

## Course Specification

Course Information																							
<b>Final award title(s)</b>	<b>MSc Building Services Engineering</b>	Course Code(s)	Full-time: <b>5223</b> Part-time: <b>5386</b>																				
<b>Intermediate award title(s)</b>	1) <b>PgDip Building Services Engineering</b> 2) <b>PgCert Building Services Engineering</b>																						
<b>Awarding Institution</b>	London South Bank University																						
<b>School</b>	<input type="checkbox"/> ASC <input type="checkbox"/> ACI <input checked="" type="checkbox"/> BEA <input type="checkbox"/> BUS <input type="checkbox"/> ENG <input type="checkbox"/> HSC <input type="checkbox"/> LSS																						
<b>Division</b>	Civil and Building Services Engineering																						
<b>Course Director</b>	Dr Abouzar Estebarsari																						
<b>Delivery site(s) for course(s)</b>	<input checked="" type="checkbox"/> Southwark <input type="checkbox"/> Havering <input type="checkbox"/> Croydon <input type="checkbox"/> Other: (please specify)																						
<b>Mode(s) of delivery</b>	<input checked="" type="checkbox"/> Full-time <input checked="" type="checkbox"/> Part-time <input type="checkbox"/> Both																						
<b>Length of course</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">Mode</th> <th style="width: 25%;">Length years</th> <th style="width: 25%;">Start - month</th> <th style="width: 25%;">Finish - month</th> </tr> </thead> <tbody> <tr> <td>Full time</td> <td>16 months</td> <td>Jan</td> <td>May</td> </tr> <tr> <td>Full time with placement/ sandwich year</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Part time</td> <td>28 months</td> <td>Jan</td> <td>May</td> </tr> <tr> <td>Part time with Placement/ sandwich year</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>			Mode	Length years	Start - month	Finish - month	Full time	16 months	Jan	May	Full time with placement/ sandwich year				Part time	28 months	Jan	May	Part time with Placement/ sandwich year			
Mode	Length years	Start - month	Finish - month																				
Full time	16 months	Jan	May																				
Full time with placement/ sandwich year																							
Part time	28 months	Jan	May																				
Part time with Placement/ sandwich year																							
<b>Is this course generally suitable for students on a Tier 4 visa?</b>	Please complete the International Office questionnaire Yes x (For FT only) <span style="float: right;">No</span> <small>Students are advised that the structure/nature of the course is suitable for those on a Tier 4 visa but other factors will be taken into account before a CAS number is allocated.</small>																						
<b>Approval dates:</b>	Course(s) validated		Revalidated September 2023																				
	Course review date		September 2028																				
	Course specification last reviewed and signed off		September 2023																				
<b>Professional, Statutory &amp; Regulatory Body accreditation</b>	1) Chartered Institution of Building Services Engineers (CIBSE); 2) Energy Institute																						

<b>Reference points:</b>	Internal	<ul style="list-style-type: none"> <li>• Corporate Strategy 2020-2025</li> <li>• Academic Quality and Enhancement Website</li> <li>• LSBU Curriculum Framework</li> <li>• School Strategy</li> <li>• LSBU Academic Regulations</li> </ul>
	External	<ul style="list-style-type: none"> <li>• QAA The UK Quality Code for Higher Education 2018</li> <li>• Framework for Higher Education Qualifications</li> <li>• FHEQ Outcome Classification Descriptions for Level 7</li> <li>• Subject Benchmark Statements (Dated)</li> <li>• OfS Guidance</li> <li>• Professional Statutory and Regulatory Bodies PSRBs</li> <li>• SEEC Level Descriptors 2021</li> <li>• Competitions and Markets Authority</li> <li>• Engineering Council's Accreditation of Higher Engineering Programmes document (AHEP4), Fourth Edition (August 2020)</li> <li>• Industrial Advisory Panel for programme support</li> <li>• The course is informed by the CIBSE Guidelines for Developing Higher and Degree Programmes, January 2018 (Version 1 – Revision 2)</li> </ul>

<b>B Course Aims, Features and Outcomes</b>	
<b>Distinctive features of course</b>	This course is intended for engineers who wish to enhance their skills and knowledge in the field of Building Services Engineering. It is also intended to provide the Masters level academic requirements leading to Chartered Engineer status when following on from an appropriate accredited BEng degree.
<b>Course Aims</b>	<p>The MSc Building Services Engineering aims to:</p> <ol style="list-style-type: none"> <li>1. Provide a broad basis of advanced understanding in the technological areas of designing, assessing and controlling the built environment.</li> <li>2. Examine the interactions between built and natural environments.</li> <li>3. Develop understanding of current and emerging industry approaches to improve building performance against the criteria of comfort, productivity and energy efficiency.</li> </ol>
<b>Course Outcomes</b>	<p>Course learning outcomes summarised here and mapped to individual modules in Curriculum Map in Appendix A.</p> <p><b>M1</b> Apply a comprehensive knowledge of mathematics, statistics, natural science and engineering principles to the solution of complex problems. Much of the knowledge will be at the forefront of the particular subject of study and information by a critical awareness of new developments and the wider context of engineering.</p>

	<p><b>M2</b> Formulate and analyse complex problems to reach substantiated conclusions. This will involve evaluating available data using first principles of mathematics, statistics, natural science and engineering principles, and using engineering judgment to work with information that may be uncertain or incomplete, discussing the limitations of the techniques employed.</p> <p><b>M3</b> Select and apply appropriate computational and analytical techniques to model complex problems, discussing the limitations of the techniques employed.</p> <p><b>M4</b> Select and critically evaluate technical literature and other sources of information to solve complex problems.</p> <p><b>M5</b> Design solutions for complex problems that evidence some originality and meet a combination of societal, user, business and customer needs as appropriate. This will involve consideration of applicable health and safety, diversity, inclusion, cultural, societal, environmental and commercial matters, codes of practice and industry standards.</p> <p><b>M6</b> evaluate the environmental and societal impact of solutions to complex problems (to include the entire life-cycle of a product or process) and minimise adverse impacts.</p> <p><b>M7</b> Evaluate the environmental and societal impact of solutions to complex problems (to include the entire life-cycle of a product or process) and minimise adverse impacts.</p> <p><b>M8</b> Identify and analyse ethical concerns and make reasoned ethical choices informed by professional codes of conduct</p> <p><b>M9</b> Use a risk management process to identify, evaluate and mitigate risks (the effects of uncertainty) associated with a particular project or activity.</p> <p><b>M10</b> Adopt a holistic and proportionate approach to the mitigation of security risks.</p> <p><b>M11</b> Adopt an inclusive approach to engineering practice and recognise the responsibilities, benefits and importance of supporting equality, diversity and inclusion.</p> <p><b>M12</b> Use practical laboratory and workshop skills to investigate complex problems.</p> <p><b>M13</b> Select and apply appropriate materials, equipment, engineering technologies and processes, recognising their limitations.</p> <p><b>M14</b> Discuss the role of quality management systems and continuous improvement in the context of complex problems.</p> <p><b>M15</b> Apply knowledge of engineering management principles, commercial context, project and change management, and relevant legal matters including intellectual property rights</p> <p><b>M16</b> Function effectively as an individual, and as a member or leader of a team. Evaluate effectiveness of own and team performance</p> <p><b>M17</b> Communicate effectively on complex engineering matters with technical and non-technical audiences, evaluating the effectiveness of the methods used.</p> <p><b>M18</b> Plan and record self-learning and development as the foundation for lifelong learning/CPD.</p>
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

## **C Teaching Learning and Assessment Strategy**

The teaching of this course encompasses a variety of methods to ensure a comprehensive learning experience for students. This includes lectures, tutorials, group and individual work, as well as laboratory and computer-based activities, among other relevant activities as determined by the module leaders. Information about resources can also be found on [Home Page - London South Bank University \(lsbu.ac.uk\)](http://lsbu.ac.uk). Further, student can contact staff via Salesforce and the student services via [MyAccount](#). In the case of MyAccount, students can do live Chat from the bottom right corner to get a prompt response. Students are supported throughout this strategy and the activities involved primarily through SAL and MyAccount as the

default, with additional support offered via our VLE moodle, Microsoft Teams, emails, and direct face-to-face meetings.

LSBU offers extensive resources such as laboratories, computer rooms, library facilities, and equipment, which students can access by visiting the Student Life Centre or consulting with their personal tutors and academics.

Academics provide regular surgery hours and can be reached through email, Teams messages, and in-person during classes. In case of unforeseen circumstances such as professional or personal commitments, illness or any other reason, hourly paid lecturers, PhD students, or other qualified individuals may cover some lectures and activities, under the supervision of the module leaders and course directors.

The course is delivered through a blended approach, incorporating physical and electronic notes, recorded videos, multimedia, and other materials to facilitate student learning. However, the course requires students to demonstrate a solid understanding of concepts by completing tutorial questions, watching videos, and reading articles and books. A continuous and consistent effort throughout the academic year is crucial.

Further details regarding the teaching strategy for each module and the corresponding learning outcomes are provided in the subsequent paragraphs.

Science, mathematics and engineering principles (**outcome M1**) are taught in all 6 teaching modules of this course including Thermal Environment, Acoustics and Lighting, Heating and Energy in Buildings, Energy Resource and Use Analysis, Electrical Power, Sustainable Refrigeration, and Ventilation and Air Conditioning. Utilizing a wide-ranging understanding of mathematics, statistics, natural science, and engineering principles to resolve intricate issues. The majority of this knowledge will be cutting-edge within the specific area of study and informed by a discerning recognition of new advancements and the broader context of engineering.

Problem analysis (**outcome M2**) is developed in the following modules: Thermal Environment, Acoustics and Lighting, Heating and Energy in Buildings, Electrical Power, Sustainable Refrigeration, and Ventilation and Air Conditioning. The modules offered aim to equip students with the ability to formulate and analyse complex problems, with a focus on reaching substantiated conclusions. The courses cover a wide range of topics, including the application of first principles in mathematics, statistics, natural science, and engineering principles. Additionally, the courses teach students how to exercise engineering judgment when working with incomplete or uncertain information, while also discussing the limitations of the techniques employed. These are important learning outcomes that students are expected to acquire through the modules.

Using analytical tools and techniques (**outcome M3**) are taught in Heating and Energy in Buildings. In this module, students will gain the skills to choose and implement suitable computational and analytical techniques for modelling intricate problems, while also analysing and discussing the constraints and drawbacks of the chosen techniques. The modules on Heating and Energy in Buildings, Sustainable Refrigeration, and Ventilation and Air Conditioning cover the design of solutions for complex problems (**outcome M5**) that demonstrate originality and address the needs of society, users, businesses, and customers. This involves considering relevant factors such as health and safety, diversity, inclusion, culture, society, environment, and commercial matters, as well as codes of practice and industry standards.

The module Energy Resource and Use Analysis covers the evaluation of environmental and societal impacts of solutions for complex problems, including the entire life-cycle of a product or process, and the minimization of adverse impacts. This module emphasizes an integrated/systems approach towards achieving **outcome M6**.

Ethics (**outcome M8**) is covered in MSc Project (Energy and Engineering Project) where students need to carry out ethical analysis and complete ethics form. This outcome (M8) involves the identification and analysis of ethical concerns, as well as the ability to make informed and reasoned ethical decisions based

on professional codes of conduct. Security (**outcome M10**) is also covered in Sustainable Refrigeration module and MSc Project module to prevent risks associated with experimental work and to mitigate them.

Throughout various modules, students are encouraged to conduct technical literature reviews to enhance their learning materials or support their coursework (**outcome M4**). Through this process, they acquire the skills to carefully select and critically evaluate technical literature and other sources of information to effectively solve complex problems. This outcome is covered in the following modules: Thermal Environment, Acoustics and Lighting, Energy Resource and Use Analysis, Electrical Power, and Sustainable Refrigeration.

Sustainability (**outcome M7**) is addressed in several modules including Thermal Environment, Acoustics and Lighting, Heating and Energy in Buildings, Electrical Power, and Sustainable Refrigeration. This outcome encompasses the evaluation of environmental and societal impacts of complex problem solutions, including their entire life-cycle, and the minimization of negative impacts. During laboratory activities, the module covers Risks (**outcome M9**), where students are tasked with conducting risk analyses for their experimental activities. Through this, they acquire the skills to use a risk management process in order to identify, evaluate, and mitigate the effects of uncertainty associated with a particular project or activity.

The final MSc Energy and Engineering Project aims to address and promote Equality, Diversity, and Inclusion (**Outcome M11**). Students are guided to embrace an inclusive approach to engineering practice and acknowledge the significance, advantages, and responsibilities of promoting equality, diversity, and inclusion.

The students are provided with practical and workshop skills (**outcome M12**) by utilizing laboratory activities to explore complex problems. Specifically, the students will gain knowledge on how to operate various laboratory tools and equipment. This is mainly covered in Sustainable Refrigeration module. The module Energy Resource and Use Analysis covers the **outcome M13**, which involves selecting and applying suitable materials, equipment, engineering technologies, and processes while acknowledging their limitations. This module evaluates various engineering technologies towards achieving the goal of net-zero emissions by 2050 and encompasses the different aspects of this outcome.

Quality management (**outcome M14**) is covered in module Energy resource and Use Analysis. In some topics of this module, the role of quality management systems and continuous improvement in the context of complex problems are discussed.

The MSc final Energy and Engineering Project addresses engineering and project management (**outcome M15**) and provides students with an opportunity to apply their knowledge of engineering management principles, project and change management, commercial context, and relevant legal matters, including intellectual property rights. The project is worth 60 credits and begins with the development of a research proposal and creation of a research timetable and Gantt Chart based on a real-world problem.

Function effectively as an individual, and as a member or leader of a team (**outcome M16**) is primarily assessed and fostered in the Thermal Environment, Acoustics and Lighting, and Energy Resource and Use Analysis modules. The evaluation of individual and team performance is accomplished through coursework delivered by groups of students.

The **outcome M17** on communication is addressed in several modules, such as Thermal Environment, Acoustics and Lighting, Energy Resource and Use Analysis, Electrical Power, and Ventilation and Air Conditioning, where students are guided, encouraged, and assessed on their ability to communicate complex engineering matters effectively with both technical and non-technical audiences, as well as evaluate the effectiveness of the communication methods used. In other words, the course's distinctive feature is its emphasis on communication skills, specifically in aural communication and the ability to articulate ideas with confidence. One example of developing communication skills is through presenting research and coursework results in the module Energy resource and Use analysis. 20% of the mark is devoted to the presentation quality and communication skill.

Self-directed learning and continuous professional development (**outcome M18**) are integral components of all modules, particularly emphasized in the MSc final Energy and Engineering project. Students are expected to maintain a logbook of their research-related activities and engage in self-study both on and off-campus, to be reviewed and discussed with their tutors.

## D. Assessment Methods

### General definitions

The assessment in this course is made by coursework (CW) and exams (EX).

CW can be in the form of tests, reports, quizzes, etc. (individual or in groups; on-campus and/or online via Moodle).

Exams are individual assessments and can be in the form of on-campus written exercises or online.

There are modules which are CW 100%, there are others with different weights on CW and exams. CW can have several components.

The modality is defined module by module in the module guides.

Details about weights can be found at **H. Course Modules** in these specifications.

This course, through its modules, includes summative and formative assessments for students to prepare for their exams.

Summative assessments are the assessments that define the student's official marks on coursework and exams.

A formative assessment is like a summative assessment, but the marks obtained (if any) are not part of the official assessment. These marks are just a tool for the student to test themselves. A formative assessment can be a previous year's coursework or exam paper, an original coursework or an original exam paper, quizzes, tests, etc. This will be decided and designed by the module leader.

Summative assessments can be reviewed and clarified after the students' requirements by the academic judgment will prevail (principle of academic judgment independence). When students are dissatisfied with their marks, they have an official appeal process to follow.

## E Academic Regulations

The University's Academic Regulations apply to this course. Any course-specific protocols will be identified here.

<https://www.lsbu.ac.uk/about-us/policies-regulations-procedures>

*Since this course is accredited, there are some extra regulations defined by the requirements by CIBSE and EI that in some cases can be more restrictive than the LSBU regulations. They are stated in these specifications and the course guide.*

### Compensation

A compensated pass could be awarded under the criteria of the exam board if a minimum of 40% is achieved at a component level (CW and/or EX) and a minimum of 40% is achieved at the module level (Module Mark). Compensation is only considered when students exhausted their four attempts to pass the module.

A maximum of 20 credits can be compensated, throughout the whole course, excluding the Final Year Project.

### **Condonement**

No Condonement of modules is allowed in this course.

## **F Entry Requirements**

In order to be considered for entry to the course applicants will be required to have at least one of the following qualifications:

- BEng (Hons) degree in an appropriate discipline. Normally a Lower Second Class would be considered a minimum, but Third Class may be acceptable depending on age and experience.
- Cognate degrees in appropriate disciplines (e.g. physics, chemistry or mathematics) will be accepted provided the candidate demonstrates some knowledge of building services engineering, for example graduates recently transferring into the industry.
- Other qualifications may be accepted depending on age and experience. This category would normally be reserved for mature candidates who have had several years' experience in the building services industry.
- In addition, international students need English language qualifications equivalent to IELTS 6.5.

## **G Course Structure**

### **Course overview**

- The course comprises six taught 20-credit modules and a 60-credit final project. The maximum period of registration is five years.
- The course may be studied full time (one year), part time (two and half years), or by flexible learning (two to four years).
- The flexible-learning students will be directed in the first instance to follow the part-time pattern of study.
- Flexibility will be offered in the time to complete modules, so that the pattern may be adapted in agreement with the Course Director. The maximum period permitted for study of an individual module would be 18 months, and students would normally study no more than three modules concurrently.
- 

The completion date for the Major Project is:

- Full-time students: Due to submit in the middle of May 2025, go to June/July Award and Progression Board 2025.
- Part-time students: Due to submit in the middle of May 2026, go to June/July Award and Progression Board 2026.

### MSc Building Services Engineering – FULL TIME

	Semester 1		Semester 2	
<b>Level 7</b>	EUB-7-960 - Thermal Environment, Acoustics and Lighting - Compulsory	20	EUB-7-962 - Energy Resource and Use Analysis- Compulsory	20
	EUB-7-963 - Electrical Power - Compulsory	20	EUB-7-127 - Heating and Energy in Buildings - Compulsory	20
	EUB-7-964 - Sustainable Refrigeration - Compulsory	20	EUB-7-131 - Ventilation and Air Conditioning - Compulsory	20
	EUE-7-965 - Dissertation Project	60		

### MSc Building Services Engineering – PART TIME

	Semester 1		Semester 2	
<b>Year 1</b>	EUB-7-960 - Thermal Environment, Acoustics and Lighting - Compulsory	20	EUB-7-962 - Energy Resource and Use Analysis- Compulsory	20
	EUB-7-963 - Electrical Power - Compulsory	20	EUB-7-127 - Heating and Energy in Buildings - Compulsory	20
<b>Year 2</b>	EUB-7-964 - Sustainable Refrigeration - Compulsory	20	EUB-7-131 - Ventilation and Air Conditioning - Compulsory	20
	EUE-7-965 - Dissertation Project	60		
<b>Year 3</b>	EUE-7-965 - Dissertation Project			

## H Course Modules



<b>M. Code</b>	<b>Module Title</b>	<b>Level</b>	<b>Semester</b>	<b>Credit value</b>	<b>Assessment Ex/Cw</b>
EUB-7-963	Electrical Power	7	1	20	30% CW / 70% Exam
EUB-7-964	Sustainable Refrigeration	7	1	20	100% CW
EUB-7-960	Thermal Environment, Acoustics and Lighting	7	1	20	50% CW / 50% Exam
EUB-7-127	Heating and Energy in Buildings	7	2	20	50% CW / 50% Exam
EUB-7-962	Energy Resource and Use Analysis	7	2	20	100% CW
EUB-7-131	Ventilation and Air Conditioning	7	2	20	50% CW / 50% Exam
EUE-7-965	Dissertation Project	7	1-2	60	100% CW

### **I. Timetable Information**

Once students are fully enrolled, they will have access to the Moodle Site, MS Teams and the official timetable via MyAccount. This is usually available in the second half of September.

Apart from the teaching timetable, there are other activities offered to the student by several other teams. Sporting, cultural and other activities that are not mandatory must be managed by the students themselves.

Students will be notified by email of any changes to the timetable.

### **J Costs and financial Support**

Information on tuition fees/financial support can be found by clicking on the following link –

Information on tuition fees/financial support can be found by clicking on the following link:

<http://www.lsbu.ac.uk/study/undergraduate/fees-and-funding> or

<http://www.lsbu.ac.uk/study/postgraduate/fees-and-funding>

<https://www.lsbu.ac.uk/international/fees-and-funding>

Information on living costs and accommodation can be found by clicking the following link:

<https://www.lsbu.ac.uk/student-life/our-campuses/southwark/cost-of-living>

## **List of Appendices**

- Appendix A: Curriculum Map AHEP4
- Appendix B: Personal Development Planning
- Appendix C: Terminology

### Appendix A: Curriculum Map

This map provides a design aid to help course teams identify where course outcomes are being assessed (A) within the course. It also provides a checklist for quality assurance purposes and may be used in validation, accreditation, and external examining processes. Making the learning outcomes explicit will also help students to monitor their learning and development as the course progresses.

Modules		Course Learning outcomes																	
Title	Code	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18
Thermal Environment, Acoustics and Lighting	EUB-7-960	TD A	TD A		TD A			TD A									TD A	TD A	
Heating and Energy in Buildings	EUB-7-127	TD A	TD A	TD A		TD A		TD A											
Energy Resource and Use Analysis	EUB-7-962	TD A			TD A		TD A							TD A	TD A		TD A	TD A	
Electrical Power	EUB-7-963	TD A	TD A		TD A			TD A										TD A	
Sustainable Refrigeration	EUB-7-964	TD A	TD A		TD A	TD A		TD A		TD A	TD A		TD A						
Ventilation and Air Conditioning	EUB-7-131	TD A	TD A			TD A												TD A	

Dissertation Project	EUE-7-965		TD A		TD A	TD A			TD A			TD A			TD A		TD A	TD A
----------------------	-----------	--	------	--	------	------	--	--	------	--	--	------	--	--	------	--	------	------

## Appendix B: Personal Development Planning

A variety of terms are used in higher education to describe a process undertaken by individuals to gather evidence on, record and review their own learning and achievement, and identify ways in which they might improve themselves academically and more broadly. The term Personal Development Planning (PDP) is proposed to describe a structured process undertaken by an individual to reflect upon their own learning, performance and/or achievement and to plan for their personal educational and career development. The purpose of this tool is to help HE teaching staff to explain where PDP is being used within a course or portfolio of modules.

Approach to PDP	Level 7
1 Supporting the development and recognition of skills through the personal tutor system.	<p>The Year Tutor is the personal tutor of a specific year The next person to support the student's issues is the Course Director who is responsible for all the students or the course (full-time and part-time Course). The Course Director works together with the year tutors to solve issues and support the development and recognition of the student effort.</p> <p>This is brought to the attention of all students at induction and regularly during the year. There are open surgeries offered by all staff for two hours a week in each semester.</p>
2 Supporting the development and recognition of skills in academic modules/modules.	<p>All modules are structured so that, over the course of the study, the combination of coursework introduces and develops the technical skills at postgraduate level in the fields of experimentation, hands-on computer modelling, structural/traffic/coastal design exercises, critical analysis, analysis methodologies, data interpretation and verification, and research methodologies.</p> <p>Assessed coursework, in stages, provides the feedback for the consolidation and improvement of these academic skills.</p>
3 Supporting the development and recognition of skills through purpose designed modules/modules.	<p>The main technical skills required for an postgraduate building services course are covered in all the taught core modules over the year.</p>
4 Supporting the development and recognition of skills through research projects and dissertations work.	<p>The Energy Resources and Use Analysis module covers the literature gathering and review, referencing techniques, technical writing, results presentation, and research methodologies.</p> <p>The LSBU Librarian (Engineering Section) demonstrates the in-house facilities available for off-line and online searches for papers, journals and articles.</p> <p>The module is based on an individual and group work. A student meets with the supervisor on a term-time sessions of about fifteen minutes to discuss and monitor progress.</p>
5 Supporting the development and recognition of career management skills.	<p>An academic staff member, who is the Liaison Officer for the Institution of Acoustics or the Chartered Institute of Building Services Engineers, briefs the students on the benefits of the student membership of both the institutions.</p> <p>Visits to the local branch of the Energy Institute are organised outside of the main course, local activities are</p>

	<p>offered , and routes to Chartered Engineering are discussed.</p> <p>Students are encouraged to use the LSBU Careers Office for CV preparation, interview skills and job vacancies.</p>
6 Supporting the development and recognition of career management skills through work placements or work experience.	Students are encouraged to take internships in the Summer.
7 Supporting the development of skills by recognising that they can be developed through extracurricular activities.	Students are directed to some of the wealth of resources available in London, such as exhibitions, museums, fairs, lectures and conferences.
8 Supporting the development of the skills and attitudes as a basis for continuing professional development.	Notices of lectures and presentations at the Energy Institute and Chartered Institute of Building Services Engineers are brought to the students' attention.
9 Other approaches to personal development planning.	Any lecturer can guide the student about his or her personal development planning.
10 The means by which self-reflection, evaluation and planned development are supported e.g. electronic or paper-based learning log or diary.	Meetings for the Project between the student and the supervisor. Written and/or verbal feedback on assessed coursework.

## Appendix C: Terminology

<b>awarding body</b>	a UK higher education provider (typically a university) with the power to award higher education qualifications such as degrees
<b>bursary</b>	a financial award made to students to support their studies; sometimes used interchangeably with 'scholarship'
<b>collaborative provision</b>	a formal arrangement between a degree-awarding body and a partner organisation, allowing for the latter to provide higher education on behalf of the former
<b>compulsory module</b>	a module that students are required to take
<b>contact hours</b>	the time allocated to direct contact between a student and a member of staff through, for example, timetabled lectures, seminars and tutorials
<b>coursework</b>	student work that contributes towards the final result but is not assessed by written examination
<b>current students</b>	students enrolled on a course who have not yet completed their studies or been awarded their qualification
<b>delivery organisation</b>	an organisation that delivers learning opportunities on behalf of a degree-awarding body
<b>distance-learning course</b>	a course of study that does not involve face-to-face contact between students and tutors
<b>extracurricular</b>	activities undertaken by students outside their studies
<b>feedback assessment) (on</b>	advice to students following their completion of a piece of assessed or examined work
<b>formative assessment</b>	a type of assessment designed to help students learn more effectively, to progress in their studies and to prepare for summative assessment; formative assessment does not contribute to the final mark, grade or class of degree awarded to students

<b>higher education provider</b>	organisations that deliver higher education
<b>independent learning</b>	learning that occurs outside the classroom that might include preparation for scheduled sessions, follow-up work, wider reading or practice, completion of assessment tasks, or revision
<b>intensity of study</b>	the time taken to complete a part-time course compared to the equivalent full-time version: for example, half-time study would equate to 0.5 intensity of study
<b>lecture</b>	a presentation or talk on a particular topic; in general lectures involve larger groups of students than seminars and tutorials
<b>learning zone</b>	a flexible student space that supports independent and social learning
<b>material information</b>	information students need to make an informed decision, such as about what and where to study
<b>mode of study</b>	different ways of studying, such as full-time, part-time, e-learning or work-based learning
<b>modular course</b>	a course delivered using modules
<b>module</b>	a self-contained, formally structured unit of study, with a coherent and explicit set of learning outcomes and assessment criteria; some providers use the word 'course' or 'course unit' to refer to individual modules
<b>national teaching fellowship</b>	a national award for individuals who have made an outstanding impact on student learning and the teaching profession
<b>navigability (of websites)</b>	the ease with which users can obtain the information they require from a website
<b>optional module</b>	a module or course unit that students choose to take
<b>performance (examinations)</b>	a type of examination used in performance-based subjects such as drama and music
<b>professional body</b>	an organisation that oversees the activities of a particular profession and represents the interests of its members
<b>prospective student</b>	those applying or considering applying for any programme, at any level and employing any mode of study, with a higher education provider



<b>regulated course</b>	a course that is regulated by a regulatory body
<b>regulatory body</b>	an organisation recognised by government as being responsible for the regulation or approval of a particular range of issues and activities
<b>scholarship</b>	a type of bursary that recognises academic achievement and potential, and which is sometimes used interchangeably with 'bursary'
<b>semester</b>	either of the parts of an academic year that is divided into two for purposes of teaching and assessment (in contrast to division into terms)
<b>seminar</b>	seminars generally involve smaller numbers than lectures and enable students to engage in discussion of a particular topic and/or to explore it in more detail than might be covered in a lecture
<b>summative assessment</b>	formal assessment of students' work, contributing to the final result
<b>term</b>	any of the parts of an academic year that is divided into three or more for purposes of teaching and assessment (in contrast to division into semesters)
<b>total study time</b>	the total time required to study a module, unit or course, including all class contact, independent learning, revision and assessment
<b>tutorial</b>	one-to-one or small group supervision, feedback or detailed discussion on a particular topic or project
<b>work/study placement</b>	a planned period of experience outside the institution (for example, in a workplace or at another higher education institution) to help students develop particular skills, knowledge or understanding as part of their course
<b>workload</b>	see 'total study time'
<b>written examination</b>	a question or set of questions relating to a particular area of study to which candidates write answers usually (but not always) under timed conditions

