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">HNC Civil Engineering Apprenticeship</td></tr>
<tr><td>Intermediate exit award title(s)</td><td colspan="3">N/A</td></tr>
<tr><td>UCAS Code</td><td></td><td>Course Code(s)</td><td>4953</td></tr>
<tr><td></td><td colspan="3">London South Bank University</td></tr>
<tr><td>School</td><td colspan="3">☐ ASC ☐ ACI ☒ BEA ☐ BUS ☐ ENG ☐ HSC ☐ 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">Carlos Gonzalo</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">
<table>
<tr><th>Mode</th><th>Length years</th><th>Start - month</th><th>Finish - month</th></tr>
<tr><td>Part time</td><td>2 years</td><td>September</td><td>June/August</td></tr>
</table>
</td></tr>
<tr><td>Is this course generally suitable for students on a Tier 4 visa?</td><td colspan="3">☐ Yes ☒ No
Students are advised that the structure/nature of the course is not suitable for those on a Tier 4 visa</td></tr>
<tr><td rowspan="3">Approval dates:</td><td colspan="2">Course(s) validated</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 and signed off</td><td>September 2023</td></tr>
<tr><td>Professional, Statutory & Regulatory Body accreditation</td><td colspan="3">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)
Approved to 2024 intake</td></tr>
<tr><td>Link to Institute of Apprenticeship (IfATE) Standard and</td><td colspan="3">https://www.instituteforapprenticeships.org/apprenticeship-standards/civil-engineering-senior-technician-v1-1
ST0046</td></tr>
</table>

Assessment Plan (Apprenticeship only)		
Reference points:	Internal	Corporate Strategy 2020-2025 Academic Quality and Enhancement Website School Strategy LSBU Academic Regulations LSBU Curriculum Framework
	External	- Engineering Council, Accreditation of Higher Education Programmes (AHEP4, Fourth Edition August 2020); - The course is informed by the Joint Board of Moderators Guidelines for Developing Degree Programmes, April 2022 - Institute for Apprenticeships and Technical Education (IfATE), Civil Engineering Senior Technician (HNC) Level 4 Standard ST0046 - The EPAOs for EPA and On-the-Job training programme - Industrial Advisory Panel for programme support - QAA Quality Code for Higher Education 2018 - Framework for Higher Education Qualifications Subject Benchmark Statements (2023) - Framework for Higher Education (FHEQ) Outcome Qualifications Descriptions for Level 4 - Competitions and Markets Authority - Office for Students (OfS) Guidance - SEEC Level Descriptors for Higher Education 2021 - Professional Statutory and Regulatory Bodies (PSRBs) - Engineering Council Guidance on security https://www.jbm.org.uk/media/sf2chhj1/guidance-on-security.pdf
B. Course Aims and Features		
Distinctive features of this course	This course is intended for apprentices who wish to study the discipline of civil engineering to HNC level 4. The course embraces recent industry developments, in particular the inclusion of ECUK UK Standard for Professional Engineering Competence (UK-SPEC) allowing the apprentices to achieve the professional status of Engineering Technician, and who may wish to achieve, by further learning, the professional status of Incorporated Engineer. This course is ideal for those with either a National Certificate in related topics or a relevant A-level, to further their studies; and, for those intending to progress to degree level by either a classic or an apprenticeship route. The curriculum is designed to cover a wide range of specialisms in civil engineering at level 4, embedding as follows: a positioning of the Climate Emergency, an encouragement on collaboration and creative thinking; a focus on the key threads of design, sustainability, and health and safety risk management; an incorporation of ethics, professionalism and inclusion, and a development of freehand sketching. It is important to note that this academic course is one component of a higher apprenticeship. All other requirements to complete the occupational standard can be found in Appendix E.	
Course Aims	The Division of Civil Engineering at LSBU aims to provide, in support of the LSBU mission statement, a high-quality education and training. This is through	

	its flexible policies on admissions to give opportunities to apprentices with a diverse range of educational backgrounds, including mature candidates with practical experience, committed to a career in civil engineering, and particularly those who may only be able to undertake higher education on a part-time basis with one day release. The HNC Civil Engineering aims to: 1. Produce higher technicians who are committed to a technical career in a variety of disciplines, with a range of employers in a variety of countries taking in mind the need for solutions for climate emergencies, and the implementation of health and safety regulations. 2. Produce higher technicians equipped to take up responsible professional employment both in the construction industry and become lifelong learners with an appreciation of the value to society of education in civil engineering. 3. Produce higher technicians who have knowhow and understanding of the fundamental aspects of civil engineering. 4. Allow higher technicians to acquire problem-solving skills and competencies in subject-specific skills. 5. Produce higher technicians who have knowledge and understanding of the construction industry, construction technology, and the organisation of the process from design to construction. 6. 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. 7. For Pearsons to maintain recognition of the HNC Civil Engineering awarded by LSBU.
Course Learning Outcomes	The course learning outcomes have been developed with reference to the Joint Board of Moderators (JBM) guidelines and Engineering Council's Accreditation of Higher Engineering Programmes document (AHEP4), Fourth Edition (August 2020). The codes in brackets (F1 to F18) refer to 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 & 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

The course also contributes to the fulfilment of the occupational profile of the apprenticeship standard ST0046 'Civil Engineering Senior Technician' specified by the following Knowledge, Skills and Behaviours (KSBs). This KSBs are mapped against the learning outcomes (Appendix A)

Knowledge

K1: Engineering principles, underpinned by relevant scientific, theoretical and technical knowledge and understanding to solve well-defined civil engineering problems.

K2: Civil engineering techniques, procedures and methods used for civil engineering systems, to either measure and test, design, install, commission, maintain or operate.

K3: Advanced mathematical, statistical and analytical problem-solving tools.

	K4: Properties of, and selection criteria for materials, components or parts used in civil engineering solutions. **K5**: Techniques and methods to collect data and technical information, to analyse and evaluate civil engineering problems. **K6**: Design principles and control processes used in the civil engineering consultancy, construction or manufacturing process, and the common constraints faced. **K7**: Technical drawings, designs, and models, using analytical and computer-based software packages. **K8**: Uses and limitations of computational and digital models, including Building Information Modelling (BIM). **K9**: Industry policies, standards, regulations and legislation, and codes of practice, including Building Safety legislation, Construction (Design and Management) (CDM) or Design Manual for Roads and Bridges (DMRB). **K10**: Statutory health, safety and welfare policies, procedures, and regulations including the Construction (Design and Management) regulation. **K11**: Risk assessment and mitigation processes, and their importance in the civil engineering environment. **K12**: Principles of sustainable development and their impact on the lifecycle of civil engineering solutions, including United Nations Sustainable Development Goals (UNSDG), net-zero carbon emissions, environmental policies and legislations, and the climate change act. **K13**: Project management techniques, including quality and information management and assurance systems and continuous improvement processes. **K14**: Methods for planning and resourcing civil engineering tasks, and the impact on cost, quality, safety, security, and environment. **K15**: Methods of communication and when to use them, using appropriate engineering terminology and conventions. **K16**: Roles and responsibilities within the organisation, team dynamics and their own boundaries of authority. **K17**: Relationships between key organisations in the civil engineering sector (for example organisations, customers, partners and suppliers). **K18**: Equality, diversity and inclusion, its importance and impact on civil engineering solutions **K19**: Ethical principles as applied to civil engineering including the need for the confidentiality and security of data and information. **K20**: Methods to maintain professional competence and technical knowledge including initial professional development (IPD) and continuing professional development (CPD). **Skills**

	S1: Apply engineering principles, using relevant scientific, theoretical and technical know-how to solve well-defined civil engineering problems. **S2**: Apply civil engineering techniques, procedures and methods, and review the results, when measuring and testing, designing, installing, commissioning, maintaining or operating civil engineering systems. **S3**: Employ a range of advanced mathematical, statistical and data interpretation tools, using analytical and computational methods to interpret and solve civil engineering problems. **S4**: Interpret and compare performance information to choose compliant materials, components or parts. **S5**: Select and use technical literature and other sources of information and data to address well-defined civil engineering problems. **S6**: Produce and interpret civil engineering technical drawings, designs, and models, using analytical and computer-based software packages, recognising the limitations of the software used. **S7**: Produce civil engineering technical solutions in accordance with relevant industry standards, procedures, codes of practice, regulations, and legislation. **S8**: Comply with, and encourage others to demonstrate, statutory health, safety and welfare policies, procedures and regulation. **S9**: Complete risk assessments to identify, evaluate and mitigate risks. **S10**: Apply principles of sustainable development and assess the impact of these in their work. **S11**: Employ project management techniques, measuring and recording progress against civil engineering project plans. **S12**: Assess and report on quality using appropriate management and assurance systems and continuous improvement processes. **S13**: Identify and use resources, equipment and technology to meet project requirements, including specifications, budget and timescales. **S14**: Monitor and manage individual performance, and supervise others, recognising the need to comply with appropriate codes of practice and equality, diversity & inclusion (EDI) requirements. **S15**: Communicate using appropriate methods for the audience, using appropriate engineering terminology and conventions. **S16**: Apply ethical principles to civil engineering projects, including the secure use of data and information. **S17**: Plan, undertake and review their own professional competence, updating and reviewing their CPD to improve performance. **Behaviours** **B1**: Works to health, safety and welfare requirements, industry standards, statutory regulation and legislation, policies, and codes of practice, and ensuring others do likewise.

	B2: Makes independent decisions when delivering civil engineering projects, whilst knowing their own limitations and when to ask for help or to escalate. **B3**: Works individually and as part of a team, being aware of their actions and the impact they may have on others, and demonstrating awareness of diversity and inclusion issues so as to meet the requirement of fairness at work. **B4:** Solves problems with attention to detail, accuracy, and diligence, and seeks to continually improve. **B5**: Maintains professional and ethical working relationships with internal, external, and other stakeholders. **B6**: Takes responsibility for their own professional development, seeking opportunities to enhance their knowledge, skills, and experience, and support others when requested.

C. Teaching Learning and Assessment Strategy

This course is taught by delivering lectures, tutorials, individual and group works, laboratories, computer laboratories, site visits, field trips, 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. This could also include guest lecturers, who will be introduced by the module leader. Guest lecturers will be bought in to provide students with information on how what they are doing relates to industrial practice, advancements in the industry around a particular subject area and the current research that is being carried out within that subject area. 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.

It is important to understand, however, that this course involves an understanding of concepts by attempting all the tutorial questions, watching videos, and reading notes, articles, and books. To succeed in this course, the student must invest a minimum private study time of about 900 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 learning and assessment strategy** is provided in connection with the modules and learning outcomes and the curriculum map established previously and in appendices A and B.

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

The codes in brackes (**K1 to K20; S1 to S17; B1 to B6**) refer to the occupational standard ST0046

Apprentices will apply a systematic approach to the solution of broadly defined problems **(F6; K7;S7)** in **Engineering Surveying.** They will appraise and question the purpose of a given surveying brief, and consider its broad environmental implications developing a holistic approach to engineering surveying.

They will identify ethical concerns and make reasoned ethical choices informed by professional codes of conduct **(F8; K19; S16; B5)** in **Construction Practice C.** They will appreciate the significance to society of the impact of human and engineering activity on the environment. They will understand the professional engineering institution's code of professional conduct.

They will apply knowledge of mathematics, statistics, natural science and engineering principles **(F1; K3; S1; S3)** and will analyse broadly defined problems reaching substantiated conclusions **(F2; K3; S3)** in **Mathematics B and Fluid Mechanics B**. Where possible, and at some extent, they will show awareness of placing the global challenges of the Climate Emergency, the 17 UNSDGs and cultural change.

They 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; K6; K7; K9; K10; S6; S7)** in **Construction Practice C.** They will demonstrate it through group design work and presentations.

They will evaluate the environmental and societal impact of solutions to broadly defined problems **(F7; K12; S10)** in **Materials and Geology C.** They will demonstrate, through lab reports, coursework and/or examinations, a culture and commitment to the principles of sustainable development.

They will communicate effectively with technical and non-technical audiences **(F17; K15; K17; S15; B5)** in **Engineering Surveying.** They will explain clearly and knowledgeably about design and construction issues via reports and presentations, with clear communication skills

They will use practical laboratory and workshop skills to investigate broadly defined problems **(F12; S12; B3)** in **Fluid Mechanics B.** They will demonstrate knowledge of water management, water supply and coastal engineering mainly in lab reports and coursework. They will assess and mitigate environmental risk in, for example, flood risk.

They will recognise the responsibilities, benefits and importance of supporting equality, diversity and inclusion **(F11; K18; S14; B3)** in **Construction Practice C.** They will demonstrate team working skills and awareness of inclusive behaviours through design projects and other activities.

They will recognise the need for quality management systems and continuous improvement in the context of broadly defined problems **(F14; K13; S8; B1; B4)** in **Structures and Construction Technology B.** They will identify an appropriate range of construction technologies under quality assurance for the project/report/coursework they are working on

They will select and apply appropriate materials, equipment, engineering technologies and processes **(F13; K4; S4; S13)** in **Materials and Geology C.** They will place the global challenges of the Climate Emergency, the 17 UNSDGs and cultural change central to their material selection..

They will adopt a holistic and proportionate approach to the mitigation of security risks **(F10; K19; S16)** in **Construction Practice C.** They will demonstrate an increasing awareness, and development of the treatment of data, IP and confidentiality amongst other aspects of security.

They will function effectively as an individual, and as a member or leader of a team **(F16; K16; S14)** in **Engineering Surveying.** They will demonstrate both individual and team working creative skills through work field and reports and team working skills.

They will apply knowledge of engineering management principles, commercial context, and project management **(F15; K13; K14; S11)** in **Construction Practice C.** 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 select and use technical literature and other sources of information to address broadly defined problems **(F4; K5; S5)** in **Structures and Construction Technology B.** They will appreciate the importance of the study of former and current engineering history as part of the development of greater visual awareness.

They will plan and record self-learning and development as the foundation for lifelong learning/CPD **(F18; K20; S17; B2; B6)** in **Construction Practice C.** They will appreciate the need for continuing professional development developing and open safety culture which encourages challenge.

They will identify, evaluate and mitigate risks (the effects of uncertainty) associated with a particular project or activity **(F9; K11; S9)** in **Materials and Geology C.** They will understand and identify the concepts of hazard and risk, estimating prioritising and mitigating risks. They will assess and mitigate environmental risk in slope stability and risk.

They will use appropriate computational and analytical techniques to model broadly defined problems **(F3; K2; K8; S2; S6)** in **Engineering Surveying.** They will exploit data to drive their engineering thinking and will conduct approximate analyses to drive rapid decision making.

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
- Access to ICE Library.
- British Standards
- Access to numerous construction 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 phase-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 but the academic judgment will prevail (principle of academic judgment independence). When students are dissatisfied with their marks, they have an official appeal process to follow.

E. Academic Regulations

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

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

Since this course is approved, there are some extra regulations defined by the requirements of the Joint Board of Moderators (JBM) 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

F. Entry Requirements

HNC CIVIL ENGINEERING

https://www.lsbu.ac.uk/study/course-finder/civil-engineering-senior-technician-hnc

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)

Civil 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 (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.

G. Course structure(s)

Course overview

The course is delivered on a semester pattern, each semester being 13 weeks in duration. The course is delivered over two years by a part-time mode of study, taught one day per week over four

semesters. Students study six 20-credit modules. A university 20 credit is the equivalent of 200 student study hours. Each module is a self-contained part of the course of study.

Year 1

Each student studies three core modules:

- **Construction Practice C**
- **Materials and Geology C**
- **Mathematics B**

To progress into year 2 learners have to achieve a minimum of 40 credits (2 modules) **and** repeating a maximum of 20 credits (1 module)

Year 2

Each student studies three core modules:

- **Fluid Mechanics B**
- **Engineering Surveying**
- **Structures and Construction Technology B**

A student who has completed 120 credits of study will be awarded a Higher National Certificate.

	HNC Civil Engineering			
	Semester 1		**Semester 2**	**Credits**
Level 4 Year 1	Mathematics B		Mathematics B	**20**
	Construction Practice C		Construction Practice C	**20**
	Materials and Geology C		Materials and Geology C	**20**
Level 4 Year 2	Fluid Mechanics B		Fluid Mechanics B	**20**
	Structures and Construction Technology B		Structures and Construction Technology B	**20**
	Engineering Surveying		Engineering Surveying	**20**

Placements information

n/a

H. Course Modules

Module Code	Module Title	Level	Semester	Credit value	Assessment
BEA-4-406	Engineering Surveying	4	1 and 2	20	100% CW
BEA-4-513	Fluid Mechanics B	4	1 and 2	20	50% CW 50% Exam
BEA-4-408	Mathematics B	4	1 and 2	20	50% CW 50%Exam
BEA-4-409	Structures and Construction Technology B	4	1 and 2	20	50% CW 50% Exam
BEA-4-486	Construction Practice C	4	1 and 2	20	100% CW
BEA-4-531	Materials and Geology C	4	1 and 2	20	50% CW 50% Exam
CBE_4_GW1	Gateway Preparation	4	1 and 2	N/A	N/A

CBE_4_GW2	Gateway Preparation	4	1 and 2	N/A	N/A
CBE_4_EPA	End Point Assessment	4	1 and 2	N/A	N/A

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.
K. Costs and financial support

General support

the default way of supporting students is via #salesForce and their LSBU MyAccount.

Course related costs

- For Materials and Geology Module, students will need to purchase safety boots which cost around £20.
- Constructionarium in Bircham Newton would cost a maximum of £500 per student, this includes transportation, food, and accommodation for 5 days (this trip is recommended but optional).

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
Appendix B: Terminology
Appendix C: Apprenticeship Standard

Appendix A: Curriculum Map

This map provides a design aid to help course teams identify where course outcomes are being assessed within the course. It also provides a checklist for quality assurance purposes and may be used in validation, approval/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.
(T: Taught; D: Developed; A: Summative Assessment)

Higher National Certificate partially meeting the academic requirement for IEng registration								
Area of Learning	**AHEP 4 Code**	**AHEP 4 Learning Outcomes**	**Mathematics B**	**Materials and Geology C**	**Construction practice C**	**Fluid Mechs B**	**Structures & CT B**	**Engineering Surveying**
Science, mathematics and engineering principles	**F1**	Apply knowledge of mathematics, statistics, natural science and engineering principles to broadly-defined problems	**TDA**			**TDA**	**TD**	**TD**
Problem analysis	**F2.**	Analyse broadly-defined problems reaching substantiated conclusions	**TDA**			**TDA**		**TD**
Analytical tools and techniques	**F3.**	Use appropriate computational and analytical techniques to model broadly-defined problems						**TDA**
Technical literature	**F4.**	Select and use technical literature and other sources of information to address broadly-defined problems			**TD**		**TDA**	
Design	**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 & safety, diversity, inclusion, cultural, societal and environmental matters, codes of practice and industry standards			**TDA**			
Integrated/systems approach	**F6.**	Apply a systematic approach to the solution of broadly-defined problems						**TDA**
Sustainability	**F7.**	Evaluate the environmental and societal impact of solutions to broadly-defined problems		**TDA**	**TD**			
Ethics	**F8.**	Identify ethical concerns and make reasoned ethical choices informed by professional codes of conduct			**TDA**			
Risk	**F9.**	Identify, evaluate and mitigate risks (the effects of uncertainty) associated with a particular project or activity		**TDA**				
Security	**F10.**	Adopt a holistic and proportionate approach to the mitigation of security risks			**TDA**			
Equality, diversity and inclusion	**F11.**	Recognise the responsibilities, benefits and importance of supporting equality, diversity and inclusion			**TDA**			
Practical and workshop skills	**F12.**	Use practical laboratory and workshop skills to investigate broadly-defined problems		**TD**		**TDA**		
Materials, equipment, technologies and processes	**F13.**	Select and apply appropriate materials, equipment, engineering technologies and processes		**TDA**				
Quality management	**F14.**	Recognise the need for quality management systems and continuous improvement in the context of broadly-defined problems					**TDA**	
Engineering and project management	**F15.**	Apply knowledge of engineering management principles, commercial context and project management			**TDA**			
Teamwork	**F16.**	Function effectively as an individual, and as a member or leader of a team						**TDA**
Communication	**F17.**	Communicate effectively with technical and non-technical audiences	**TD**		**TD**			**TDA**
Lifelong learning	**F18.**	Plan and record self-learning and development as the foundation for lifelong learning/CPD			**TDA**			

(a: formative assessment to contribute to the fulfilment of the occupational standard. The summative assessment is undertaken by the EPAO during the EPA process)

		Civil Engineer (HNC) Standard ST0046																	
	K S B	Learning Outcomes AHEP4																	
		Science and mathematics	Engineering Analysis			Design and innovation		The engineer and society					Engineering practice						
			Problem Aanalysis	Analytical tools and Techniques	Technical Literature	Design and innovation	Integrated/Systems Approach	Sustainability	Ethics	Risk	Security	EDI	Practical and Workshop Skills	Material, Equipment, Technologies and Processes	Quality Management	Engineering and Project Management	Teamwork	Communication	Lifelong Learning
		F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	F14	F15	F16	F17	F18
APPRENTICESHIP STANDARD	**Knowledge**																		
	K1	a																	
	K2			a															
	K3	a	a																
	K4													a					
	K5				a														
	K6					a													
	K7					a	a												
	K8			a															
	K9					a													
	K10					a													
	K11									a									
	K12							a											
	K13														a	a			
	K14															a			
	K15																	a	
	K16																a		
	K17																	a	
	K18											a							
	K19								a		a								
	K20																		a
		F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	F14	F15	F16	F17	F18
APPRENTICESHIP STANDARD	**Skills**																		
	S1	a																	
	S2			a															
	S3	a	a																
	S4													a					
	S5				a														
	S6			a		a													
	S7					a	a												
	S8														a				
	S9									a									
	S10							a											
	S11															a			
	S12												a		a				
	S13													a					
	S14											a					a		
	S15																	a	
	S16								a		a								
	S17																		a
		F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	F14	F15	F16	F17	F18
APPT STNRD	**Behaviour**																		
	B1														a				
	B2																		a
	B3											a	a						
	B4		a												a				
	B5								a									a	
	B6																		a

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

Appendix C: The Apprenticeship Standard

An apprenticeship is aligned to a standard which is referred to as an 'apprenticeship standard'. An apprenticeship standard is designed by groups of employers known as 'trailblazer groups' to meet skill shortages in their sectors and is linked to an occupational profile. Apprenticeship standards are designed by industry and lay out which Knowledge, Skills and Behaviours (KSBs) must be mastered by the Apprentice by the end of apprenticeship programme in order to successfully achieve the apprenticeship qualification. Note that this degree programme is non-integrated.

The academic element of the apprenticeship programme is mapped to the apprenticeship standard. A list of KSBs that must be evident in additional to the degree programme. LSBU e-portfolio system will allow Apprentice to set tasks to address any outstanding elements of the Standard and to ensure that the progress is tracked regularly. Evidence for the Skills and Behaviours should be collected and stored on LSBU e-portfolio. For example: A Witness Testimony, from your employer, detailing a task that you have undertaken whilst at work, which meets a criterion of the Standard.

Completing the academic element only partly satisfy the requirements of the Apprenticeship Standard, there are also skills and behaviours that need to be addressed at the workplace. Details of your Standard can be located on the Institute of Apprentices website and via your LSBU e-portfolio.

Link to Institute for Apprenticeships & Technical Education (IfATE) Standard and Assessment Plan:

https://www.instituteforapprenticeships.org/apprenticeship-standards/civil-engineering-senior-technician-v1-1

20% off-the-job Training

Apprentices are required to spend 20% of the contracted hours on off-the-job activities that directly relate to your apprenticeship. It is the responsibility for the Apprentice and the employer to create a working plan to show 20% off-the-job training.

ESFA Definition

"Off-the-job training is defined as learning which is undertaken outside of the normal day-to-day working environment and leads towards the achievement of an apprenticeship. This can include training that is delivered at the apprentice's normal place of work but must not be delivered as part of their normal working duties."

Off-the-job training can include:	Off-the-job training does not include:
The teaching of theory (for example: lectures, role playing, simulation exercises, online learning or manufacturer training)	Preparing for Functional Skills English and Maths (If applicable)
Practical training (for example: Shadowing, job rotation, industry visits and attendance at competitions)	Progress Reviews
Group discussions & Tutorials	On-programme assessment required for the apprenticeship standard
Learning Support (If applicable)	Training which takes place outside of your paid working hours
Time spent writing assessments / assignments	Induction into university or work place

The 20% off-the-job activity cannot be part of the normal work, however, the employer can utilise some of this 20% by undertaking projects within the organisation, so long as it would not be part of normal role. The 20% hours must be logged on LSBU e-portfolio to provide evidence, which will be used in the progress reviews and End Point Assessment. It's important to note that an apprenticeship is not solely an academic programme; the academic programme and corresponding qualification is just one element of an apprenticeship. There are different and additional commitments and expectations required of both the apprentice and the employer.

Apprenticeship Progress Reviews (APRs)

It is important that the progress are made and tracked throughout the course and it is written on record. Progress reviews are conducted at the end of each semester between LSBU, the apprentice and the employer via meetings or conference call and LSBU e-portfolio. The attendance and results will be uploaded when the review is due for employer to access.

THE FULFILLMENT OF THE KNOWLEDGE, SKILLS AND BEHAVIOURS WILL BE ACHIEVED WITH THE COLLABORATION OF ICE UNDER THEIR ON PROGRAMME ASSESSMENT AND END-POINT ASSESSMENT.

Gateway Preparation Module

The Gateway is the entry point to End-Point Assessment (EPA). It is the point at which the apprentice has completed their learning, met the requirements of the standard, 20% off-the-job (OJT) training, and that they, alongside their employer and LSBU agree that they are ready to enter their EPA.

The Gateway Preparation module is a pass/fail, zero credit module designed to support apprentices to identify and work towards meeting the Gateway criteria from an early stage in their apprenticeship, particularly those that sit outside of an academic qualification. The module will be completed each year throughout the duration of the apprenticeship up to passing the Gateway.

The Gateway

LSBU will be required to submit evidence of the following to progress onto the final stages of the EPA, this will include:

- English & Maths
- Degree
- 20% off the job training requirement met
- Academic qualification

End-Point Assessment (EPA) (Completion) Module End-point assessment (EPA) is the final stage of an apprenticeship and must be completed after the apprentice successfully passes through Gateway. It is an assessment of whether the apprentice has developed the skills, knowledge and behaviours outlined in the apprenticeship standard.

The End Point Assessment (Confirmation) module is a pass/fail independent summative assessment carried by the End Point Assessment Organisation (EPAO) that facilitates achievement and progress of the non-integrated End Point Assessment. It is assessed and confirmed by the EPAO as set out in the assessment plan for the standard. The grade is confirmed by the EPAO.

End Point Assessment

To successfully complete your apprenticeship, you will need to achieve in the End Point Assessment (EPA), during which your competence of the KSBs, as set out in the apprenticeship standard, is assessed. The EPA plan is a document which was created by the trailblazer group which sets out the requirements, assessment methods and grading criteria for the EPA. All current apprenticeship standards and assessment plans can be found on the Institute for Apprenticeships website. There is a certain period once you have completed the degree to complete the EPA.

To know about the EPA assessment plan, please refer to the link provided.

Employer and Apprentice must apply via an EPA letter to the ICE.

Membership Development Officer (MDO) from the ICE must agree and sign off apprentice in order to do this.

For further details, please refer to the Apprentice Team at apprenticeships@lsbu.ac.uk.