

Programme Specification for Postgraduate Programme

Leading to:

MSc in Building Services Engineering Management



Applicable for all postgraduate students starting in 2021

<u>Version No.</u>	<u>Date</u>	<u>Notes – QA USE ONLY</u>	<u>AO</u>
2021-22 v1	29 June 2021	Programme Specification updated for 2021/22 entrants.	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/ Dept of Mechanical and Aerospace Engineering
4. Contributing college/department/division /associated institution	None
5. Programme accredited by	Chartered Institute of Building Services Engineering (CIBSE), The Energy Institute (EI), Institution of Mechanical Engineers (IMechE)
6. Final award(s) and FHEQ Level of Award	MSc Building Services Engineering Management FHEQ Level 7
7. Programme title	MSc Building Services Engineering Management
8. Programme type (Single honours/joint)	N/A
9. Normal length of programme (in months) for each mode of study	Distance Learning 36 months
10. Maximum period of registration for each mode of study	The normal length of programme plus two years up to a maximum of five years
11. Variation(s) to September start	January start for Distance Learning only
12. Modes of study	Distance Learning
13. Modes of delivery	Distance Learning
14. Intermediate awards, titles and FHEQ Level of Award	Postgraduate Diploma in Building Services Engineering Management FHEQ Level 7 Postgraduate Certificate in Building Services Engineering Management - FHEQ Level 7
15. UCAS Code	N/A
16. JACS / HECoS Code	H300 / 100147
17. Route Code	H300PSBLDSEM

18. Relevant subject benchmark statements and other external and internal reference points used to inform programme design	UK Quality Code for Higher Education 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" SARTOR specification for matching sections
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)	N/A
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.	N/A
22. Further information about the programme is available from:	Course webpage

23. EDUCATIONAL AIMS OF THE PROGRAMME

To develop the student's knowledge, understanding and skills in a range of business functions and core engineering disciplines essential to building services. To produce graduates with expertise in the engineering and management techniques employed, and an understanding of the underlying physical, physiological, social and economic factors.

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 7	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)
	K	1. Knowledge and understanding of the theoretical basis for the study of the internal environment and human comfort				ME5507 ME5508 ME5509
	K	2. Knowledge and understanding of the principles of energy conversion and appropriate thermodynamic machines. 3.				ME5506 ME5508 ME5521

	K	4. Knowledge and understanding of the heat and mass transfer processes in the heating and cooling of buildings				ME5508
	K	5. Knowledge and understanding of electrical power distribution and utilisation in buildings.				ME5507
	K	6. Knowledge and understanding of the theoretical basis for the organisation of engineering business				ME5552
	K	7. Knowledge and understanding of the principles of asset management				ME5517 ME5555
	K	8. Knowledge and understanding of individual and group behaviour in the workplace				ME5551
	C	9. Able to identify and analyse the design requirements for the built environment				ME5507 ME5508
	C	10. Able to analyse and evaluate the performance of building services assets				ME5506 ME5507 ME5508 ME5509 ME5517 ME5521
	C	11. Able to evaluate the environmental effects of design solutions.				ME5506 ME5509 ME5521
	C	12. Able to plan personal projects	x			ME5500
	C	13. Able to identify relevant aspects of current employment and contract legislation				ME5517 ME5551
	C	14. Able to evaluate the structure and culture of organisations				ME5552
	C	15. Able to assemble and critically analyse relevant primary and secondary data	x			ME5500
	C	16. Able to select and use appropriate investigative techniques	x			ME5500
	C	17. Able to develop a thesis by following a coherent argument.	x			ME5500
	S	18. Able to select and adapt appropriate motivational methods				ME5551
	S	19. Able to manage building services assets				ME5517 ME5551 ME5552 ME5555
	S	20. Able to define and organise a substantial investigation.	x			ME5500
	S	21. Able to select and employ appropriate research methods	x			ME5500

	S	22. Able to organise technical information into a concise, coherent document				ME5500 ME5517 ME5551 ME5552 ME5555
	S	23. Able to employ conventional methods of technical communication				ME5500 ME5517 ME5551 ME5552 ME5555

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

Knowledge-and-understanding learning outcomes

All of the learning outcomes are taught through self-study course material including self-assessment questions. In addition, learning outcomes 4, 5 and 7 are acquired through periodic summative coursework.

Cognitive skills

Skills 8-13 are acquired through examples and self-assessment questions in self-study course material. Additionally, skills 9 and 10 are developed through coursework assignments drawing on the student's professional experience.

Skills 14-15 are acquired through the development of milestone submissions for the dissertation project as well as the dissertation itself.

Other skills and attributes

Skills 17, 18, 21 and 22 are acquired through the undertaking and the presentation of coursework assignments. Many of the skills are acquired through the dissertation project. Namely, skills 20 and 21 through the literature search and review, skills 19-22 through the preparation of the dissertation.

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

Knowledge-and-understanding learning outcomes

Each of the outcomes is assessed using written assignments. For learning outcomes 1-4 unseen written exams are also used.

Cognitive skills

Skills 8-13 are assessed using written coursework in addition to project reports for skills 8 and 11, and unseen written examinations including problem solving tasks for skills 8, 9 and 12.

Skills 11, 14-16 are assessed through the dissertation project.

Other skills and attributes

All of the skills are assessed using written coursework including technical project reports. Additionally, skills 19-22 are assessed through the dissertation and skill 17 is assessed using unseen written examinations.

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.

FHEQ Level 7

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>ME5507 Electrical Services and Lighting Design (15 credits)</p> <p>ME5508 Building Heat Transfer and Air Conditioning (15 credits)</p> <p>ME5509 Acoustics , Fire, Lifts and Drainage (15 credits)</p> <p>ME5517 Management of Facilities and Engineering Contracts (15 credits)</p> <p>ME5551 Management of People in Engineering Activities (15 credits)</p> <p>ME5552 Organisation of Engineering Business (15 credits)</p> <p>ME5555 Engineering Finance and Accounting (15 credits)</p> <p>ME5500 Dissertation (60 credits) Core: Block</p> <p><u>January start – Year 1 modules</u></p> <p>ME5507 Electrical Services and Lighting Design (15 credits)</p> <p>ME5509 Acoustics , Fire, Lifts and Drainage (15 credits)</p> <p>ME5551 Management of People in Engineering Activities (15 credits)</p> <p>ME5555 Engineering Finance and Accounting (15 credits)</p>	<p>Optional modular block codes, titles and credits</p> <p>Students should choose one of the two themes below:</p> <p><u>Theme A - Traditional</u></p> <p>ME5506 Energy Conversion Technologies (15 credits)</p> <p><u>Theme B – Renewable</u></p> <p>ME5521 Renewable Energy Technologies (15 credits)</p>
<p>FHEQ Level 7 Progression and Award Requirements</p> <p>As per Senate Regulation 3</p> <p>A PGDip may be awarded by substitution of the dissertation (ME5500) for up to 30 credits of modular/assessment blocks in the taught part of the programme, provided the learning outcomes have been met.</p>	
<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.</p>	