EST 1892 LSBU

Course Specification

<table>
<tr><th colspan="4">A. Course Information</th></tr>
<tr><td>Final award title(s)</td><td colspan="3">HND Building Services Engineering</td></tr>
<tr><td>Intermediate exit award title(s)</td><td colspan="3">None</td></tr>
<tr><td>UCAS Code</td><td>042K</td><td>Course Code(s)</td><td>Full-time: 541
Part-time: 549</td></tr>
<tr><td>Awarding Institution</td><td colspan="3">London South Bank University</td></tr>
<tr><td>School</td><td colspan="3">☐ ASC ☐ ACI ☒ BEA ☐ BUS ☐ ENG ☐ IHSC ☐ LSS</td></tr>
<tr><td>Division</td><td colspan="3">Civil and Building Services Engineering</td></tr>
<tr><td>Course Director</td><td colspan="3">Dr Zhihui Ye</td></tr>
<tr><td>Delivery site(s) for course(s)</td><td colspan="3">☒ Southwark ☐ Havering ☐ Croydon
☐ Other: (please specify)</td></tr>
<tr><td>Mode(s) of delivery</td><td colspan="3">☒Full time ☒Part time ☐Other (please specify)</td></tr>
<tr><td>Length of course/start and finish dates</td><td colspan="3">
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<tr><th>Mode</th><th>Length years</th><th>Start - month</th><th>Finish - month</th></tr>
<tr><td>Full time</td><td>2 years</td><td>Sep</td><td>June</td></tr>
<tr><td>Full time with placement/ sandwich year</td><td></td><td></td><td></td></tr>
<tr><td>Part time</td><td>3 years</td><td>Sep</td><td>June</td></tr>
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<tr><td>Is this course suitable for a Visa Sponsored Student?</td><td colspan="3">Yes for 541 No for 549</td></tr>
<tr><td rowspan="3">Approval dates:</td><td colspan="2">Course Validation date</td><td>Revalidated September 2023</td></tr>
<tr><td colspan="2">Course Review date</td><td>September 2028</td></tr>
<tr><td colspan="2">Course Specification last updated</td><td>September 2023</td></tr>
<tr><td>Professional, Statutory & Regulatory Body accreditation</td><td colspan="3"></td></tr>
</table>

Link to Institute of Apprenticeship (IoA) Standard and Assessment Plan (Apprenticeship only)	NA	
Reference points	**Internal**	Corporate Strategy 2020-2025 Academic Quality and Enhancement Website LSBU Curriculum Framework School Strategy LSBU Academic Regulations
	External	Engineering Council, Accreditation of Higher Education Programmes (Fourth Edition 2020); QAA The UK Quality Code for Higher Education 2018 Framework for Higher Education Qualifications Subject Benchmark Statements (Dated) OfS Guidance PSRBs SEEC Level Descriptors 2021 Competitions and Markets Authority

B. Course Aims and Features	
Distinctive features of this course	LSBU has almost 70 years' expertise in running Building Services Engineering courses and it produces around 50% of graduates in the industry. Our HND BSE course is designed to equip students with the technical, management and communication skills needed to be an effective member of the building services engineering industry and/or its affiliated sectors with technical and application skills in accordance with the requirements of an Incorporated Engineer. This course is intended for technician engineers who are looking to develop their skills. Graduates will be well equipped to enter the industry in areas such as design and build, consultancy, and facilities management. A wide range of building services is taught, both mechanical and electrical, and the theme of energy conservation and environmental impact is present throughout. In keeping with the needs of modern engineering practice, management and communication skills also strongly feature in this course. The course is designed to deliver the following core skills that will enable students to work effectively in the field: • Mathematic and scientific skills and their application in building services • Technical skills and knowledge required to understand systems design • Communication skills. Students will also begin to develop team-working skills in preparation for further study should they wish to gain professional status.

Course Aims	The general aim of this course is to develop the students' technical and application skills in accordance with the requirements of an Incorporated Engineer; the emphasis being on developing skills appropriate to a multidisciplinary, integrated building services and energy engineering environment. Incorporated engineers will be expected to have good technical and project management competence, with critical self-awareness and confidence in applying appropriate design solutions. They will be expected to rise to positions of middle and top management. They will require good analytical and communication skills, to be able to lead design teams, while also being able to work independently. The course is specifically relevant to those wishing to join the Chartered Institution of Building Services Engineers (CIBSE) and/or the Energy Institute (EI). With regard to CIBSE the course provides the management, design and technical skills for those working within the building services industry. The interests of the Energy Institute are represented by the emphasis on energy management, low energy design and an awareness of the relationship of buildings to energy resource and supply issues. The HND Building Services Engineering aims to: 1. Produce diplomats trained in the core discipline of Building Services/Energy Engineering with a strong emphasis on design and application. Such graduates typically find employment in the building services and energy industries, either with a consultant, end user, contractor, equipment manufacturer, energy specialist or facilities manager. 2. Develop students' knowledge of mathematics, applied sciences, engineering methods, safety, economics, finance, and sustainability in support of the central themes of the course. 3. Develop students' practical and problem-solving skills through the integration of a broad range of subject material. 4. Teach students to communicate clearly, to argue rationally and to draw conclusions based on a rigorous, analytical and critical approach to data and systems. 5. Develop the transferable skills expected of a diplomate who will work in multidisciplinary teams with technical, commercial and management staff in industrial and other occupations. 6. Produce diplomates capable of contributing to the profession of Energy/Building Services Engineering in the context of modern industrial practice and sustainable development by promoting advanced techniques and methods and by extending current technologies. 7. Produce diplomates engineers who will have the core competencies and enthusiasm to continue lifelong learning and development.

Course Learning Outcomes	The course outcomes have been developed concerning the Engineering Council's Accreditation of Higher Engineering Academic Programmes, **Fourth Edition (August 2020)**. The codes in brackets (**F1 to F18**) refer to the **AHEAP4** are mapped with the Learning Outcomes described in the AHEP4 documentation. The curriculum map showing the modules in which the material that each of the learning outcomes covers is taught, developed, and assessed is in Appendix A.

	F1 Apply knowledge of mathematics, statistics, natural science and engineering principles to broadly defined problems. **F2** Analyse broadly defined problems reaching substantiated conclusions. **F3** Use appropriate computational and analytical techniques to model broadly defined problems. **F4** Select and use technical literature and other sources of information to address broadly defined problems. **F5** Design solutions for broadly defined problems that meet a combination of user, business, and customer needs as appropriate. This will involve consideration of applicable health and safety, diversity, inclusion, cultural, societal, and environmental matters, codes of practice and industry standards. **F6** Apply a systematic approach to the solution of broadly defined problems. **F7** Evaluate the environmental and societal impact of solutions to broadly defined problems. **F8** Identify ethical concerns and make reasoned ethical choices informed by professional codes of conduct. **F9** Identify, evaluate and mitigate risks (the effects of uncertainty) associated with a particular project or activity. **F10** Adopt a holistic and proportionate approach to the mitigation of security risks. **F11** Recognise the responsibilities, benefits and importance of supporting equality, diversity and inclusion. **F12** Use practical laboratory and workshop skills to investigate broadly defined problems. **F13** Select and apply appropriate materials, equipment, engineering technologies and processes. **F14** Recognise the need for quality management systems and continuous improvement in the context of broadly defined problems. **F15** Apply knowledge of engineering management principles, commercial context and project management. **F16** Function effectively as an individual, and as a member or leader of a team. **F17** Communicate effectively with technical and non-technical audiences.

	F18 Plan and record self-learning and development as the foundation for lifelong learning/CPD.

C. Teaching and Learning Strategy

This course is taught by delivering lectures, tutorials, individual and group works, laboratories, computer laboratories, and any other activity the module leaders consider relevant and useful for student learning.

LSBU provide access to laboratories, computer rooms, a library, equipment, and many other resources that can be found by visiting the Student Life Centre or talking to the academics and personal tutors. Information about resources can also be found on Home Page - London South Bank University (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.

Every academic provides surgery hours (in person and/or on Teams) and can be contacted by email, Teams messages and in person during the classes.

When necessary, due to professional, personal, health or other circumstances, hourly paid lecturers, PhD students, or any other qualified person can cover part of the lectures and activities of this course. They will be always supervised by academics covering the role of module leaders and course directors.

This course is delivered by a blended approach. This means the material and the delivery of the teaching include physical notes in many cases but electronic notes, recorded videos, and multimedia as well. All of this is offered to boost the learning process of students.

However, this course involves an understanding of concepts, attempting all the tutorial questions, watching videos, and reading articles and books. To succeed in this course, the student must invest a minimum private study time of 1,830 hours. This time, of course, is variable depending on the previous knowledge of the student (background).

The effort must be continuous and steady throughout the academic year.

In the next paragraphs, a detailed teaching strategy is provided in connection with the modules and learning outcomes established previously.

The codes in brackets **(F1 to F18)** refer to the Learning Outcomes described in the AHEP4 documentation.

Students will apply a systematic approach to the solution of broadly defined problems **(F6)** in **Heating and Ventilation Design, Electrical Principles, Thermofluids Principles and Thermo-fluids Engineering.** They will appraise and question the purpose of a given heating system design brief of heating load analysis, heating system choice and control, and consider its broad environmental implications. They will develop a holistic approach to heating system design.

They will identify ethical concerns and make reasoned ethical choices informed by professional codes of conduct **(F8)** in **Construction Practice B** and **Design Applications.** They will appreciate the significance to society of the impact of human activity on the environment. They will formulate and articulate judgements relating to ethical behaviour. They will identify the ethical elements in decision-making. They will understand the interaction between engineering, the environment, and society, and the implications of their professional engineering institution's code of professional conduct.

Students will apply knowledge of mathematics, statistics, natural science, and engineering principles **(F1)** and will analyse broadly defined problems reaching substantiated conclusions **(F2)** in **Foundation Engineering Mathematics, Engineering Mathematics B, Electrical Principles, Thermofluids Principles and Thermofluids Engineering**. At some extent, they will show awareness the challenges of global warning impact on building services industry.

Students will apply design solutions for broadly defined problems that meet a combination of user, business, and customer needs as appropriate. This will involve consideration of applicable health & safety, diversity, inclusion, cultural, societal, and environmental matters, codes of practice and industry standards **(F5)** in **Construction Practice B, Internal Environment & Comfort B**, **Design Applications** and **Refrigeration Air Conditioning and Heat Pumps.** They will demonstrate, through group design work and presentations, a strong awareness of, and commitment to, the principles of regenerative design, intervention which has societal benefit, and sustainable development. They will appreciate the perspectives of all 'stakeholders', ensuring that designs are inclusive of all users. They will show they say creative skills through design projects.

Students will evaluate the environmental and societal impact of solutions to broadly defined problems **(F7)** in **Fundamentals of Building Services Engineering, Refrigeration Air Conditioning and Heat Pumps, Design Applications** as well as **Heating and Ventilation Design.** They will gather, assimilate, and apply relevant knowledge and information to building services engineering, energy and environmental issues with regards to various building services systems for the support of the project. They will be aware of resource scarcity, embodied energy, and low energy building services system choice and design. Through the coursework, lab work and class activities, they will demonstrate their understanding of the principles in tackling issues related to climate changes, as well as low energy low carbon emission building and building services system design.

Students will communicate effectively with technical and non-technical audiences **(F17)** in **Foundation Engineering Mathematics, Engineering Mathematics B as well as Refrigeration Air Conditioning and Heat Pumps.** They will explain clearly and knowledgeably about solve complex engineering issues via coursework, lab reports and exam. They will demonstrate clear communication skills through their report writing, experimental testing, and sustainability matters.

Students will use practical laboratory and workshop skills to investigate broadly defined problems **(F12)** in **Internal Environment & Comfort B, Electrical Services in Buildings** as well as **Refrigeration Air Conditioning and Heat Pumps**. They will demonstrate knowledge of thermal, lighting and acoustics impact on human comfort and low carbon building mainly in lab reports, coursework, and exam.

Students will recognise the responsibilities, benefits and importance of supporting equality, diversity, and inclusion **(F11)** in **Construction Practice B and Design Applications.** They will demonstrate team working skills and awareness of inclusive behaviours through design projects and other activities.

Students will recognise the need for quality management systems and continuous improvement in the context of broadly defined problems **(F14)** in **Internal Environment & Comfort B** and **Electrical Services in Buildings.** They will demonstrate how the design method of thermal, acoustics and electrical services system, issues of safety and legislation, and the concepts of quality assurance can strongly influence internal environment design choices. Also, they will identify and assess risks throughout the design process and decide on methods of elimination and/or control under quality assurance.

Students will select and apply appropriate materials, equipment, engineering technologies and processes **(F13)** in **Fundamentals of Building Services Engineering, Electrical Services in Buildings, Refrigeration Air Conditioning and Heat Pumps as well as Heating and Ventilation Design.** They will consider the global warning and energy issues when select material, equipment, engineering technologies and processes. They will know how wasteful or not a good design is when rated against carbon footprint and societal benefit.

Students will adopt a holistic and proportionate approach to the mitigation of security risks **(F10)** in **Construction Practice B.** They will demonstrate an increasing awareness, and development of the treatment of data, IP and confidentiality. They will understand how risks can be mitigated and the importance of communicating risks to others.

Students will function effectively as an individual, and as a member or leader of a team **(F16)** in **Internal Environment & Comfort B** and **Design Applications.** They will demonstrate both individual and team working creative skills through lab works and group coursework. They will conduct themselves

appropriately when undertaking lab works demonstrating the importance of honesty, integrity and an ethics-driven thinking.

Students will apply knowledge of engineering management principles, commercial context, and project management **(F15)** in **Construction Practice B.** They will be aware of how the economy, sustainability, ethics, politics, and the impact on all members of society can affect design and construction. They will justify the chosen solution (including in a non-technical language) to 'stakeholders'. They will interact with 'stakeholders' to help the 'client' and other team members to develop a better understanding of the brief, including the functional, social, and economic objectives. They will be aware of the use of environmental management systems, environmental impact assessment, and social impact assessment and how they are used in engineering projects.

Students will select and use technical literature and other sources of information to address broadly defined problems **(F4)** in **Fundamentals of Building Services Engineering, Electrical Principles and Thermofluids Principles.** They will be able to use technical literature related to the building services discipline to find out the current innovated technology and avoid engineering failure.

Students will plan and record self-learning and development as the foundation for lifelong learning/CPD **(F18)** in **Construction Practice B.** They will appreciate the need for continuing professional development developing and open safety culture which encourages challenge. They will learn independently, understanding the limits of their technical competency in recognising complexity in problems and developing critical thinking skills and professional judgements.

They will identify, evaluate and mitigate risks (the effects of uncertainty) associated with a particular project or activity **(F9)** in **Heating and Ventilation Design.** They will understand and identify the concepts of hazard and risk, estimating prioritising and mitigating risks. They will assess and mitigate environmental risk in designing heating and ventilation system.

Students will use appropriate computational and analytical techniques to model broadly defined problems **(F3)** in **Heating and Ventilation Design, Thermofluids Engineering** and **Design Applications.** They will analysis data and consider engineering constrain to drive their engineering thinking and will conduct project design decision.

Self-study is an integral part of this course and for most of the modules, students are expected to complete 152 hours of self-study. This does not include contact time in lectures, tutorials and labs which is 48 hours for most of the modules.

The library has a number of in-line resources to help students including:

- IHS
- British Standards
- Access to numerous building services magazines.

Staff teaching on the course are LSBU Civil and Building Services Engineering Division staff.

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

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.

Condonement

No Condonement of modules is allowed in this course.

F. Entry Requirements

To be considered for entry to the course applicants will be required to have one of the following qualifications:

- A Level EEE - Must include Mathematics and preferably a Science in either Chemistry or Physics (UCAS points: 48)
- T-level (Pass or above) in Construction: Design, Surveying and Planning. (UCAS points: 72)
- BTEC Level 3 Extended Diploma MPP in an Engineering subject area or Construction and Built Environment area (Must include Mathematics and advanced Mathematics) (UCAS points: 64)
- Building Services Engineering Technician level 3 apprenticeship MP (UCAS points: 48) alongside grade Pass or Distinction at EPA
- Access to HE qualifications with 45 Passes supported by substantial relevant work experience
- Other equivalent level 3 qualifications worth 64 UCAS points supported by substantial relevant work experience
- Applicants must hold 5 GCSEs A-C including Maths and English or equivalent (reformed GCSEs grade 4 or above).

Credit for prior learning (APL)Applicants may be able to use their learning or other life experiences to gain academic
credit towards their course of study. Applicants need to demonstrate that their learning is equivalent to formal learning on the course and produce satisfactory evidence. If an applicant has gained a qualification from a professional body or another institution this may be credited towards the University qualification via our transfer credit scheme.

G. Course Structure(s)

Building Services Engineering at London South Bank University is studied at undergraduate level at HND and BEng (Hons) levels. The HND and BEng have been deliberately designed to share modules at levels 4 and 5 to facilitate cross transition 'ladders and bridges' between the courses and opportunities are taken to lecture HND and BEng students together where appropriate.

Level 4 and 5 modules contain a broad mixture of mechanical and electrical services together with management and supporting maths and science. Details of module content may be derived from individual module guides.

Full-time study

Year 1

Foundation Engineering Mathematics (Level S)
Electrical principles (Level 4)
Fundamentals of building Services Engineering (Level 4)
Thermofluids Principles (Level 4)
Engineering Mathematics B (Level 4)
Construction Practice B (Level 4)

Year 2

Internal Environment and Comfort B (Level 4)
Heating and Ventilation Design (Level 4)
Thermofluids Engineering (Level 5)
Electrical Services in Buildings (Level 5)
Refrigeration, Air Conditioning and Heat Pumps Engineering (Level 5)
Design Applications (Level 5)

Part-time study

Year 1

Foundation Engineering Mathematics (Level 4)
Electrical principles (Level 4)
Fundamentals of building Services Engineering (Level 4)
Thermofluids Principles (Level 4)

Year 2

Engineering Mathematics B (Level 4)
Construction Practice B (Level 4)
Internal Environment and Comfort B (Level 4)
Heating and Ventilation Systems (Level 4)

Year 3

Thermofluids Engineering (Level 5)
Electrical Services in Buildings (Level 5)
Refrigeration, Air Conditioning and Heat Pumps Engineering (Level 5)
Design applications (Level 5)

HND Building Services Engineering – **Full time**

	Semester 1		Semester 2	
Level 4	Foundation Engineering Mathematics, compulsory	20	Electrical Principles, Compulsory	20
	Engineering Mathematics B, compulsory	20		
	Construction Practice B, compulsory	20		
	Fundamentals of Building Services Engineering, Compulsory	20	Thermofluids Principles, Compulsory	20
	Internal Environment and Comfort B, Compulsory	20	Heating and Ventilation Design, Compulsory	20
Level 5	Design Applications, Compulsory	20	Thermofluids Engineering, Compulsory	20
	Electrical Services in Buildings, Compulsory	20	Refrigeration, Air Conditioning and Heat Pump Engineering	20

HND Building Services Engineering – **Part time**

	Semester 1		Semester 2	
Year 1	Foundation Engineering Mathematics, compulsory	20	Thermofluids Principle, Compulsory	20
	Fundamentals of Building Services Engineering	20	Electrical Principles, Compulsory	20
Year 2	Internal Environment and Comfort B, Compulsory	20	Heating and Ventilation Design, Compulsory	20
	Engineering Mathematics B, Compulsory	20		
	Construction Practice B, Compulsory	20		
Year 3	Design Applications, Compulsory	20	Refrigeration, Air Conditioning and Heat Pump Engineering, Compulsory	20
	Electrical Services in Buildings, Compulsory	20	Thermofluids Engineering, Compulsory	20

Placements information

Placement opportunities would be announced to students through VL throughout the semester

H. Course Modules

Module Code	Module Title	Level	Semester	Credit value	Assessment	
BEA-S-459	Foundation Engineering Mathematics	S	1	20	Exam 100%	
BEA_4_EMB	Engineering Mathematics B	4	1-2	20	Exam 50%, CW 50%	
BEA-4-452	Electrical principles	4	2	20	Exam 100%	
BEA-4-453	Thermofluids Principles	4	2	20	Exam 100%	
BEA-4-485	Construction Practice B	4	1-2	20	CW 100%	
BEA_4_FBE	Fundamentals of building Services Engineering	4	1	20	CW 100%	
BEA_4_ICB	Internal Environment and Comfort B	4	1	20	Exam 50% CW 50%	
BEA_4_HVD	Heating and Ventilation Design	4	2	20	Exam 50% CW 50%	
BEA-5-461	Thermofluids Engineering	5	2	20	Exam 100%	
BEA-5-462	Refrigeration Air Conditioning and Heat Pumps Engineering	5	2	20	Exam 70% CW 30%	
BEA-5-463	Design application	5	2	20	CW 100%	
BEA-5-466	Electrical Services in Buildings	5	2	20	Exam 70% CW 30%	

I. Timetable information

The course will run one day per week for two years. Timetables will be made available to students when they register.

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

Course related costs

Provide information about other course-related costs (explain what is and what is not included in the tuition fees, e.g., such additional expenses as the cost of books or other learning materials, specialist equipment, uniforms, clothing required for work placements, field trips, bench fees)

Tuition fees/financial support/accommodation and living costs

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

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

Module		AHEP4 Learning Outcome Code																		Year	
		F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	F14	F15	C16	F17	F18	FT	PT
LEVEL S	Foundation Engineering Mathematics	TDA																TDA			
LEVEL 4	Electrical Principles	TDA	TDA		TDA		TDA													YEAR 1	YEAR 1
	Thermofluids Principles	TDA	TDA		TDA		TDA														
	Fundamentals of Building Services Engineering				TDA			TDA						TDA							
	Engineering Mathematics B	TDA																TDA			YEAR 2
	Construction Practice B					TDA			TDA		TDA	TDA				TDA			TDA		
	Internal Environment & Comfort B					TDA							TDA		TDA		TDA				
	Heating & Ventilation Design			TDA			TDA	TDA		TDA				TDA							
LEVEL 5	Electrical Services in Buildings		TDA										TDA	TDA	TDA					YEAR 2	YEAR 3
	Thermofluids Engineering	TDA		TDA			TDA														
	Refrigeration Air Conditioning and Heat Pumps					TDA		TDA					TDA	TDA				TDA			
	Design Applications			TDA		TDA		TDA	TDA			TDA					TDA				

Appendix B: Terminology

(Please review the definitions and add those according to your course and context to help prospective students who may not be familiar with terms used in higher education.)

Some examples are listed below:

accelerated degree	accelerated degrees (also known as two-year degrees) are full bachelor's degrees (undergraduate courses) you can complete in a condensed time.
awarding body	a UK higher education provider (typically a university) with the power to award higher education qualifications such as degrees
bursary	a financial award made to students to support their studies; sometimes used interchangeably with 'scholarship'
collaborative provision	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
compulsory module	a module that students are required to take
contact hours	the time allocated to direct contact between a student and a member of staff through, for example, timetabled lectures, seminars and tutorials
coursework	student work that contributes towards the final result but is not assessed by written examination
current students	students enrolled on a course who have not yet completed their studies or been awarded their qualification
delivery organisation	an organisation that delivers learning opportunities on behalf of a degree-awarding body
end-point assessment	End-point assessment (EPA) tests the knowledge, skills and behaviours that an apprentice has gained during their training. Unique to each standard, EPA demonstrates the competence of an apprentice in their role. Only approved End-Point Assessor Organisations (EPAOs) can carry out assessments as set out in the assessment plan.
extended degree	an extended degree provides a bridging route for students who don't meet the initial entry requirements for the undergraduate degree. The first year provides the necessary knowledge and skills before students begin the degree-level course.
extracurricular	Activities are undertaken by students outside their studies
feedback (on assessment)	advice to students following their completion of a piece of assessed or examined work
formative assessment	a type of assessment designed to help students learn more effectively, progress in their studies and prepare for summative assessment; formative assessment does not contribute to the final mark, grade or class of degree awarded to students
foundation	foundation year programmes are designed to develop skills and subject-specific knowledge to ensure a student can advance to a degree course. They may be offered as stand-alone one-year courses or integrated into degree programmes.

gateway	gateway takes place before an End-Point Assessment (EPA) can start. The employer and LSBU will review their apprentice's knowledge, skills and behaviours to see if they have met the minimum requirements of the apprenticeship set out in the apprenticeship standard and are ready to take the assessment. Usually includes off-the-job training and reviews.
higher education provider	organisations that deliver higher education
independent learning	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
integrated	an integrated master's degree combines undergraduate and postgraduate study. About Apprenticeships, integrated would usually mean that the End-Point Assessment (EPA) is integrated with the academic award
intensity of study	the time taken to complete a part-time course compared to the equivalent full-time version: for example, the half-time study would equate to 0.5 intensity of study
lecture	a presentation or talk on a particular topic; in general lectures involve larger groups of students than seminars and tutorials
material information	information students need to make an informed decision, such as what and where to study
mode of study	different ways of studying, such as full-time, part-time, e-learning or work-based learning
module	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 'unit' to refer to individual modules
national teaching fellowship	a national award for individuals who have made an outstanding impact on student learning and the teaching profession
non-integrated	about Apprenticeships, non-integrated would usually mean that the End-Point Assessment (EPA) is not integrated with the academic award
optional module	a module or course unit that students choose to take
performance (examinations)	a type of examination used in performance-based subjects such as drama and music
pre-registration (HSC only)	a pre-registration course is designed for students who are not already registered with an independent regulator such as the Nursing and Midwifery Council (NMC)
professional body	an organisation that oversees the activities of a particular profession and represents the interests of its members
prospective student	those applying or considering applying for any programme, at any level and employing any mode of study, with a higher education provider

regulated course / regulatory body	a course that is regulated by a regulatory body, which is an organisation recognised by the government as being responsible for the regulation or approval of a particular range of issues and activities
scholarship	a type of bursary that recognises academic achievement and potential, and which is sometimes used interchangeably with 'bursary'
semester	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)
seminar	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
summative assessment	A formal assessment of students' work, contributes to the final result.
term	any of the parts of an academic year that are divided into three or more for purposes of teaching and assessment (in contrast to division into semesters)
top-up degree	A top-up degree is the final year (Level 6) of an undergraduate degree course. It allows students to top-up an existing qualification to a full BA, BSc, or BEng.
total study time/workload	the total time required to study a module, unit, or course, including all class contact, independent learning, revision and assessment
tutorial	one-to-one or small group supervision, feedback or detailed discussion on a particular topic or project
work/study placement	a planned period of experience outside the institution (for example, in a workplace or at another higher education institution) to help students develop skills, knowledge or understanding as part of their course
written examination	a question or set of questions relating to an area of study to which candidates write answers usually (but not always) under timed conditions