlined on Brunel International's language requirements pages.
20. Other relevant information (e.g. study abroad, additional information on placements)	None
21. Programme regulations not specified in Senate Regulation 3. Any departure from regulations specified in Senate Regulation 3 must be stated here and approved by Senate.	None
22. Further information about the programme is available from:	Course webpage

23. EDUCATIONAL AIMS OF THE PROGRAMME

1. To develop a range of essential management and business skills across multidisciplinary functions involved in the management of successful organisations and that will improve the individual's effectiveness within the organisation
2. To develop a systematic understanding of multidisciplinary functions, and a critical awareness of engineering management issues/problems and new thinking.
3. To effectively implement management principles and practices at an operational and strategic level.
4. To develop an advanced understanding of the key strategic issues involved in developing and implementing engineering projects and solutions.

24. PROGRAMME AND INTERMEDIATE LEARNING OUTCOMES

The programme provides opportunities for students to develop and demonstrate knowledge and understanding (K) cognitive (thinking) skills (C) and other skills and attributes (S) in the following areas:

Level	Category (K = knowledge and understanding, C = cognitive (thinking) skills, S = other skills and attributes)	Learning Outcome	Masters Only	Associated Assessment Blocks Code(s)	Associated Study Blocks Code(s)	Associated Modular Blocks Code(s)
5	K	Methods to create and deliver value to customers through effective management of the supply chain; in particular, goals of service enhancement and cost reduction explored through supply chain strategies.				MN5547, MN5563
5	K	Principles of operations in manufacturing and service sectors, including principles of modern quality assurance and advanced techniques of reliability engineering.				MN5554
5	K	Concepts and theories of systems approach, including the latest techniques and software/hardware tools.				MN5543
5	K	Strategic context and importance of project management, and the appropriateness of some management techniques.				MN5508
5	K	Latest advanced management theories for managerial decision making and leadership in global organizations.				MN5506, MN5563

5	K	Concepts and theories of manufacturing system design and economics and of sustainability using a strategic approach.				MN5502, MN5557
5	K	Research tools and techniques, for planning, undertaking and evaluating research and its outcomes.				MN5508, MN5554, MN5501
5	K	Choice of options that allow students to extend the reach and/or depth of the programme provision.				MN5610, MN5563, MN5557,
5	C	Plan, and undertake an in-depth study requiring a high standard of investigation and presentation.				MN5502, MN5506, MN5543, MN5547, MN5501, MN5557
5	C	Demonstrate self-direction and apply independent thinking skills				MN5547, MN5501 MN5552
5	C	Develop project management skills.				MN5508
5	C	Demonstrate the ability to reflect on content, approaches, tools techniques etc				MN5502, MN5508, MN5543, MN5547, MN5554, MN5501, MN5610, MN5563, MN5557, MN5552
5	C	Synthesise material in meaningful ways.				MN5502, MN5543, MN5557 MN5552
5	C	Use virtual environments and virtual modelling to facilitate and improve supply chain design.				MN5543, MN5547, MN5563
5	S	Communicate complex arguments and issues in written and/or oral forms.				MN5506, MN5547, MN5501, MN5557

5	S	Demonstrate competent project management skills				MN5508
5	S	Practise and demonstrate communication and interpersonal skills				MN5506, MN5557
5	S	Independently conduct a thorough literature review using a range of resources	X			MN5501
5	S	Use well-formulated methods and commercial computer-aided tools for supporting engineering and manufacturing management.				MN5543, MN5554, MN5563
5	S	Use and apply statistical techniques and software to describe and analyse research data.				MN5543, MN5554, MN5610
5	S	Write a technical report or academic paper in a clear, organised and well-focussed manner.				MN5502, MN5506, MN5543, MN5547, MN5501, MN5610, MN5552
5	S	Manage people, time and resources				MN5508, MN5543, MN5501
		The programme outcomes for the award of PGCert will be a subset of those for the award of PGDip and will vary depending upon the modules passed by the individual student.				

Learning/teaching strategies and methods to enable learning outcomes to be achieved, including formative assessments

Acquisition of above points is achieved via a combination of lectures, seminars, group tutorials, project/dissertation, Study materials (CD's course notes, lectures slides and notes- for Distance learning students) and directed private study as appropriate:
Lectures are (generally) used to deliver essential material. Seminars are generally used to apply acquired knowledge via exercises and/or to develop critical insight or reflect on material.
Directed private study is used to (a) supplement and consolidate the points above and (b) broaden individual knowledge and understanding of the subject matter.
The dissertation (and project) provides experience in defining and organizing a substantial individual and (group) investigation into an engineering topic and present the information in the form of a report.

Distance Learning: Module based distance learning teaching packages which include personal feedback questions, personal activities, case studies, problem solving exercises and staged examples.

Summative assessment strategies and methods to enable learning outcomes to be demonstrated.

A variety of assessment methods are used depending on the learning outcomes of the modules. These include coursework, group work, presentations, reports, exams, evaluation and solution of a case study, lab exercises. The dissertation module is assessed by the thesis, with the dissertation proposal being submitted for progression at the end of stage two of the course.

The specific ways in which each area is assessed is spelled out in the appropriate module specification.

25. Programme Structure, progression and award requirements

Programme structures and features: levels, assessment blocks, credit and progression and award requirements

- **Compulsory block:** one which all students registered for the award are required to take as part of their programme of study. These will be listed in the left hand column;
- **Optional block:** one which students choose from an 'option range'. These will be listed in the right hand column;
- A **core assessment** is an assessment identified within an assessment block or modular block (either compulsory or optional) which must be passed (at grade C- or better) in order to be eligible to progress and to be eligible for the final award. All core assessments must be specified on the programme specification next to the appropriate assessment or modular block:

Where students are expected to pass the block at C- or better, but not necessarily all elements, then the block itself is core.

e.g. AB5500 Project (40)
Core: Block

Where only some elements of assessments are required to be passed at C- or better, these will be identified by listing each element that is core

e.g. ABXXX1 Title (XX credits)
Core: 1 & 4

Where students are expected to pass all assessments in a block then this will be identified. By setting the assessment this way, students are also required to pass the block by default. This will be identified thus:

e.g. ABXXXX Title (XX credits)
Core: All, Block

- A **non-core assessment** does not have to be passed at grade C- or better, but must D- or better in order to be eligible for the final award.

Level 5	
Compulsory assessment block codes, titles and credit	Optional assessment block codes, titles and credits
Compulsory study block codes, titles and credit volume	Optional Study block codes, titles and credit volume
<p>Compulsory modular block codes, titles and credits</p> <p>All modules are 15 credits unless otherwise specified</p> <p>MN5502 Manufacturing Systems Design & Economics MN5506 Managing People and Organisations MN5508 Project Management MN5543 Systems Modelling and Simulation MN5547 Logistics and Global Supply Chain Management MN5554 Quality Management and Reliability MN5501 Dissertation (60 credits)</p> <p>Core: Block Distance-learning Year 1: MN5506; MN5508; MN5502; MN5543 Year 2: MN5547; MN5554 plus two options Year 3: MN5501</p>	<p>Optional modular block codes, titles and credits</p> <p>All modules are 15 credits unless otherwise specified</p> <p>MN5610 Advanced Measurement Systems and Data Analysis MN5563 Global Manufacturing MN5557 Sustainable Design & Manufacture MN5507 Financial Management MN5552 Robotics and Manufacturing Automation</p>
<p>Level 5 Progression and Award Requirements</p> <p>As per Senate Regulation 3</p> <p>PG Dip may not be awarded by substitution of the dissertation (MN5501) for modular/assessment blocks in the taught part of the programme.</p>	
<p>Level 4 (pre-Masters)</p> <p>The Level 4 structure available to international students is specified in document “Validated Programme Element Specification for LBIC Generic Pre-Masters (with and without work placement)”. This document also specifies the admission and progression requirements.</p>	

Please note: this specification provides a concise summary of the main features of the programme and the learning outcomes that a 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 learning outcomes, content and teaching, learning and assessment methods can be found in the modular block, assessment and study block outlines and other programme and block information. The accuracy of the information contained in this document is reviewed by the University from time to time and whenever a modification occurs.