Course Specification

A. Course Information			
Final award title(s)	Extended Degree Programme in Engineering FT 3184 Extended Degree Programme in Engineering PT 3185		
Intermediate exit award title(s)	None		
UCAS Code	**H101**	**Course Code(s)**	FT 3184 PT 3185
	London South Bank University		
School	☐ ASC ☐ ACI ☐ BEA ☐ BUS ☒ ENG ☐ HSC ☐ LSS		
Division	Chemical and Energy Engineering		
Course Director	Steve Faulkner		
Delivery site(s) for course(s)	☒ Southwark ☐ Havering ☐ Other: please specify		
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	September	June
Full time with placement/ sandwich year	N/A		
Part time	1	September	June
Part time with Placement/ sandwich year	N/A		

Is this course generally suitable for students on a Tier 4 visa?	Please complete the International Office questionnaire Yes Students are advised that the structure/nature of the course is suitable for those on a Tier 4 visa but other factors will be taken into account before a CAS number is allocated.	
Approval dates:	Course(s) validated / Subject to validation	March 2011
	Course specification last updated and signed off	Update Sept 2019
Professional, Statutory & Regulatory Body accreditation	None	

Reference points:	Internal	Corporate Strategy 2015-2020 Academic Quality and Enhancement Manual School Strategy LSBU Academic Regulations
	External	QAA Quality Code for Higher Education 2013 Framework for Higher Education Qualifications Subject Benchmark Statements 2018 PSRB Competitions and Markets Authority SEEC Level Descriptors 2016

B. Course Aims and Features

Distinctive features of course	The Extended Degree programme is offered both as a full and part time course and aims to prepare and equip the students with the knowledge and skills required to enable them to progress onto their chosen degree programme.
Course Aims	The aims of the programme are: 1. To provide courses that add value in relation to entry qualifications and to provide the academic and pastoral support to enable students to achieve an Extended Degree. 2. To provide a course of study in a scientific environment offering the best possible opportunity for students to develop their practical, intellectual and personal skills; 3. To respond to the differing needs of students, particularly those from local areas in accordance with the policies and practice of equal opportunities; 4. To fosters students' enthusiasm for their subject, enabling them to develop intellectual, personal, practical and transferable skills as a sound basis for progression into work or further study; 5. To give students an adequate level of scientific and numerical literacy, so that they can thus approach the more advanced material in the rest of the Extended Degree programme. 6. To integrate practical and theoretical aspects of the subject disciplines offered; 7. To develop students' practical scientific skills whilst promoting safe laboratory practices, enabling them to become confident technically proficient and responsible scientists; 8. To promote student appreciation of the need to work with accuracy, precision and reproducibility, with due regard for the need for accurate and verifiable records; 9. To enable students to continue to develop their range of skills and understanding of modern analytical methods, beyond this course; 10. To manage and continually improve the quality of the student learning experience through unit, subject and course review.

Course Learning Outcomes	a) Students will have knowledge and understanding of: a1. subject knowledge underpinning the major disciplines in either the sciences or engineering; a2. experimental method and the development and testing of hypotheses; a3. methods used in the analysis, evaluation and critical review of evidence in either the sciences or engineering; a4. processes and procedures in sampling, data analysis and expressing precision, accuracy and reproducibility. b) Students will develop their intellectual skills such that they are able to: b1. understand the role of rational argument; b2. appreciate the key features of a problem and suggest possible means of investigation; b3. be aware of the significance of hypotheses, experimental data and rational arguments; b4. apply a theory, concept or subject-specific principle to a new context. c) Students will acquire and develop practical skills such that they are able to: c1. demonstrate safe practices and advise on safety procedures associated with a particular technique or methodology; c2. evaluate alternative methodologies for an investigation or completing a process; c3. organise and allocate duties, set targets and evaluate progress in achieving a specific technical goal; c4. present data in a seminar or lecture c5. demonstrate competence in a range of basic statistical procedures c6. demonstrate competence in the use of word-processors, spreadsheets and data presentation packages. d) Students will acquire and develop transferrable skills such that they are able to: d1. manage and adapt their work schedule and learning strategy; e) d2. adopt skills and techniques to address a particular problem; d3. be aware of the full range of sources of information, citing references properly; d4. appreciate the need and begin to communicate ideas, arguments and concepts in a rational and systematic way, using a variety of media; d5. assume responsibility for their own learning and work independently; d6. manage and monitor their role within a group working to meet specific targets.

C. Teaching and Learning Strategy

Laboratory skills and technical proficiency in analytical methods (a2, a3 and a4) are initiated in the first semester unit in Study & Laboratory Skills (in Scientific Principles for Engineering P/T students) and are further developed (often involving more subject-specific techniques) in the second semester stream specific units. These units concentrate on practical exercises that students have to complete to demonstrate competence.

Diagnostic tests in Study & Laboratory Skills, undertaken within the first few weeks after enrolment, allow an assessment of student ability in mathematics and English, and this unit also begins the student's induction into the scientific method (a2 and a3). A schedule of personal tutoring monitors student progress especially during the first year and is informed by student progress on the Study & Laboratory Skills unit, beginning with the outcomes of the initial diagnostic tests.

All units employ teaching methods that encourage students to consider and challenge the evidence with which they are presented. Very often the assessment schedule encourages students to question some key concept or principle. This may be formally assessed or simply part of group discussions, debates or as part of some problem-solving exercises. Problem-solving exercises typically require students to work individually or collectively by applying their understanding of current thinking or methodologies to a new context (b2, b4).

The second semester coursework is seen as an important test of the student's ability to integrate their developed scientific and numerical literacy skills with a properly devised methodology to enable them to investigate a subject area closely linked to their intended field of undergraduate study (b3, b4). The student will develop their coursework topic in consultation with the unit leader (b2, b3) and are likely to have to address methodological problems to bring the project to completion (b2).

Safe practice in laboratories begins with the first semester unit Study & Laboratory Skills and is further reinforced through the stream specific units in semester two (c1, c3). These units develop confidence in the laboratory and relate experimental activities to scientific understanding. In all units there is some methodological component, even if there is no practical element per se- coursework exercises are used in some units to assess student understanding of these techniques, often as part of a tutorial or group-work session.

A key emphasis of the Extended Degree Scheme is the development of the student's practical and analytical skills through both subject-specific and generic practicals. Students are inducted into teamwork skills in the Study & Laboratory Skills unit and part of their assessment of this unit is to produce a reflective account of their experiences in the laboratory (c1). Students are encouraged to consider alternative ways to approach specific problems, or to address specific questions (c1, c2, c3), typically through their practical work. In this way we are able to build student confidence in their technical and practical skills and reinforce the basic concepts delivered in the associated lecture programme.

The stream specific units again integrate many of these skills, and also requires the students to analyse and present their data in a standard scientific manner. The student has to organise their schedule of work in consultation with the unit leader and bring this to conclusion with a properly presented report (c3-c6).

These skills are fully mapped through the curriculum and each is met by the combination of units undertaken. A number of tasks assessed in both the Study & Laboratory Skills unit measure their progress in managing their own learning (d1, d5) and to work effectively as part of a team (d6). These all require a flexible approach to data acquisition, interpretation and presentation, not least because of the range of topics being covered (d1). Presentations and seminars are used extensively in semester 2. The second semester project work again is seen as serving an important test of many of these skills (d1-d5).

All students are allocated a personal tutor on initial enrolment to the course. The personal tutor is the point of contact for all matters relating to the student's welfare and progress whilst at London South Bank. The personal tutors are supported by year tutors, one for each year of the course. All tutees will meet their course team at the start and throughout the course.

The primary teaching contact with students, in classrooms, laboratories and workshop, is supported by print and electronic material. For their general understanding of the course, students receive a course guide and a summary of the syllabus; these are updated annually. For each module, the module leader provides a module guide. Subject tutors provide further material as appropriate, including course notes, supporting information and reprints, problem sets, assignment briefs and experiment instructions. Students have access to books in the Perry library, and may obtain copies of past exam papers.

The VLE will contain information for core and additional learning experiences.

D. Assessment

Students experience variety of assessments during their first year, including the initial review of their proficiency in maths and English as they commence the Study & Laboratory Skills unit. Knowledge is tested by unseen in-class assessments and open book written examination in the Scientific Principles unit (a1) in the first semester. Other units assess using essays or problem solving exercise. Great emphasis is placed on a series of subject specific practical experiences that have to be completed satisfactorily to pass the Study & Laboratory Skills unit and in this way we are able to check student competencies in basic practical skills. In the second semester the variety of assessment styles is continued, assessment is a combination of examination, a variety of coursework, including presentations (a3), essays, problem-solving exercises (a4) intended to aim development and preparation for undergraduate study.

E. Academic Regulations

Assessment regulations laid down in the current edition of the university's Academic Regulations for Taught Programmes apply to the course, subject to any exceptions noted in the text below and any instances where local protocols supersede University guidelines for accreditation purposes.

The most current Academic Regulations can be found here:

http://www.lsbu.ac.uk/__data/assets/pdf_file/0008/84347/academic-regulations.pdf

F. Entry Requirements

Entry requirements

- A Level DD **or;**
- BTEC National Diploma MPP **or;**
- Access to HE qualifications with Pass **or**;

- Equivalent level 3 qualifications worth 64 UCAS points
- 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.

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G. Course structure(s)

Course overview

ED Engineering, full-time (120 credits)

Yr 1, Sem 1	Applied Mathematics Owner: chem-pet Credits: 20	Scientific Principles for Engineering (+ Labs) Owner: chem-pet Credits: 20	Study & Laboratory Skills Owner: biosci Credits: 20
Yr 1, Sem 2	Mathematicss for Engineering Owner: chem-pet Credits: 20	Engineering Science Owner: chem-pet Credits: 20	Stream-specific unit Owner: Credits: 20

Proposed stream-specific units	Unit title
Electronics	Practical Electronics
Mech & Build Serv	Eng Des & model
Chem & Pet Eng	Chemistry & applications
Civil	Constructing the BE

ED Engineering, part-time (80 credits)

Yr 1, Sem 1	Applied Mathematics Owner: chem-pet Credits: 20	Scientific Principles for Engineering (+ labs) Owner: biosci Credits: 20

Yr 1, Sem 2	Mathematics for Engineering Owner: chem-pet Credits: 20	Engineering science Owner: chem-pet Credits: 20

ED Science, full-time (120 credits)

Yr 1, Sem 1	Applied Mathematics 1 Owner: chem-pet Credits: 20	Scientific Principles for Applied Science Owner: biosci Credits: 20	Study & Laboratory Skills Owner: biosci Credits: 20
Yr 1, Sem 2	Mathematics for Science Owner: chem-pet Credits: 20	Chemistry and Applications Owner: biosci Credits: 20	Biology and Applications Owner: biosci Credits: 20

	Semester 1		**Semester 2**	
Level S	Applied Mathematics EAB_S_971	20	Mathematics for Engineering EAB_S_126	20
	Scientific Principles for Engineering EAB_S_125	20	Engineering Science EAB_S_127	20
	Study & Laboratory Skills EAB_S_972	20	Practical Electronics EAB_S_128	20 optional
			Engineering Design & Modelling EAB_S_129	20 optional
			Chemistry & Applications EAB_S_973	20 optional
			Constructing the Built Environment EBB_S_008	20 optional

Extended Degree – **Part time**

	Semester 1		**Semester 2**	
Level S	Applied Mathematics EAB_S_971	20	Mathematics for Engineering EAB_S_126	20
	Scientific Principles for Engineering EAB_S_125	20	Engineering Science EAB_S_127	20
Year 1	{enter module title, optional/compulsory}	{enter credit value}	{enter module title, optional/compulsory}	{enter credit value}
	{enter module title, optional/compulsory}	{enter credit value}	{enter module title, optional/compulsory}	{enter credit value}
Year 2	{enter module title, optional/compulsory}	{enter credit value}	{enter module title, optional/compulsory}	{enter credit value}
	{enter module title, optional/compulsory}	{enter credit value}	{enter module title, optional/compulsory}	{enter credit value}
Year 3	{enter module title, optional/compulsory}	{enter credit value}	{enter module title, optional/compulsory}	{enter credit value}
	{enter module title, optional/compulsory}	{enter credit value}	{enter module title, optional/compulsory}	{enter credit value}
Year 4	{enter module title, optional/compulsory}	{enter credit value}	{enter module title, optional/compulsory}	{enter credit value}
	{enter module title, optional/compulsory}	{enter credit value}	{enter module title, optional/compulsory}	{enter credit value}
Year 5	{enter module title, optional/compulsory}	{enter credit value}	{enter module title, optional/compulsory}	{enter credit value}

Placements information

None

H. Course Modules

Module Code	Module Title	Level	Semester	Credit value	Assessment
EAB_S_971	Applied Mathematics	S	1	20	
EAB_S_125	Scientific Principles for Engineering	S	1	20	
EAB_S_972	Study & Laboratory Skills	S	1	20	
EAB_S_126	Mathematics for Engineering	S	2	20	
EAB_S_127	Engineering Science	S	2	20	
EAB_S_128	Practical Electronics	S	2	20 optional	
EAB_S_129	Engineering Design & Modelling	S	2	20 optional	
EAB_S_973	Chemistry & Applications	S	2	20 optional	
EBB_S_008	Constructing the Built Environment	S	**2**	20 optional	

I. Timetable information

Information regarding the timetable will be available to students once the 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.

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

List of Appendices

Appendix A: Curriculum Map
Appendix B: Terminology

Appendix A: Curriculum Map

This map provides a design aid to help course teams identify where course outcomes are being developed, taught and assessed within the course. It also provides a checklist for quality assurance purposes and may be used in validation, 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.

Modules			Course outcomes																			
Level	**Title**	**Code**	**A1**	**A2**	**A3**	**A4**	**B1**	**B2**	**B3**	**B4**	**C1**	**C2**	**C3**	**C4**	**C5**	**C6**	**D1**	**D2**	**D3**	**D4**	**D5**	**D6**
S	Scientific Principles for Engineering	EAB_S_971	DTA		DTA				D	DT	DT						D	D			D	
S	Scientific Principles for Applied Science	EAB_S_125	DTA		DTA				D	DT	DT						D	D			D	
S	Study and Laboratory Skills for Extended Degree	EAB_S_972		DTA	DTA	DTA	D	D	DTA		DTA	DT	DTA	DTA	DTA	DTA	DTA	DTA	DTA	DTA	DTA	DTA
S	Applied Mathematics 1	EAB_S_126	DTA			D		DT									D	D			DT	
S	Biological and Applications	EAB_S_127	DTA			DT	D		D	DT							D			D	DT	
S	Chemistry and Applications	EAB_S_128	DTA			DT	D		D	DT							D			D	DT	
S	Mathematics for Science	EAB_S_129	DTA			DT		DT							DTA		D				DT	
S	Mathematics for Engineering	EAB_S_973	DTA			DT		DT							DTA		D				DT	
S	Engineering Science	EBB_S_008	DTA			DT	D	DT		DT												

S	Constructing the Built Environment	EAB_S_971	DTA	DTA						DT			DT					D				
S	Practical Electronics	EAB_S_125	DTA	DTA		DT		DT					DT					D				
S	Engineering Design and Modelling	EAB_S_972	DTA	DTA				DT					DT					D				

Appendix B: 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 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
distance-learning course	a course of study that does not involve face-to-face contact between students and tutors
extracurricular	activities 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 taken to complete a part-time course compared to the equivalent full-time version: for example, half-time study would equate to 0.5 intensity of study
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 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 final 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 particular skills, knowledge or understanding as part of their course
workload	see 'total study time'
written examination	a question or set of questions relating to a particular area of study to which candidates write answers usually (but not always) under timed conditions