EST 1892 LSBU

Course Specification

A. Course Information			
Final award title(s)	Pearson BTEC Level 4 Higher National Certificate in Mechanical Engineering (General).		
Intermediate exit award title(s)	N/A		
UCAS Code		**Course Code(s)**	5814 FT 5815 PT
Awarding Institution	London South Bank University/Pearson		
School	☐ ASC ☐ ACI ☐ BEA ☐ BUS ☒ ENG ☐ HSC ☐ LSS		
Division	Mechanical Engineering LSBU		
Course Director	TBD		
Delivery site(s) for course(s)	☐ Southwark ☐ Havering ☐ Croydon ☒ Other: (please specify) South Bank Technical College		
Mode(s) of delivery	☒Full time ☒Part time ☐Other (please specify)		
Length of course/start and finish dates			

Mode	Length years	Start - month	Finish - month
Full time	1	Sept	July
Full time with placement/ sandwich year			
Part time	2	Sept	July
Part time with Placement/ sandwich year			

Is this course suitable for a Visa Sponsored Student?	☐ Yes ☒ No	
Approval dates:	Course validation date	06/06/2022
	Course Review date	June 2027

	Course specification last updated and signed off		26/07/2022
Professional, Statutory & Regulatory Body accreditation	Pearson are the awarding body for the qualification.		
Link to Institute of Apprenticeship (IoA) Standard and Assessment Plan (Apprenticeship only)	N/A		
Reference points:	Internal	Corporate Strategy 2020-2025 (including strategic plan for South Bank Colleges) https://www.lsbu.ac.uk/__data/assets/pdf_file/0008/273869/2025-group-strategy.pdf LSBU Group manifesto Academic Quality and Enhancement Website School Strategy LSBU Academic Regulations	
	External	Pearson BTEC Higher Nationals Engineering Specification (First Teaching from September 2018, First Certification from 2019) QAA The UK Quality Code for Higher Education 2018 Framework for Higher Education Qualifications (FHEQ) Subject Benchmark Statements for Engineering 2019 OfS Guidance SEEC Level Descriptors 2021 Competitions and Markets Authority	

B. Course Aims and Features

Distinctive features of course	This programme will prepare students to progress to the IMechE accredited BEng Engineering stream courses in Mechanical Engineering or Advanced Vehicle Engineering at LSBU with entrance at Level 5 (second year), provided students pass all modules (120 credits) at Level 4 with no compensation or condonement. Students who take Mechanical Engineering at Level 5 could be considered to upgrade to the MEng if they successfully complete all credits at Level 5 and meet the requirements of the School of Engineering Local Protocols. The syllabus and learning outcomes have been mapped to engineering accredited level 4 modules offered at LSBU. The HNC qualification provide students with a clear pathway to employment, appropriate support during employment and a recognised progression route to gain the further learning required at Level 6 to achieve Incorporated Engineer (IEng) registration or to the final stages of a degree.
Course Aims	The purpose of Pearson BTEC Higher Nationals in Engineering is to develop students as professional, self-reflecting individuals who can meet the demands of employers in the rapidly evolving engineering sector and adapt to a constantly

	changing world. The qualifications also aim to widen access to higher education and enhance the career prospects of those who undertake them. The course aims to: ● To provide students with the core knowledge, skills and techniques that all engineers require, irrespective of future specialism, to achieve high performance in the engineering profession. ● To build a body of specialist knowledge, skills and techniques in order to be successful in a range of careers in engineering at the Technician or Engineer level. ● To develop the skills necessary for fault finding and problem solving in a timely, professional manner, reflecting on their work, and contributing to the development of the process and environment, they operate within. ● To understand the responsibilities of the engineer within society, and work with integrity, regard for cost, sustainability and the rapid rate of change experienced in world class engineering. ● To provide opportunities for students to enter, or progress in, employment within the engineering sector, or progress to higher education qualifications such as degrees and honours degree in engineering or a closely related area, by balancing employability skills with academic attainment. ● To provide opportunities for students to make progress towards achieving internationally recognised registration with a Professional Body regulated by the Engineering Council. ● To allow flexibility of study and to meet local or specialist needs .
Course Learning Outcomes	At the end of the course, students will be provided with: **Knowledge and Understanding** 1. Sound knowledge of the basic concepts of engineering. 2. A thorough grounding in engineering principles at Level 4. . **Intellectual Skills** 3. The development of academic study skills and the appropriate technical knowledge at Level 4 to enable a progression path to work and a university degree. **Practical and Professional Skills** 4. The essential qualities of an engineer, including integrity, regard for cost and sustainability, as they apply to a range of roles and responsibilities within the engineering sector. 5. The practical and application regard for the ethical responsibilities of the engineer, for cost and for the importance of protecting and sustaining the environment. **Transferable Skills**

	6. A broad range of important transferable skills embedded throughout the course designed to enable students to develop positive and professional attitudes towards their education and future employment. 7. Basic research, time management, and presentation skills; the ability to work in a team and act on individual initiative, problem solving skills. 8. Required skills to be adaptable and flexible in their approach to work, showing resilience under pressure and the ability to meet challenging targets within a reasonable, pre-set, timeframe.

C. Teaching and Learning Strategy

The programme is designed so that students will be engaged in a dynamic, interactive, and reflective experience. The plan for teaching and learning effectively prepare students to successfully engage in the assessment.
While students are stimulated by academic engagement and get challenging and constructive feedback during face-to-face activities, the programme will also employ remote and blended learning technologies.

Considerable time will also be required for the student to experiment independently learning and develop the skills required to produce a quality portfolio of assignment outcomes. The use of self-directed study and independent learning will be essential, with tutors guiding and assisting self-directed learning, dependent on the needs of the individual student.

Teaching and learning activities include a combination of lectures, tutorials, workshops, and practical demonstrations. Students will be able to use the virtual learning environment (VLE), to access taught material such as presentation slides or handouts, and formative tasks such as quizzes.
Students will also be able to access further reading to support the learning of the subject and details of the module, assessment calendar and timetable.

Student will benefit from a high-quality teaching and learning experience which incorporate qualified and experienced tutors, an interactive and engaging curriculum, and a support system that caters for the pastoral as well as academic interests of students.

The delivery of units is sequenced so that students will be acquiring fundamental knowledge and understanding during the first semester and more advanced skills in semester two.

During the first semester, students will be learning through units, Engineering Maths, Engineering Design and Engineering Science and Mechanical Principles. In semester two, more advanced and engineering specific subjects are included, such as Fundamentals of Thermodynamics and Heat Engines, Fluid mechanics, Computer Aided Design and Manufacture and Managing a Professional Engineering Project.

Employer collaborations

Learners within the LSBU Group will benefit from courses that are supported by our extensive links employer partners. LSBU/Employer collaborations create a range of learning opportunities from career development, industry awareness and current industry practices. Employer activities such as guest speakers, project and assignment design, case studies, site visits and workshops are used to further prepare students towards achieving their next steps and career goals. Where possible, Students are encouraged to participate in employer and industry led competitions and awards to celebrate the highest standards of professional work and achievement.

D. Assessment

Students will be engaged with a variety of assessment tools that are accessible, appropriately challenging, and supported the development of their self-efficacy and self-confidence.
To ensure that assignments are valid and reliable, quality assurance measures and monitoring process are implemented.
This includes ensuring that all students engage in assessment positively and honestly.
Assessment is varied and each unit include formative and summative assessment. Student will receive supportive and constructive feedback as individual and holistic to the cohort.

All students will have the opportunity to comment on the quality of the learning experience on each unit. Staff will also complete evaluations for each unit that they deliver. This feedback will be analysed by the programme leader and the results fed into the annual monitoring report, faculty self-evaluation document and subsequent year's module handbook.
Programme and unit leaders will promote and undertake the relevant modification to all units to improve the delivery of any assignment. These enhancements will be recorded in the annual monitoring report and carried forward as appropriate.
All teaching staff will be observed delivering learning at least annually. Teaching and learning that does not satisfy the minimum expected standard will require an action plan agreed between the line manager and the member of staff.
Student satisfaction will be measured by both cohort surveys and student opinion gathered at assignment culmination.
Student representatives will be elected are invited to course team meetings and, additionally, have the opportunity to raise items with the course leader at individual meetings outside of these meetings.
Course representatives will have access to the wider LSBTC –LSBU student fraternity and meet regularly to discuss and promote:

- matters relating to the wider student experience
- student voice within the LSBTC –LSBU partnership’s strategic and operational agenda
- feedback on areas of good practice
- suggestions for the development of Institutional policy and strategy
- student learning experience
- academic and research events and cultural events
- student engagement in all aspects of educational quality processes.

An assignment may take a variety of forms, including practical and written types. An assignment is a distinct activity and must be completed independently by students (either alone or in a team). An assignment is separate from teaching, practice, exploration and other activities that students complete with direction from, and formative assessment by, tutors.

An assessor must assess only student work that is authentic, i.e. students' own independent work. Students must authenticate the evidence that they provide for assessment through signing a declaration stating that it is their own work. A student declaration must state that:

● evidence submitted for that assignment is the student's own
● the student understands that false declaration is a form of malpractice.

Assessors must ensure that evidence is authentic to a student through setting valid assignments and supervising them during the assessment period. Assessors must also take care not to provide direct input, instructions or specific feedback that may compromise authenticity

In the first instance, students should always seek to use original assets in their practical work. But where a student whose practical work requires the use of public resources, they will be required to acknowledge other people work by using appropriate citing and referencing methods.

During assessment an assessor may suspect that some or all of the evidence from a student is not authentic. The assessor must then take appropriate action, using appropriate academic misconduct procedures.

E. Academic Regulations

The University's Academic Regulations apply for this course.

The final award classification for each pathway is determined by Pearson's regulations of 'Pass,' 'Merit,' or 'Distinction.'

The calculation of the overall qualification grade is based on the student's performance in all units. Students are awarded a Pass, Merit or Distinction qualification grade, using the points gained through all 120 credits.

F. Entry Requirements

Standard offer

The standard entry requirement for the Higher National Certificate will be 80 UCAS points alongside a minimum of grade C/4 in GCSE or equivalent qualification in English and Maths.

For students who have recently been in education, the entry profile is likely to include one of the following:
● A* to C grade and/or 9 to 4 in GCSE Maths (or equivalent).
● A BTEC Level 3 qualification in Engineering
● A GCE Advanced Level profile that demonstrates strong performance in a relevant subject or adequate performance in more than one GCE subject. This profile is likely to be supported by GCSE grades at A* to C and/or 9 to 4 (or equivalent)
● Other related Level 3 qualifications
● An Access to Higher Education Diploma awarded by an approved further education institution
● Related work experience
● An international equivalent of the above.

Non-standard offer

We will encourage applications from non-traditional learners who lack formal academic qualifications. These non-traditional applicants will be assessed through an interview where their overall interest in the relevant specialist pathway as well as current academic skills will be judged. We will set an appropriate piece of work that elicits both a written and a practical creative outcome. From this work we will consider and assess their academic potential and relevant experience and skills. For example, a prospective candidate may not be able to evidence an educational background relevant to a specific pathway but may possess and demonstrate excellent problem-solving skills and a wide cultural appreciation of creative media. The desire to change careers through training will also be taken into consideration. In line with a strengths-based approach to widening participation, students without direct experience will be offered extra support and will also benefit from regular tutorials with both the Programme Leader and the pathway tutors so that they can integrate fully and access support for their educational journey.

Accreditation of prior learning

Applicants may be admitted with credit for prior certificated learning (APcL) or work/life experience or other uncertificated learning (APeL).

G. Course Structure(s)

Course overview

The programme is going to be delivery in two modes, full time and part time.

Full time

HNC Engineering General

Unit Title	**Type**	**Code** (Ofqual)	**Credits**	**Level**
Unit 01: Engineering Design	Core	K/615/1475	15	4
Unit 02: Engineering Maths	Core	M/615/1476	15	4
Unit 03: Engineering Science	Core	T/615/1477	15	4
Unit 08: Mechanical Principles	Specialist	F/615/1482	15	4
Unit 77: Fundamentals of Thermodynamics and Heat Engines	Specialist	F/617/0825	15	4
Unit 11: Fluid Mechanics	Optional	R/615/1485	15	4

Unit 04: Managing a Professional Engineering Project	Core	A/615/1478	15	4
Unit 03: Computer Aided Design and Manufacture	Optional	R/616/1711	15	4

Part time

HNC Engineering General

Unit Title	**Type**	**Code** (Ofqual)	**Credits**	**Level**
Unit 01: Engineering Design	Core	K/615/1475	15	4
Unit 02: Engineering Maths	Core	M/615/1476	15	4
Unit 03: Engineering Science	Core	T/615/1477	15	4
Unit 08: Mechanical Principles	Specialist	F/615/1482	15	4
Unit 77: Fundamentals of Thermodynamics and Heat Engines	Specialist	F/617/0825	15	4
Unit 11: Fluid Mechanics	Optional	R/615/1485	15	4
Unit 04: Managing a Professional Engineering Project	Core	A/615/1478	15	4
Unit 03: Computer Aided Design and Manufacture	Optional	R/616/1711	15	4

H. Placement information/Work based learning

The programme has a distinctive focus on entry into work; delivering a curriculum that embeds employability, has a strong

commitment to ethics and diversity and introduces students to contemporary as well as seminal research. All teaching and learning reflect the expectations of employers and society and is guided by external benchmarks such as Professional and Statutory Bodies.

Students completing a Higher National in Engineering will have the attributes, skills, principles, and behaviours that will enable them to make a valuable contribution to local, national, and international engineering.

Students completing the BTEC can also progress to the BEng stream offered by the Mechanical Engineering Division at LSBU with the option to upgrade to MEng after a successful completion of level 5.

I. Timetable Information

Information regarding the timetable will be available to students once they have completed enrolment. An informal review of the timetable can be obtained by communicating with the Course Director

NOTE this informal timetable information may change due to requirements beyond our control.

J. Costs and Financial Support

Course related costs

- Fees for the course do not cover any off-campus experiences such as field trips or visits to sites or other activities of interest. All students will have personal access to innovative hardware, industry-standard software, and practical facilities for independent and collaborative study at London South Bank Technical College (LSBTC) in buzzing Nine Elms.
- The programme promotes small group sizes, one-to-one tutor support and a culture which encourages time and space for reflection, self-development, and collaboration.

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/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