EST 1892 LSBU

School of The Built Environment and Architecture

Course Specification

A. Course Information

Final award title(s)	BEng (Hons) Civil Engineering	**Course Code(s)**	Full-time: 191 Part-time: 5383
Intermediate award title(s)	BEng Civil Engineering		
Awarding Institution	London South Bank University		
School	☐ ASC ☐ ACI ☒ BEA ☐ BUS ☐ ENG ☐ HSC ☐ LSS		
Division	Civil and Building Services Engineering		
Delivery site(s) for course(s)	☒ Southwark ☐ Havering ☐Other: MS Teams		
Mode(s) of delivery	☐Full-time ☐Part-time ☒ Both		

Length of course

Mode	Length years	Start - month	Finish - month
Full-time	3	September	July
Full-time (sandwich)	4	September	July
Part-time	5	September	July

Is this course generally suitable for students on a Tier 4 visa?	Please complete the International Office questionnaire Yes No ✓ Students are advised that the structure/nature of the course is suitable for those on a Tier 4 visa, but other factors will be considered before a CAS number is allocated.	
Approval dates:	Course(s) validated	191 Full-time 2005 5383 Part-time 2008 (FT & PT Revalidated May 2021)
	Course specification last updated and signed off	May 2021
Professional, Statutory & Regulatory Body accreditation	Joint Board of Moderators (on behalf of the Engineering Council), representing. • Institution of Civil Engineers (ICE) • Institution of Structural Engineers (IStructE) • Institute of Highway Engineers (IHE) • Chartered Institution of Highways & Transportation (CIHT) • Permanent Way Institution (PWI) **Accredited to 2024 intake**	
Reference points:	Internal	- LSBU Mission Statement and Strategic Plan. - LSBU Core Skills Policy. - LSBU Academic Regulations
	External	- Engineering Council, Accreditation of Higher Education Programmes (Third Edition 2014). - Joint Board of Moderators Guidelines for Developing Degree Programmes, January 2018 (Version 1 – Revision 2)

B. Course Aims, Features and Outcomes	
Distinctive features of this course	This course prepares students for a career as a civil or structural engineer. The course embraces recent industry developments the inclusion of the ECUK UK Standard for Professional Engineering Competence (UK-SPEC) and gives students the opportunity to achieve the professional status of Incorporated or Chartered Engineer after having some practice and/or doing further studies. The curriculum emphasises the development of traditional engineering numerical strengths coupled with an enquiring creative approach as required by employers. Developing the latter approach is sometimes culturally difficult but it is our aim to get students to eventually approach with relish a blank sheet of paper and an ill-defined, uncertain brief to which they can develop a rational solution. The principles of Building Information Modelling, Computer Aided Design and Finite Element Analysis are studied in a thread of modules and applied in group projects. We do seek to educate, rather than to merely train. Because civil engineering is such a broad area, there is a wide range of different specialisms for students to consider after graduating, but our degree gives to our students a solid background and expertise for entering any of them. The full-time mode is timetabled two or three-day-a-week depending on the level and the part-time mode of this course is timetabled on one-day-a-week attendance. The timetable is dynamic and could suffer variations in the number of days per week to attend the course due to technical reasons like availability of lecturers, rooms, hybrid/blended online delivery, etc. This course shares all its modules with the BEng (Hons) Civil Engineering (TAC Apprenticeship) course. The apprenticeship course has additional requirements than this course (see course specifications for the BEng (Hons) Civil Engineering (TAC Apprenticeship) course.
Course Aims	**The BEng (Honours) Civil Engineering aims to:** 1. Produce graduates who are committed to a career in civil engineering with a range of employers in a variety of countries. 2. Produce graduates equipped for postgraduate study and to take up responsible professional employment both in the construction industry and become lifelong learners with an appreciation of the value to society of an education in civil engineering. 3. Produce graduates who have a breadth and depth of knowledge and understanding of the key aspects of civil engineering. 4. Allow graduates to acquire and develop analytical and problem-solving skills, and subject-specific skills. To acquire and develop the ability to evaluate evidence, arguments, and assumptions, to reach sound judgements and communicate effectively. 5. Develop graduates who approach design problems creatively and who have the technical skills to see their ideas through to realisation. 6. Provide opportunities to those in full-time employment to study towards a degree in civil engineering on a part-time basis.

	7. Create an educational environment that may benefit from the practical experience of mature and part-time students. 8. Provide an engineering education, centred within the built environment that recognises the important roles of other professions in the development of the built environment and cultivates interaction and teamwork with these other professionals. 9. Provide graduates with the necessary academic qualification which equips them to enter advanced postgraduate study thus satisfying an approved course of further learning comprising the full educational base for a Chartered Engineer.
Course Outcomes	LSBU defines knowledge and understanding (A1 to A8), intellectual skills (B1 to B10), practical skills (C1 to C7) and transferable skills (D1 to D4). The course outcomes have been developed with reference to the JBM guidelines and the Engineering Council's Accreditation of Higher Engineering Programmes document, Third Edition (2014). The number and letter in brackets e.g. (SM2i) refer to the Learning Outcomes described in Engineering Council Documentation Appendix C. 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. a. Students will have **knowledge and understanding** of: A1: Knowledge and understanding of scientific principles and methodology necessary to underpin their education in their engineering discipline, to enable appreciation of its scientific and engineering context, and to support their understanding of relevant historical, current and future developments and technologies. (SM1b) A2: Knowledge and understanding of mathematical and statistical methods necessary to underpin their education in their engineering discipline and to enable them to apply mathematical and statistical methods, tools, and notations proficiently in the analysis and solution of engineering problems. (SM2b) Ability to apply and integrate knowledge and understanding of other engineering disciplines to support the study of their own engineering discipline. (SM3b) A3: Understanding the need for a high level of professional and ethical conduct in engineering and knowledge of professional codes of conduct. (EL1) A4: Knowledge and understanding of the commercial, economic, and social context of engineering processes. (EL2) A5: Knowledge and understanding of management techniques, including project management, that may be used to achieve engineering objectives. (EL3m) A6: Understanding of the requirement for engineering activities to promote sustainable development and ability to apply quantitative techniques where appropriate. (EL4) A7: Awareness of relevant legal requirements governing engineering activities, including personnel, health & safety, contracts, intellectual property rights, product safety and liability issues. (EL5b) A8: Knowledge and understanding of risk issues, including health & safety, environmental and commercial risk, and risk assessment and risk management techniques. (EL6b)

	b) Students will develop their **intellectual skills** such that they are able to: B1: Understanding of engineering principles and the ability to apply them to analyse key engineering processes. (EA1b) B2: Ability to identify, classify and describe the performance of systems and components using analytical methods and modelling techniques. (EA2) B3 Ability to apply quantitative and computational methods to solve engineering problems and to implement appropriate action. (EA3b) B4: Understanding of, and the ability to apply, an integrated or systems approach to solving engineering problems. (EA4) B5: Understand and evaluate the business, customer, and user needs, including considerations such as the wider engineering context, public perception, and aesthetics. (D1) B6: Investigate and define the problem, identifying any constraints including environmental and sustainability limitations; ethical, health, safety, security, and risk issues; intellectual property; codes of practice and standards. (D2) B7: Work with information that may be incomplete or uncertain and quantify the effect of this on the design. (D3b) B8: Apply advanced problem-solving skills, technical knowledge and understanding, to establish rigorous and creative solutions that are fit for purpose for all aspects of the problem including production, operation, maintenance, and disposal. (D4/G1) B9: Plan and manage the design process, including cost drivers, and evaluate outcomes. (D5) B10: Communicate their work to technical and non-technical audiences. (D6) **c)** Students will acquire and develop **practical skills** such that they are able to: C1: Understanding of contexts in which engineering knowledge can be applied (for example operations and management, application, and development of technology, etc.). (P1) C2: Knowledge of characteristics of materials, equipment, processes, or products. (P2b) C3: Ability to apply relevant practical and laboratory skills. (P3) C4: Understanding the use of technical literature and other information sources. (P4) C5: Knowledge of relevant legal and contractual issues. Understanding of appropriate codes of practice and industry standards (P5 and P6) C6: Awareness of quality issues and their application to continuous improvement. (P7) C7: Ability to work with technical uncertainty. Understanding of, and the ability to work in, different roles within an engineering team. (P8 and P11b). **d)** Students will acquire and develop **transferable skills** such that they are able to: D1: Apply their skills in problem-solving, communication, information retrieval, working with others and the effective use of general IT facilities. (G1) D2: Plan self-learning and improve performance, as the foundation for lifelong learning/CPD. (G2) D3: Plan and carry out a personal programme of work, adjusting where appropriate. (G3d) D4: Exercise initiative and personal responsibility, which may be as a team member or leader. (G4)

C. Teaching Strategy

A Knowledge and understanding

Scientific principles underpinning *Fluid Mechanics, Hydraulics, Materials, Civil Engineering Structures* and *Soil Mechanics* **(outcome A1-SM1b)** are taught at all levels. Engineering Surveying is taught at level 4 only. Teaching methods include lectures, tutorial, laboratory experiments demonstrations, computing, and online sources for self-study.

Understanding of scientific principles is developed in *Structures and Design Modules* and *Projects* work, both individual and group. *Mathematics A* **(outcome A2-SM2b)** is taught at level 4 and more *Advanced Mathematics* at level 5 using lectures, tutorials, computing sessions and online formative assessments. *Mathematics, Statistics and Probability* understanding, and application are developed in several levels 5 and 6 modules.

Students are taught about other engineering disciplines **(outcome A3-SM3b)** in *Construction Practice C* & *Structures and Construction Technology A* at level 4 and in *Structures and Construction Management A* & *BIM and Design* at level 5 as well as being taught in *Highway Engineering A* and developed through *Projects* at level 6.

Students are taught professional and ethical conduct **(outcome A3-EL1b)** in *Construction Practice C* module at level 4 and *Projects* at level 6.

The commercial, economic and social context of engineering **(outcome A4-EL2b)** is introduced in *Construction Technology* and *Management* related modules at all levels as well as *Projects.*

Project management **(outcome A5-EL3b)** is also introduced in *Construction Technology* and *Management* related modules at all levels as well as *Projects.*

Sustainability principles and the ability to apply quantitative techniques **(outcome A6-EL4b)** are taught at level 4 in *Construction Practice C* & *Materials and Geology` A* modules and further taught and developed at levels 5 in *Hydraulics* & *Soil Mechanics* and in level 6 in *Geotechnical Engineering, Environmental Engineering* and *Highway Engineering A* modules.

Legal aspects of civil engineering, including contracts and liabilities **(outcome A7-EL5b)** and risk assessment and management including health and safety **(outcome A8-EL6b)** principles are covered at level 5 and 6 in *Structures and Construction Management A, Materials and Geology A* module and further developed in *Highway Engineering A.* Case studies and examples from practice are combined with the presentation of theoretical principles.

Teaching is through lectures, tutorials and practical sessions. The application of health and safety is through risk assessment, which students are constantly introduced to in laboratory and field works. **(Outcomes A3-EL1b, A8-EL6b)** are developed in research and group design *Project* work at level 6.

Throughout the course students have module guides relevant to each topic of study, giving additional reading material which students are encouraged to use for private study to consolidate the formal learning process, and both broaden and deepen their knowledge and understanding in the subject area. All students are encouraged to become student members of the professional institutions, use their libraries and resources, and attend meetings.
Self-study of the subjects is fundamental for the development of the knowledge and understanding of the modules of this course. Just attending the lessons is not enough.

B Intellectual skills

Students are taught to interpret and assess their results and to understand engineering principles and to apply them to analyse key engineering processes **(outcome B1-EA1b)** in *Fluid Mechanics A* and *Structures and Construction Technology A* at level 4 and in *Hydraulics, Structures and Construction Management A* & *Soil Mechanics* modules of level 5.
The student's skills are further developed in most level 6 modules.

The ability to Identify, classify and describe the performance of systems and components using analytical methods and modelling techniques **(outcome B2-EA2b)** is taught in *Materials and Geology A* at level 4 and is developed later in most modules of level 5 while being taught in *BIM and Design* at the same level 5 as well as being taught in *Structures & design A* and developed through *Geotechnical* and *Environmental Engineering* at level 6.

Students are taught how to apply quantitative and computational methods to solve engineering problems and to implement appropriate action **(outcome B3- EA3b)** in *Engineering Surveying* and *Mathematics A* at level 4 and in later *Design* and *Mathematics* modules of level 5.
At levels 5, in *8/M and Design* module, students are taught to understand and apply, an integrated or systems approach to solving engineering problems **(outcome B4-EA4b).**

Students are taught the necessity to understand end users' needs **(outcome B5-D1b)** in the *Construction Practice C* module and develop this through the group design projects in the same module. This skill is taught and developed further in *BIM and Design* at level 5.

The skill of defining the problem and its various constraints **(outcome B6- D2b)** is taught in *Construction Practice C* and *Materials and Geology A* at level 4 and is developed later in *most modules* of level 5 while being taught and developed *in most modules* of level 6.

The students learn how to deal with uncertainty and incomplete information **(outcome B7-D3b)** in *Design of Elements A* at level 5. This is developed in most *design modules* of levels 5 and 6.

In *Mathematics A,* Advanced Mathematics and *design modules,* they are also taught problem-solving skills **(outcome B8-D4b)** which they develop in solving problems with the complexity of issues in *Group Design Project.*

In *design projects* at each level, students learn how to manage the design process **(outcome B9-D5b)** and to communicate their work **(outcome C6-P7b).** The communication skills are taught in Construction *Practice C* (writing, AutoCAD) and at level 5 in *BIM and Design* module.

(Outcomes D1b-D6b) are developed in research and group design *Project* work at level 6.

C Practical Skills

Students appreciate the context of engineering **(Outcome C1-outcome P1b)** in *Structures and Construction Technology A* at level 4. This is then taught and developed in *Design of Elements A* and most level 6 modules.

Understanding of materials, equipment etc. **(outcome C2-P2b)** and the laboratory practice **(outcome C3-P3b)** are largely taught and developed at levels 4 and 5, in technical and computing laboratories and in lectures and tutorials.

In their study, students are taught to use technical literature related to a specific discipline **(outcome C4-P4b).** This knowledge is developed in project work at level 6.

Relevant legal and contractual issues **(outcome C5-P5b)** are taught in *Structures and Construction Management A* at level Sand developed further in *BIM and Design* at the same level as well as in *Projects* at level 6.

Modules covering *engineering design* cover the use of codes of practice (Eurocode) **(outcome C5-P6b)**

Quality issues (**outcome C6-P7b)** are introduced in *Materials and Geology A* at level 4, in relation to the laboratory experiments. The quality awareness is developed in *Hydraulics* and *Soil Mechanics* of level 5, while at level 6, it is developed in *Structures and Design A, Geotechnical and Environmental Engineering* and *Group Design Project.*

Students' ability to work with technical uncertainty **(outcome C7-P8b)** is developed in *all modules* of level 6 while it is also taught in research methodologies lectures for the individual *project* at the same level. Group working skills **(outcome C7-P9b)** are taught in *Practice Skills* and developed in *Highway Engineering A* and *Group Design Project.*

D Transferable Skills

In most level 4 modules, students acquire their **(outcome G1b)** related skills of communication in *Construction Practice C,* problem-solving in *Mathematics A, Fluid Mechanics A, Structures and Construction Technology A,* computing in *Practice Skills, Mechanics A,* information retrieval in *Materials and Geology A* and *Engineering Surveying* and working with others in Construction *Practice C.* These skills are developed in level 5 and 6 modules. Self-learning and personal development **(outcome G2b)** are taught in Construction *Practice C* and developed in the *final year projects.* The ability to carry out a personal programme of work **(outcome G3b)** is taught in seminars in *the Research project.* Exercising personal responsibility **(outcome G4b)** is part of *Construction Practice C* and developed in *Highway Engineering A,* and in *Group Design Project.*

D. Assessments

A Knowledge and understanding

The understanding of the knowledge base of scientific principles (SM1b) is assessed through *written examinations* and *in-class or at home online tests* at levels 4, 5 and 6, in the disciplines of Fluid Mechanics, Materials, Structures, Soil Mechanics, Hydraulics, Geotechnical and Environmental Engineering. *Coursework* is also used, comprising *online tests, laboratory, computing, and design reports.* Mathematics (SM2b) is assessed at levels 4 and 5 through *phase tests* and *written examinations.* Students are assessed in their understanding of other engineering disciplines (outcome SM3b) in *Construction Practice C* through *reports* and *individual and group projects* & Structures and Construction Technology through *design exercises* at level 4 and in Structures and Construction Management A through *reports and essays* & BIM and Design through *group projects* at level 5 as well as being assessed in Highway Engineering A through *design projects* at level 6.

Professional and ethical conduct (EL1b) is assessed through *projects* at level 6. Financial and social context (EL2b) is assessed in Structures and Construction Technology through *design exercises* and *coursework* at level 4 and through *projects* at level 6. Legal aspects (EL5b) are assessed in Structures and Construction Management A at level 5, through *coursework.*

Knowledge of management (EL3b) and health and safety principles (EL6b) is assessed in Structures and Construction Management A module at level 5, again through *written assignments.* The understanding of sustainability (EL4b) is assessed *in laboratory reports* in *Materials and Geology A* and *group project work* in Construction Practice module at level 4 as well as in *Hydraulics* and *Soil Mechanics* modules through *laboratory reports* and *unseen written examinations* at level 5. At level 6, the understanding of approaches for analysing sustainability is assessed through *unseen written examinations* in Environmental Engineering and Geotechnical Engineering, and it makes a part of the *group and individual project* submission, all at level 6.

B Intellectual Skills

The interpretation of results (EA1b) is assessed in *laboratory reports* where results from two or more different approaches are compared and recommendation given. This occurs in Structures, Fluid Mechanics A, Hydraulics, Materials and Geology A, Highways Engineering A and Soil Mechanics modules and in the *project work.* The ability to use analytical methods and modelling techniques (EA2b) is assessed through *tests* and *reports* in *Materials and Geology A* at level 4 and in later analysis and design modules as *design exercises* and *projects.* How to apply quantitative and computational methods (EA3b) is assessed in Mathematics A in the form of *tests* and *unseen written examinations* and in Engineering Surveying A *coursework* at level 4 and in *coursework* and *tests* in later design modules, where based on the results the students recommend an action. *Group Design Project* assesses a variety of skills and knowledge combined to solve a complex engineering problem in an integrated and systematic approach (EA4b).

Identifying end users' needs (D1b) is assessed in *project work* in the *Construction Practice C* module, in BIM and Design (aesthetics) and in *group design project.* The skill of defining the problem (D2b) is assessed in most modules, starting from level 4. Statistics and probability are part of the *tests* and *exams* in Mathematics A and advanced Mathematics, but general dealing with uncertainty (D3b) is assessed in *design coursework* and *tests* at levels 5 and 6. Problem-solving skills (D4b) and their application to multi-disciplinary problems are assessed through *group design project.* The management of the design process (D5b) is assessed in *coursework* in level 4, 5

and 6 management modules. The communication skills (D6b) are assessed in *Construction Practice C (academic report writing,* AutoCAD *tests),* at level 5 in BIM and Design module, as a *group design project* as well as *group design projects* at level 6.

C Practical Skills

Structures and Construction Technology A *coursework* combines real buildings and beam structural analysis. Further context awareness (P1b) is assessed in the module Design of Elements A *coursework* and *unseen written examinations,* and in the *coursework* of most level 6 modules. Understanding of materials, equipment etc. (P2b) and the laboratory demonstrations (P3b) are assessed at levels 4 and 5, in *technical* and *computing laboratory reports.* The use of technical literature related to a specific discipline (P4b) is assessed in *coursework* and *design exercises* in BIM and Design, Structures and Design A and other modules. The P1b-P5b outcomes are also assessed in final year *Research Project.* Relevant legal and contractual issues (P5b) are assessed through *reports* and *coursework* in Structures and Construction.
Management A. The use of codes of practice (Eurocode) (P6b) forms a part of *in-class tests* in design modules at levels 5 and 6. The appreciation of quality issues (P7b) such as the quality of results is included in *lab reports* in *Materials and Geology A* at level 4 and Soil Mechanics at level 5. The quality awareness is assessed also in Hydraulics and Structures and Design A as in *coursework* and *reports* and in *Group Design Project* at level 6. Students' ability to work with technical uncertainty (P5b) is assessed at level 6 in Geotechnical and Environmental Engineering, Highway Engineering A as *coursework* and *group design exercises* as well as the *Individual project.* Group working skills (P9b) are assessed in *coursework, group design exercises* and *field work* for Highway Engineering A and *Group Design Project.*

D Transferable Skills

(G1b) is tested in a variety of ways. Communication in *Construction Practice C* is assessed in *a project report,* problem-solving in Mathematics A, Fluid Mechanics A, Structures and Construction Technology A in *tests* and *exams,* computing of *Construction Practice C* and Fluid Mechanics A is assessing it through *in-class tests,* information retrieval in *Materials and Geology A* as well as Surveying, in *laboratory reports* and working with others in *Construction Practice C* in *group project reports.* These skills are part of the assessment in most level 5 and 6 modules. Self-learning and personal development (G2b) are assessed in *Construction Practice C* through *coursework* and in the final year *projects.* The ability to carry out a personal programme of work (G3b) is a part of the
Research project assessment. Exercising personal responsibility (G4b) is assessed in *Construction Practice C*, Highway Engineering A in *group design exercises,* and assessed in *Group Design Projects.*

E Academic Regulations

The University's Academic Regulations apply for this course. Any course specific protocols will be identified here.
http://www.lsbu.ac.uk/__data/assets/pdf_file/0008/84347/academic-regulations.pdf
The lowest mark in an Assessment that can be compensated is 30%.

F. Entry Requirements

Pre-requisites for this course

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

Year 1 entry (full-time and sandwich only)

Applicants for admission to the course should normally possess one of the following qualifications:

GCSE passes in six subjects (grade C or above), including English Language and Physics. The University will accept a pass in the Key Skills qualification at Level 2 in place of GCSE English Language. Additionally, applicants must possess one of the following:

- A-Level BBC **or**
- BTEC National Diploma DDM **or**
- Access to Engineering qualifications with 15 Distinctions and 30 Merits including Maths and Physical Science credit, **or**
- Equivalent level 3 qualifications worth 128 UCAS points
- Level 3 qualifications must include Maths and Physics.
- Applicants must hold 5 GCSEs A-C including Maths and English or equivalent (reformed GCSEs grade 4 or above).
- We welcome qualifications from around the world. English language qualifications for international students: IELTS score of 6.0 **or** Cambridge Proficiency or Advanced Grade C.

Year 2 entry (full-time, sandwich and part-time)

• Students with an HNC, HND or BSc in Civil Engineering from CBSE, LSBU will need six merit passes (55 marks of above) at Level 4 to be accepted at year 2, level 5, full-time course or at year 3, level 5, part-time course.

• Students with an HNC, HND, BEng, BSc or any other degree in other fields different to Civil Engineering from LSBU will need six merit passes (55 marks of above) at Level 4 for modules that cover all the learning outcomes of the BEng (Hons) Civil Engineering at LSBU. In some cases, could be necessary to take modules at level 4 at the same time the student start the BEng course to cover the learning outcomes up to a maximum of two modules at level 4 (40 credits).

• Any other student with an HNC, HND, BSc or qualification will be deemed to be the equivalent of the above with agreement with the course director.

Credit for prior learning (APEL)

Applicants may be able to use their learning from work 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. The course director will be consulted before approving the access.

A note about progression:

Progression from Year 1 to Year 2 or Year 2 to Year 3 | Full-time course
To progress a student must have studied 120 credits at Year 1 (Level 4) or Year 2 (Level 5) and passed 120 credits at Year 1 (Level 4) or Year 2 (Level 5).

Students can progress carrying over a maximum of 40 credits from one year to another.

	Only one module can be compensated if the student has 30 marks or more in each component (CW and Exam) during the whole course and the compensation is considered after the fourth attempt. The Individual research project module cannot be compensated due to JBM requirements. **Progression | part-time course** To progress from Year 1 to Year 2 and Year 2 to Year 3, a student must have: Studied 60 credits at Year 1 or Year 2 (Level 4) and passed at least 60 credits at Year 1 or Year 2 (Level 4). To progress from Year 3 to Year 4 or Year 4 to Year 5, a student must have: Studied 80 credits at Year 3 (Level 5) or Year 4 (Levels 5/6) and passed at least 60 credits at Year 3 or Year 4 (Levels 5/6). Students can progress carrying over a maximum of 20 credits from one year to another. ***Only one module can be compensated if the student has 30 marks or more in each component of the module (CW and Exam) during the whole course. The Individual research project module cannot be compensated due to JBM requirements.***

G. Course Structure

Full-time Course Overview

The Course is delivered on a semester pattern; each semester is 15 weeks in duration.
Students study six modules at each of Level 4, Level 5, and Level 6.

Year 1

Construction Practice C	(L4)	Fluid Mechanics A	(L4)
Materials and Geology A	(L4)	Structures and Construction Technology A	(L4)
Mathematics A	(L4)	Engineering Surveying	(L4)

Year 2

BIM and Design	(L5)	Hydraulics	(L5)
Design of Elements A	(L5)	Advanced Mathematics	(L5)
Structures and Con Man A	(L5)	Soil Mechanics	(L5)

Year 3

Structures and Design A	(L6)	Group Design Project	(L6)
Geotechnical Engineering	(L6)	Individual Research Project A	(L6)
Highway Engineering A	(L6)	Environmental Engineering and PD	(L6)

Year	Semester 1	Credits	Semester 2	Credits	Level	
1	Mathematics A			20	4	Core
	Construction Practice C			20	4	Core
	Materials and Geology C			20	4	Core
	Structures and Construction Technology A			20	4	Core
	Fluid Mechanics A			20	4	Core
	Engineering Surveying			20	4	Core
2	Hydraulics	20	Design of Elements A	20	5	Core
	Structures and Construction Management A			20	5	Core
	BIM and Design			20	5	Core
	Advanced Mathematics	20	Soil Mechanics	20	5	Core
3	Highway Engineering A			20	6	Core
	Structures and Design A			20	6	Core
	Group Design Project A			20	6	Core
	Geotechnical Engineering	20	Environmental Engineering and Professional Development	20	6	Core
	Individual Research Project A			20	6	Core

Part-time Course Overview

The Course is delivered on a semester pattern; each semester is 15 weeks in duration.
Students study six modules at each of Level 4, Level 5, and Level 6.

Year 1		**Year 2**	
Construction Practice C	(L4)	Fluid Mechanics A	(L4)
Materials and Geology A	(L4)	Structures and Construction Technology A	(L4)
Mathematics A	(L4)	Engineering Surveying	(L4)
Year 3		**Year 4**	
BIM and Design	(L5)	Soil Mechanics	(L5)
Design of Elements A	(L5)	Advanced Mathematics	(L5)
Structures and Con Man A	(L5)	Structures and Design A	(L6)
Hydraulics	(L5)	Group Design Project	(L6)

Year 5

Environmental Engineering and Professional Development	(L6)
Geotechnical Engineering	(L6)
Highway Engineering A	(L6)
Individual Research Project A	(L6)

Year	Semester 1	Credits	Semester 2	Credits	Level	
1	Mathematics A			20	4	Core
	Construction Practice C			20	4	Core
	Materials and Geology C			20	4	Core
2	Structures and Construction Technology A			20	4	Core
	Fluid Mechanics A			20	4	Core
	Engineering Surveying			20	4	Core
3	Hydraulics	20	Design of Elements A	20	5	Core
	Structures and Construction Management A			20	5	Core
	BIM and Design			20	5	Core
4	Advanced Mathematics	20	Soil Mechanics	20	5	Core
	Structures and Design A			20	6	Core
	Group Design Project A			20	6	Core
5	Highway Engineering A			20	6	Core
	Geotechnical Engineering	20	Environmental Engineering and Professional Development	20	6	Core
	Individual Research Project A			20	6	Core

H. Course Modules

M. Code	Module Title	Level	Semester	Credit value	CW/Exam Weight
BEA_4_529	Materials and Geology A	4	1 – 2	20	50/50
BEA_4_486	Construction Practice C	4	1 – 2	20	100/0
BEA_4_404	Mathematics A	4	1 – 2	20	50/50
BEA_4_406	Engineering Surveying	4	1 – 2	20	50/50
BEA_4_512	Fluid Mechanics A	4	1 – 2	20	50/50
BEA_4_405	Structures and Construction Technology A	4	1 – 2	20	50/50
BEA_5_410	Hydraulics	5	1	20	30/70
BEA_5_413	Design of Elements A	5	2	20	30/70
BEA_5_414	BIM and Design	5	1 - 2	20	100/0
BEA_5_411	Structures and Construction Management A	5	1 – 2	20	50/50
BEA_5_415	Advanced Mathematics	5	1	20	30/70
BEA_5_412	Soil Mechanics	5	2	20	30/70
BEA_6_420	Structures and Design A	6	1 – 2	20	30/70
BEA_6_424	Group Design Project A	6	1 – 2	20	100/0
	Industrial placement (optional)				
BEA_6_482	Highway Engineering A	6	1	20	50/50
BEA_6_421	Geotechnical Engineering	6	1	20	30/70
BEA_6_422	Environ. Eng. and Professional Development	6	2	20	30/70
BEA_6_425	Individual Research Project A	6	1 – 2	20	100/0

All the modules are core modules.

J Costs and Financial Support

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

http://www.lsbu.ac.uk/courses/undergraduate/fees-and-funding or
http://www.lsbu.ac.uk/courses/postgraduate/fees-and-funding

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

https://my.lsbu.ac.uk/my/portal/Student-Life-Centre/International-Students/Starting-at-LSBU/#expenses For Materials and Geology Module, students will need to purchase safety boots which cost around **£20**. A small cost in the area of up to **£10** can be anticipated (poster, any printed chapter drafts for supervisor and logbook). A USB flash drive will also be submitted but the student can collect it back from the supervisor at the end of the semester Constructionarium in Bircham Newton will cost a maximum of **£500** per students, this includes transportation, food and accommodation for 5 days (this trip is recommended but **optional**).

List of Appendices

Appendix A: Curriculum Map

This map provides a design aid to help course teams identify where course outcomes are being taught (T), developed (D), 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 own learning and development as the course progresses.

Units			Programme outcomes LSBU							
Level	**Title**	**Code**	**A1 SM1b**	**A2 SM2b SM3b**	**A3 EL1**	**A4 EL2**	**A5 EL3b**	**A6 EL4**	**A7 EL5b**	**A8 EL6b**
4	Fluid Mechanics A	BEA_4_512	**TD**	**TD**						
	Construction Practice C	BEA_4_486	**TD**		**TD**			**TD**		**TD**
	Materials and Geology A	BEA_4_529	**TD**					**TDA**		**TDA**
	Mathematics A	BEA_4_404		**TD**						
	Structures and Construction Technology A	BEA_4_405	**TDA**	**TDA**		**TD**	**TD**	**TD**		
	Engineering Surveying	BEA_4_406	**TD**							
5	Hydraulics	BEA_5_410	**TDA**					**TD**		
	Structures and Construction Management A	BEA_5_411	**TD**	**D**		**TDA**	**TDA**		**TDA**	**D**
	Soil Mechanics	BEA_5_412	**TDA**	**D**				**D**		**TDA**
	Design of Elements A	BEA_5_413	**TD**	**D**	**TDA**		**D**			
	BIM and Design	BEA_5_414	**TD**	**TDA**				**TDA**		**TD**
	Advanced Mathematics	BEA_5_415		**TDA**						
6	Individual Research Project A	BEA_6_425	**D**	**D**	**TDA**	**D**	**D**	**D**	**D**	**D**
	Group Design Project A	BEA_6_424	**D**		**D**	**TDA**	**D**	**D**		**D**
	Structures and Design A	BEA_6_420	**TDA**	**D**				**T**		
	Geotechnical Engineering	BEA_6_421	**TD**	**D**				**TDA**		
	Environ. Eng. and Professional Development	BEA_6_422	**TD**					**TD**		
	Highway Engineering A	BEA_6_482	**TD**					**TD**		**TDA**

T: taught, D: developed and A: assessed

Units			Programme outcomes LSBU									
Level	Title	Code	B1 EA1b	B2 EA2	B3 EA3b	B4 EA4	B5 D1	B6 D2	B7 D3b	B8 D4	B9 D5	B10 D6
4	Fluid Mechanics A	BEA_4_512	TD		TD							
	Construction Practice C	BEA_4_486					TDA	TD	TDA		TD	TD
	Materials and Geology A	BEA_4_529		TD	T			TD				
	Mathematics A	BEA_4_404			TD			TD				
	Structures and Construction Technology A	BEA_4_405	TDA					TD			TD	
	Engineering Surveying	BEA_4_406			TD					TD		TD
5	Hydraulics	BEA_5_410	TD		TDA							
	Structures and Construction Management A	BEA_5_411	TD	D				D			TDA	
	Soil Mechanics	BEA_5_412	TD									TD
	Design of Elements A	BEA_5_413		TD	TDA			D	TDA	T		
	BIM and Design	BEA_5_414		TDA	TD	TD	TDA	D	D	TD	D	DA
	Advanced Mathematics	BEA_5_415		D	TD					TD		
6	Individual Research Project A	BEA_6_425			D		D	DA			A	D
	Group Design Project A	BEA_6_424				DA	D	D	D	TD	D	DA
	Structures and Design A	BEA_6_420	D	TDA	D			TD	D	TDA		
	Geotechnical Engineering	BEA_6_421	TDA	D				TD	D			
	Environ. Eng. and Professional Development	BEA_6_422	TD		TDA			TD				
	Highway Engineering A	BEA_6_482			TD			TDA	TDA	TD		TD

T: taught, D: developed and A: assessed

Units			Programme outcomes LSBU										
Level	Title	Code	C1 P1	C2 P2b	C3 P3	C4 P4	C5 P5 P6	C6 P7	C7 P8 P11b	D1 G1	D2 G2	D3 G3	D4 G4
4	Fluid Mechanics A	BEA_4_512	TD	TD	TDA					TD			TD
	Construction Practice C	BEA_4_486		TD					TD	T	TD		TA
	Materials and Geology	BEA_4_529		TDA	TDA	TD		TD		T			
	Mathematics A	BEA_4_404								T			
	Structures and Construction Technology A	BEA_4_405	TD							TDA			
	Engineering Surveying	BEA_4_406	TDA		TD			TDA		TA		TD	
5	Hydraulics	BEA_5_410	TD		TDA			D		D			
	Structures and Construction Management A	BEA_5_411					TDA	T	TDA	D			
	Soil Mechanics	BEA_5_412		TDA	TDA	D	TD			D			D
	Design of Elements A	BEA_5_413	TD			TD	TDA		TD	D			D
	BIM and Design	BEA_5_414		D		TD	D			TD			
	Advanced Mathematics	BEA_5_415								TDA			
6	Individual Research Project A	BEA_6_425		D	D	D	D	D	D	D	D	DA	D
	Group Design Project A	BEA_6_424	D	D			D	TD	DA	D			TDA
	Structures and Design A	BEA_6_420				D	TDA	D	D	D			
	Geotechnical Engineering	BEA_6_421	D				TDA	TD	DA	D			
	Environ. Eng. and Professional Development	BEA_6_422	TDA			TDA				D	TDA		
	Highway Engineering A	BEA_6_482	D	D	D		TDA		DA	D			D

T: taught, D: developed and A: assessed

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 4, Level 5, and Level 6
1 Supporting the development and recognition of skills through the personal tutor system.	The personal tutor of a specific group of students (to be defined every year for the new students) is the first person to contact by the students when they have an issue apart from the academic ones. 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. 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.
2 Supporting the development and recognition of skills in academic modules/modules.	All modules are structured so that, in total over the three years of study, the combination of coursework introduces and develops the technical skills at undergraduate 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. Assessed coursework, in stages, provides the feedback for the consolidation and improvement of these academic skills.
3 Supporting the development and recognition of skills through purpose designed modules/modules.	The main technical skills required for an undergraduate civil engineering course are covered in all the taught core modules over the three years of the course. In particular, the application of design and analyses skills runs throughout the course in the subjects of Structures, Hydraulics, Geotechnics and Mathematics.
4 Supporting the development and recognition of skills through research projects and dissertations work.	The Project module covers the literature gathering and review, referencing techniques, technical writing, results presentation, and research methodologies. The LSBU Librarian (Engineering Section) demonstrates the in-house facilities available for off-line and online searches for papers, journals, and articles. The Project module is based on an individual work undertaken over a period of nine months. A student meets with the supervisor on a term-time weekly session of about fifteen minutes to discuss and monitor progress.
5 Supporting the development and recognition of career management skills.	An academic staff member, who is the Liaison Officer for the Institution of Civil Engineers and The Institution of Structural Engineers, briefs the students on the benefits of the student membership of both the institutions. The local South East branch of the Institution of Civil Engineers visits the students on site and briefs them about the activities and the benefits of the membership of the local activities, and routes to Chartered Engineering.

	Students are encouraged to use the LSBU Careers Office for CV preparation, interview skills and job vacancies.
6 Supporting the development and recognition of career management skills through work placements or work experience.	Students are encouraged to **take** a sandwich year placement after Year 2 of study.
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. All the activities that require gathering students could be affected by government restriction due to covid-19 but the learning outcomes will be achieved anyway with alternative activities like virtual visits.
8 Supporting the development of the skills and attitudes as a basis for continuing professional development.	Notices of lectures and presentations at the Institution of Civil Engineers and The Institution of Structural 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.	Weekly meetings for the Project between the student and the supervisor. Written and/or verbal feedback on assessed coursework.

Appendix C: Learning Outcomes
Correlation between JMB and LSBU codes on Learning Outcomes

JMB Guidelines January 2018			Course Outcomes LSBU	
Science and Mathematics (SM)	SM1b	Knowledge and understanding of scientific principles and methodology necessary to underpin their education in their engineering discipline, to enable appreciation of its scientific and engineering context, and to support their understanding of relevant historical, current, and future developments and technologies.	A1	**Knowledge and Understanding**
	SM2b	Knowledge and understanding of mathematical and statistical methods necessary to underpin their education in their engineering discipline and to enable them to apply mathematical and statistical methods, tools, and notations proficiently in the analysis and solution of engineering problems.	A2	
	SM3b	Ability to apply and integrate knowledge and understanding of other engineering disciplines to support the study of their own engineering discipline		
Engineering and Analysis (EA)	EA1b	Understanding of engineering principles and the ability to apply them to analyse key engineering processes.	B1	**Intellectual Skills**
	EA2	Ability to identify, classify and describe the performance of systems and components using analytical methods and modelling techniques.	B2	
	EA3b	Ability to apply quantitative and computational methods to solve engineering problems and to implement appropriate action.	B3	
	EA4	Understanding of, and the ability to apply, an integrated or systems approach to solving engineering problems.	B4	
Design (D)	D1	Understand and evaluate the business, customer, and user needs, including considerations such as the wider engineering context, public perception, and aesthetics.	B5	
	D2	Investigate and define the problem, identifying any constraints including environmental and sustainability limitations; ethical, health, safety, security, and risk issues; intellectual property; codes of practice and standards.	B6	
	D3b	Work with information that may be incomplete or uncertain and quantify the effect of this on the design.	B7	
	D4	Apply advanced problem-solving skills, technical knowledge and understanding, to establish rigorous and creative solutions that are fit for purpose for all aspects of the problem including production, operation, maintenance, and disposal.	B8	
	D5	Plan and manage the design process, including cost drivers, and evaluate outcomes.	B9	
	D6	Communicate their work to technical and non-technical audiences.	B10	

JMB Guidelines January 2018			Course Outcomes LSBU	
Economic, legal, social, ethical, and environmental context (EL)	EL1	Understanding the need for a high level of professional and ethical conduct in engineering and a knowledge of professional codes of conduct	A3	**Knowledge and Understanding**
	EL2	Knowledge and understanding of the commercial, economic, and social context of engineering processes.	A4	
	EL3b	Knowledge and understanding of management techniques, including project management, that may be used to achieve engineering objectives.	A5	
	EL4	Understanding the requirement for engineering activities to promote sustainable development and the ability to apply quantitative techniques where appropriate	A6	
	EL5b	Awareness of relevant legal requirements governing engineering activities, including personnel, health & safety, contracts, intellectual property rights, product safety and liability issues.	A7	
	EL6b	Knowledge and understanding of risk issues, including health & safety, environmental and commercial risk, and risk assessment and risk management techniques.	A8	
Engineering practice (P)	P1	Understanding of contexts in which engineering knowledge can be applied (for example operations and management, application, and development of technology, etc.)	C1	**Practical Skills**
	P2b	Knowledge of characteristics of materials, equipment, processes or products.	C2	
	P3	Ability to apply relevant practical and laboratory skills.	C3	
	P4	Understanding the use of technical literature and other information sources	C4	
	P5	Knowledge of relevant legal and contractual issues	C5	
	P6	Understanding of appropriate codes of practice and industry standards	C5	
	P7	Awareness of quality issues and their application to continuous improvement	C6	
	P8	Ability to work with technical uncertainty.	C7	
	P11b	Understanding of, and the ability to work in, different roles within an engineering team.	C7	
Additional general skills (G)	G1	Apply their skills in problem-solving, communication, information retrieval, working with others and the effective use of general IT facilities.	D1	**Transferable Skills**
	G2	Plan self-learning and improve performance, as the foundation for lifelong learning/CPD	D2	
	G3b	Plan and carry out a personal programme of work, adjusting where appropriate.	D3	
	G4	Exercise initiative and personal responsibility, which may be as a team member or leader.	D4	

Appendix D: Educational Framework

This appendix to the course specification document enables course teams to evidence how their courses meet minimum expectations, at what level where appropriate, as the basis for embedding the Educational Framework in all undergraduate provision at LSBU.

The dimension of the Educational Framework	Minimum expectations and rationale	How this is achieved in the course
Curricula informed by employer and industry need	Outcomes focus and professional/employer links. All LSBU courses will evidence the involvement of external stakeholders in the curriculum design process, as well as plan for the participation of employers and/or alumni through guest lectures or Q&A sessions, employer panels, employer-generated case studies or other input of expertise into the delivery of the course, provide students with access to current workplace examples and role models. Students should have access to employers and/or alumni in at least one module at level 4.	The curriculum design is informed by the JBM and the Industrial Advisory Panel at LSBU. Teaching staff on the course are LSBU staff.
Embedded learning development	Support for transition and academic preparedness At least two modules at level 4 should include embedded learning development in the curriculum to support student understanding of, and familiarity with, disciplinary ways of thinking and practising (e.g., analytical thinking, academic writing, critical reading, reflection). Where possible, learning development will be normally integrated into content modules rather than as standalone modules. Other level 4 modules should reference and reinforce the learning development to aid in the transfer of learning.	These expectations are achieved in the Construction Practice C module in which academic writing is introduced and, in the Materials, and Geology A module where the behaviour of materials is introduced and linked to the performance of structures, which is an introduction to analytical thinking.
High impact pedagogies	Group-based learning experiences The capacity to work effectively in teams enhances learning through working with peers and develops student outcomes, including communication, networking, and respect for diversity of perspectives relevant to **professionalism** and **inclusivity**. At least one module at level 4 should include an opportunity for group working. Group-based learning can also be linked to assessment at level 4 if appropriate. Consideration should be given to how students are allocated to groups to foster an experience of diverse perspectives and values.	There is a Group Project in Construction Practice C. Due to the nature of the scheme, group-based learning is also encouraged in topics such as Mathematics. All modules at all level concerning labs and projects are positively impacting on the experience
Inclusive teaching, learning and assessment	Accessible materials, resources, and activities All course materials and resources, including course guides, PowerPoint presentations, handouts and Moodle should be provided in an accessible format. For example, font type and size, layout, and colour as well as captioning or transcripts for audio-visual materials. Consideration should also be given to	Students work in diverse groups in labs and projects. Inclusion is guaranteed with the mix of different cohorts during the lectures. Site visits, a virtual field trips and labs demonstrations

	accessibility and the availability of alternative formats for reading lists.	are set for students to attend.
Assessment *for* learning	<u>Assessment and feedback to support attainment, progression, and retention.</u> Assessment is recognised as a critical point for at-risk students as well as integral to the learning of all students. Formative feedback is essential during the transition to university. All first semester modules at level 4 should include a formative or low-stakes summative assessment (e.g., low weighted in outcome for the module) to provide an early opportunity for students to check progress and receive prompt and useable feedback that can feed-forward into future learning and assessment. Assessment and feedback communicate high expectations and develops a commitment to **excellence**.	Short in-class formative tests are used to check the progress of the students.
High impact pedagogies	<u>Research and enquiry experiences</u> Opportunities for students to undertake small-scale independent enquiry enable students to understand how knowledge is generated and tested in the discipline as well as prepare them to engage in enquiry as a highly sought after the outcome of university study. In preparation for an undergraduate dissertation at level 6, courses should provide opportunities for students to develop research skills at level 4 and 5 and should engage with open-ended problems with appropriate support. Research opportunities should build student autonomy and are likely to encourage **creativity** and problem-solving. Dissemination of student research outcomes, for example via posters, presentations, and reports with peer review, should also be considered.	At all levels, there are opportunities for the learners to get ready to undertake their individual research project at the end of the degree.
Curricula informed by employer and industry need / Assessment *for* learning	<u>Authentic learning and assessment tasks</u> Live briefs, projects or equivalent authentic workplace learning experiences and/or assessments enable students, for example, to engage with external clients, develop their understanding through situated and experiential learning in real or simulated workplace contexts and deliver outputs to an agreed specification and deadline. Engagement with live briefs creates the opportunity for the development of student outcomes including **excellence**, **professionalism**, **integrity,** and **creativity**. A live brief is likely to develop research and enquiry skills and can be linked to assessment if appropriate.	The group project introduces the students to work on a live brief.
Inclusive teaching, learning and assessment	<u>Course content and teaching methods acknowledge the diversity of the student cohort.</u> An inclusive curriculum incorporates images, examples, case studies and other resources from a	This diversity is guaranteed with a successful mix of full-time, part-time and apprenticeship students

	broad range of cultural and social views reflecting the diversity of the student cohort in terms of, for example, gender, ethnicity, sexuality, religious belief, socio-economic background etc. This commitment to **inclusivity** enables students to recognise themselves and their experiences in the curriculum as well as a foster understanding of other viewpoints and identities.	where the lecturers encourage the learners to share their knowledge.
Curricula informed by employer and industry need	<u>Work-based learning</u> Opportunities for learning that is relevant to future employment or undertaken in a workplace setting are fundamental to developing student applied knowledge as well as developing work-relevant student outcomes such as networking, **professionalism,** and **integrity**. Work-based learning can take the form of work experience, internships, or placements as well as, for example, case studies, simulations, and role-play in industry-standards settings as relevant to the course. Work-based learning can be linked to assessment if appropriate.	As noted above students on the course are part-time and working in the construction industry where they will have many opportunities to network and undertake work-based learning.
Embedded learning development	<u>Writing in the disciplines: Alternative formats</u> The development of student awareness, understanding and mastery of the specific thinking and communication practices in the discipline is fundamental to applied subject knowledge. This involves explicitly defining the features of disciplinary thinking and practices, finding opportunities to scaffold student attempts to adopt these ways of thinking and practising and providing opportunities to receive formative feedback on this. A writing in the disciplines approach recognises that writing is not a discrete representation of knowledge but integral to the process of knowing and understanding in the discipline. It is expected that assessment utilises formats that are recognisable and applicable to those working in the profession. For example, project report, presentation, poster, lab or field report, journal or professional article, position paper, case report, handbook, exhibition guide.	Student writing skills are taught and assessed at all levels. These skills are needed to produce the lab reports, and group project report that form part of the module assessments.
High impact pedagogies	<u>Multi-disciplinary, interdisciplinary or interprofessional group-based learning experiences</u> Building on the experience of a group working at level 4, at level 5 students should be provided with the opportunity to work and manage more complex tasks in groups that work across traditional disciplinary and professional boundaries and reflecting interprofessional work-place settings. Learning in multi- or interdisciplinary groups creates the opportunity for the development of student outcomes including **inclusivity**, communication, and networking.	Apprentices are introduced to these expectations at all levels and mainly in the Group Projects.

Assessment *for* learning	<u>Variation of assessment</u> An inclusive approach to curriculum recognises diversity and seeks to create a learning environment that enables equal opportunities for learning for all students and does not give those with a particular prior qualification (e.g., A-level or BTEC) an advantage or disadvantage. A holistic assessment strategy should provide opportunities for all students to be able to demonstrate achievement of learning outcomes in different ways throughout the course. This may be by offering alternate assessment tasks at the same assessment point, for example, either a written or oral assessment, or by offering a range of different assessment tasks across the curriculum.	There is a range of assessments on the course including as follows: Examinations and in-class tests. Laboratory Reports. Presentations. Group Project and Group Surveying Project.
Curricula informed by employer and industry need	<u>Career management skills</u> Courses should provide support for the development of career management skills that enable the student to be familiar with and understand relevant industries or professions, be able to build on work-related learning opportunities, understand the role of self-appraisal and planning for lifelong learning in career development, develop resilience and manage the career-building process. This should be designed to inform the development of **excellence** and **professionalism**.	As noted above the course is informed by the JBM and the Industrial Advisory Panel at LSBU.
Curricula informed by employer and industry need / Assessment *for* learning / High impact pedagogies	<u>Capstone project/dissertation</u> The level 6 project or dissertation is a critical point for the integration and synthesis of knowledge and skills from across the course. It also provides an important transition into employment if the assessment is authentic, industry-facing or client-driven. It is recommended that this is a capstone experience, bringing together all learning across the course and creates the opportunity for the development of student outcomes including **professionalism**, **integrity,** and **creativity**.	As per Individual Research Project A

Appendix E: Terminology

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 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
distance-learning course	a course of study that does not involve face-to-face contact between students and tutors
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, 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

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
intensity of study	the time is 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
learning zone	a flexible student space that supports independent and social earning
material information	information students need to make an informed decision, such as about what and where to study
mode of study	different ways of studying, such as full-time, part-time, e-learning or work-based learning
modular course	a course delivered using modules
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 'course 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
navigability (of websites)	the ease with which users can obtain the information they require from a website
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
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	a course that is regulated by a regulatory body
regulatory body	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	formal assessment of students' work, contributing to the result
term	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)
total study time	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
workload	see 'total study time'
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