



LEEDS
BECKETT
UNIVERSITY

Course Specification

MEng Building Services Engineering

Course Code: MBSEN

2022/23

MEng Building Services Engineering (MBSEN)

Applicant Facing Course Specification for 2022/23 Undergraduate Entrants

Confirmed at 04/2022

General Information

Award	Master of Engineering Building Services Engineering
Contained Awards	Bachelor of Engineering with Honours Building Services Engineering (Level 6) Bachelor of Engineering Building Services Engineering (Level 6) Diploma of Higher Education Building Services Engineering (Level 5) Certificate of Higher Education Building Services Engineering (Level 4)
Awarding Body	Leeds Beckett University
Level of Qualification and Credits	Level 7 of the Framework for Higher Education Qualifications, with 120 credit points at each of Levels 4, 5, 6 and 7 of the UK Credit Framework for Higher Education (480 credits in total).
Course Lengths and Standard Timescales	Start dates will be notified to students via their offer letter. The length and mode of delivery of the course is confirmed below: <ul style="list-style-type: none">• 4 years (full time, campus based)• 5 years (full time, sandwich, campus based)• 7 years (part time, campus based)
Part Time Study	PT delivery is usually at half the intensity of the FT equivalent course, although there may be flexibility to increase your pace of study to shorten the overall course duration. Some modules may be delivered in a different sequence to that defined within this information set but the modules offered within each level are consistent. Please note that the work placement option is not generally available to PT students.
Location(s) of Delivery	City Campus, Leeds Students are responsible for obtaining their own placement, with assistance from the University. The locations will vary, dependant on the opportunity.
Entry Requirements	Admissions criteria are confirmed in your offer letter. Details of how the University recognises prior learning and supports credit transfer

are located here: <https://www.leedsbeckett.ac.uk/student-information/course-information/recognition-of-prior-learning/>

Admissions enquiries may be directed to: AdmissionsEnquiries@leedsbeckett.ac.uk.

Course Fees

Course fees and any additional course costs are confirmed in your offer letter. Fees enquiries may be directed to Fees@leedsbeckett.ac.uk.

Timetable Information

Timetables for Semester 1 will be made available to students during induction week via:

- i) The Student Portal (MyBeckett)
- ii) The Leeds Beckett app

Any difficulties relating to timetabled sessions may be discussed with your Course Administrator.

Policies, Standards and Regulations (www.leedsbeckett.ac.uk/academicregulations)

In line with a recent Engineering Council directive, a Regulation Exemption has been approved by the University which states that:

“Students must pass all modules which are mapped to Accreditation of Higher Education Programme (AHEP) learning outcomes with an overall mark of not less than 40% in the combined assessments, with a submission in each component for each module.

If students do not achieve these marks at the first attempt they will have the chance to undergo a re-sit in that particular area; if they still fail to achieve the marks at this attempt they will not be allowed to progress onto the following year until they have completed the module again and achieved the above mark.

Failure at the second attempt at a module will result in a student’s withdrawal from the course.”

Key Contacts

Your Course Director

Mike White

Your Academic Advisor

Each student will be allocated an Academic Advisor once they commence their studies at the University. The Academic Advisor will be a member of the Engineering Academic Staff.

Your Course Administrator

Josh Bateman - J.J.Bates@leedsbeckett.ac.uk

Sandwich or Other 'In Year' Work Placement Information

Summary

Leeds Beckett is dedicated to improving the employability of our students and one of the ways in which we do this is to support our students to gain valuable work experience through work-based placements. Our placement teams have developed strong links with companies, many of whom repeatedly recruit our students into excellent placement roles and the teams are dedicated to supporting students through every stage of the placement process. More information about the many benefits of undertaking a work placement, along with details about how to contact our placement teams can be found here: <http://www.leedsbeckett.ac.uk/studenthub/placement-information/>

Length

40 weeks, undertaken between year 2 (level 5) and year 3 (level 6)

Location

Students are responsible for obtaining their own placement, with assistance from the University. The locations will vary, dependant on the opportunity.

Professional Accreditation or Recognition Associated with the Course

Professional Body

Accreditation for Chartered Engineer status (CEng) will be sought in conjunction with the Chartered Institution of Buildings Services Engineers and the Engineering Council UK when a full cohort of students have completed the programme.

Course Overview

Aims

The aims of the programme are to:

The course aims to provide a broad-based educational experience, enabling successful students to enter careers in the building services engineering and allied sector. At present there is a significant shortfall in the number of graduate Building Services engineers in the UK and in a global context particularly within the emerging economies. In the future students who have studied STEM subject disciplines are going to be in great demand. The target group for the MEng programme is therefore students seeking to become engineering practitioners employed in the building services engineering and related disciplines i.e. design, mechanical and electrical estimating, services project management, low carbon buildings design, architectural engineering and controls engineering. This programme is seen as a stepping stone for students who enjoy problem solving and would like to be involved in a diverse and interesting career with opportunities to work on such projects as designing 'clean room' ventilation systems for the pharmaceutical

industries, low energy lighting solutions for education establishments and intelligent building systems for international clients.

The award learning aims are

- Provide the knowledge and understanding of the scientific, mathematical and engineering principles and methodologies that underpin Building Services Engineering
- To enable students to undertake independent critical analysis, enhancing their intellectual development and developing their ability to produce optimal solutions to complex engineering problems
- Develop a range of graduate skills relevant to a career in the modern building services engineering industry including all forms of digital and multi-media communication, problem-solving, individual motivation and team working.
- To ensure that successful graduates will have the potential to contribute to advances in engineering and be capable of accepting extensive managerial responsibilities
- To establish an appropriate foundation for a lifetime of continuing professional development
- The programme also aims to provide the educational requirements for graduate membership of CIBSE and engineering council accreditation for CEng status

These aims have been written to take account of the UK-SPEC General Learning Outcomes and Engineering Benchmark statements.

Course Learning Outcomes

At the end of the course, students will be able to:

No.	Learning Outcome
1	Demonstrate the underlying concepts of engineering design and principles, showing ability in the analysis of building energy performance, the application and appraisal of appropriate concept design and its communication to stakeholders from a local, national and global perspective whilst taking into consideration the complex needs of a diverse client base and unfamiliar environments
2	Demonstrate the competent use and application of industry standard building services engineering software, thus illustrating the student's digital literacy in the resolution of building services design problems.
3	Demonstrate the understanding and use of, commercial and financial judgement and managerial skills in the planning organisation, control and successful delivery of building services projects and enterprises whilst being aware of the impact these techniques can have in a global context
4	Demonstrate knowledge, understanding, critical thinking and analysis of fundamental issues relating to a Building Services Engineering practitioner operating in diverse social and cultural contexts
5	To identify and analyse broadly defined problems, evaluate optional strategies and optimise appropriate solutions to building services projects and be able to communicate these solutions to a diverse client base and promote low carbon solutions and sustainability in unfamiliar environments

6	Use a range of skills appropriate to the working environment, including working effectively with diverse construction professionals, using appropriate digital technologies, and communicating effectively with all stakeholders, locally and internationally
7	Develop the student's research methods and applications and use appropriate communication skills so that the graduates may convey their ideas effectively and imaginatively in a clear and concise manner to both the related professions and to persons outside the industry

Teaching and Learning Activities

Summary

Formal lectures, tutorials, design project workshops and building case studies will be embedded in the delivery to help to reinforce the learning process. The feedback and progress reviews, extracurricular seminars, field trips and the involvement of industry experts as guest speakers will be used to enrich the learning experience and students' knowledge of current issues within the building services engineering environment.

Your Modules

This information is correct for students progressing through the programme within standard timescales. Option modules listed are indicative of a typical year. There may be some variance in the availability of option modules. Students who are required to undertake repeat study may be taught alternate modules which meet the overall course learning outcomes. Details of module delivery will be provided in your timetable.

Full Time Study

Level 4			
Year 1: Semester 1	Core (Y/N)	Year 1: Semester 2	Core (Y/N)
Building Services Design Principles (20 credits)	Y	Thermo Fluids (20 credits)	Y
Advanced Mathematics (20 credits)	Y	Electrical and Electronics Principles (20 credits)	Y
Building Services Science (20 credits)	Y	Mechanical Services (20 credits)	Y

Level 5			
Year 2: Semester 1	Core (Y/N)	Year 2: Semester 2	Core (Y/N)
Engineering Mathematics (20 credits)	Y	BMS and Control Systems (20 credits)	Y

Level 5			
Electrical Services and Lighting Systems (20 credits)	Y	Group Design Project (20 credits)	Y
Airconditioning and Refrigeration Systems (20 credits)	Y	Construction Communications and Application (20 credits)	Y

Level 6			
Year 3: Semester 1	Core (Y/N)	Year 3: Semester 2	Core (Y/N)
Low-Carbon Systems Design (20 credits)	Y	Intelligent Building Technologies (20 credits)	Y
Facilities Maintenance and Management (20 credits)	Y	Building Physics (Modelling and Analysis) (20 credits)	Y
Dissertation (20 credits)	Y	Dissertation (20 credits)	Y

Level 7			
Year 4: Semester 1	Core (Y/N)	Year 4: Semester 2	Core (Y/N)
Sustainable Systems Design (20 credits)	Y	Project Management or BEMS and Intelligent Buildings (20 credits)	N
Sustainable Buildings or Humanitarian Engineering (20 credits)	N	Building Information Modelling and Mechanical, Electrical, Plumbing (20 credits)	Y
Integrated Project (20 credits)	Y	Integrated Project (20 credits)	Y
Research Paper (20 credits)	Y	Research Paper (20 credits)	Y

Part Time Study

Part-time students will be supported by the course team to determine an appropriate selection of modules from the level for each year of study.

Level 4			
Year 1: Semester 1	Core (Y/N)	Year 1: Semester 2	Core (Y/N)
Building Services Design Principles (20 credits)	Y	Thermo Fluids (20 credits)	Y

Level 4			
Advanced Mathematics (20 credits)	Y	Building Services Science (20 credits)	Y
Year 2: Semester 1	Core (Y/N)		
Electrical and Electronics Principles (20 credits)	Y		
Mechanical Services (20 credits)	Y		

Level 5			
Year 2: Semester 2	Core (Y/N)	Year 3: Semester 1	Core (Y/N)
Engineering Mathematics (20 credits)	Y	BMS and Control Systems (20 credits)	Y
Electrical Services and Lighting Systems (20 credits)	Y	Group Design Project (20 credits)	Y
Year 3: Semester 2	Core (Y/N)		
Airconditioning and Refrigeration Systems (20 credits)	Y		
Construction Communications and Application (20 credits)	Y		

Level 6			
Year 4: Semester 1	Core (Y/N)	Year 4: Semester 2	Core (Y/N)
Low-Carbon Systems Design (20 credits)	Y	Intelligent Building Technologies (20 credits)	Y
Facilities Maintenance and Management (20 credits)	Y	Building Physics (Modelling and Analysis) (20 credits)	Y
Year 5: Semester 1	Core (Y/N)	Year 5: Semester 2	
Dissertation (20 credits)	Y	Dissertation (20 credits)	Y

Level 7			
Year 6: Semester 1	Core (Y/N)	Year 6: Semester 2	Core (Y/N)
Sustainable Systems Design (20 credits)	Y	Sustainable Buildings or Humanitarian Engineering (20 credits)	N
Project Management or BEMS and Intelligent Buildings (20 credits)	N	BIM and MMEP (20 credits)	Y
Year 7: Semester 1	Core (Y/N)	Year 7: Semester 2	
Integrated Project (20 credits)	Y	Integrated Project (20 credits)	Y
Research Paper (20 credits)	Y	Research Paper (20 credits)	Y

Assessment Balance and Scheduled Learning and Teaching Activities by Level

The assessment balance and overall workload associated with this course are calculated from core modules and typical option module choices undertaken by students on the course. They have been reviewed and confirmed as representative by the Course Director but applicants should note that the specific option choices students make may influence both assessment and workload balance.

A standard module equates to 200 notional learning hours, which may be comprised of teaching, learning and assessment, any embedded placement activities and independent study. Modules may have more than one component of assessment.

Assessment

Level 4 is assessed by a mix of online time-controlled tests and coursework

Level 5 is assessed by examinations predominantly, with some coursework and practical assessments.

Level 6 is assessed by coursework predominantly, with some examinations.

Level 7 is assessed by a mix of coursework, projects and presentations

Workload

Overall Workload	Level 4	Level 5	Level 6	Level 7
Teaching, Learning and Assessment	216 hours	228 hours	184 hours	216 hours
Independent Study	984 hours	972 hours	1016 hours	984 hours
Placement (optional)		40 weeks		

Learning Support

If you have a question or a problem relating to your course, your Course Administrator is there to help you. Course Administrators work closely with academic staff and can make referrals to teaching staff or to specialist professional services as appropriate. They can give you a confirmation of attendance letter, and a transcript. You may also like to contact your Course Rep or the Students' Union Advice team for additional support with course-related questions.

Student Services

If you have any questions about life at University, call into our Student Services Centre at either campus or contact Student Advice directly. This team, consisting of trained officers and advisers are available to support you throughout your time here. They will make sure you have access to and are aware of the support, specialist services, and opportunities our University provides. They also work on a wide range of projects throughout the year all designed to enhance your student experience and ensure you make the most of your time with us. Student Advice are located in the Student Services Centre in the Leslie Silver Building at City Campus and on the ground floor of the Priestley Building at Headingley Campus. The team can also be contacted via email at studentadvice@leedsbeckett.ac.uk, telephone on 0113 812 3000, or by accessing our online chat link, available on the student homepage.

Support and opportunities

Within MyBeckett you will see two tabs (Support and Opportunities) where you can find online information and resources for yourselves. The Support tab gives you access to details of services available to give you academic and personal support. These include Library Services, the Students' Union, Money advice, Disability advice and support, Wellbeing, International Student Services and Accommodation. There is also an A-Z of Support Services, and access to online appointments/registration.

The Opportunities tab is the place to explore the options you have for jobs, work placements, volunteering, and a wide range of other opportunities. For example, you can find out here how to get help with your CV, prepare for an interview, get a part-time job or voluntary role, take part in an international project, or join societies closer to home.