EST 1892 LSBU

Course Specification

A. Course Information			
Final award title(s)	HND Building Services Engineering		
Intermediate exit award title(s)	None		
UCAS Code	**042K**	**Course Code(s)**	Full-time: 541 Part-time: 549
	London South Bank University		
School	☐ ASC ☐ ACI ☒ BEA ☐ BUS ☐ ENG ☐ HSC ☐ LSS		
Division	Civil and Building Services Engineering		
Course Director	Zhihui Ye		
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	2 years	Sep	June
Full time with placement/ sandwich year			
Part time	3 years	Sep	June
Part time with Placement/ sandwich year			

Is this course generally suitable for students on a Tier 4 visa?	Please complete the International Office questionnaire Yes for 541 No for 549 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	2019
	Course specification last updated and signed off	August 2022
Professional, Statutory & Regulatory Body accreditation	Chartered Institution of Building Services Engineers (CIBSE); Energy Institute (EI)	

Reference points:	Internal	Corporate Strategy 2020-2025 Academic Quality and Enhancement Website School Strategy LSBU Academic Regulations
	External	QAA Quality Code for Higher Education 2018 Framework for Higher Education Qualifications Subject Benchmark Statements (Engineering 2019) PSRB Competitions and Markets Authority SEEC Level Descriptors 2021 Engineering Council AHEP 2014

B. Course Aims and Features

Distinctive features of course

LSBU has almost 70 years' expertise in running Building Services Engineering courses and it produces around 50% of graduates in the industry. Our HND BSE course is designed to equip students with the technical, management and communication skills needed to be an effective members of the building services engineering industry and/or its affiliated sectors with technical and application skills in accordance with the requirements of an Incorporated Engineer.
This course is intended for technician engineers who are looking to develop their skills. Graduates will be well equipped to enter the industry in areas such as design and build, consultancy and facilities management.

A wide range of building services is taught, both mechanical and electrical, and the theme of energy conservation and environmental impact is present throughout. In keeping with the needs of modern engineering practice, management and communication skills also strongly feature in this course. The course is designed to deliver the following core skills that will enable students to work effectively in the field:

- Mathematic and scientific skills and their application in building services
- Technical skills and knowledge required to understand systems design
- Communication skills.

Students will also begin to develop team-working skills in preparation for further study should they wish to gain professional status.

12 Course aims

The general aim of this course is to develop the students' technical and application skills in accordance with the requirements of an Incorporated Engineer; the emphasis being on developing skills appropriate to a multidisciplinary, integrated building services and energy engineering environment. Incorporated engineers will be expected to have good technical and project management competence, with critical self-awareness and confidence in applying appropriate design solutions. They will be expected to rise to positions of middle and top management. They will require good analytical and communication skills, to be able to lead design teams, while also being able to work independently.

	The course is specifically relevant to those wishing to join the Chartered Institution of Building Services Engineers (CIBSE) and/or the Energy Institute (EI). With regard to CIBSE the course provides the management, design and technical skills for those working within the building services industry. The interests of the Energy Institute are represented by the emphasis on energy management, low energy design and an awareness of the relationship of buildings to energy resource and supply issues.
Course Aims	The HND Building Services Engineering aims to: 1. Produce diplomate Building Services/Energy Engineers satisfying in part the academic requirements for incorporated membership of the Chartered Institution of Building Services Engineers and the Energy Institute. 2. Produce diplomats trained in the core discipline of Building Services/Energy Engineering with a strong emphasis on design and application. Such graduates typically find employment in the building services and energy industries, either with a consultant, end user, contractor, equipment manufacturer, energy specialist or facilities manager. 3. Develop students' knowledge of mathematics, applied sciences, engineering methods, safety, economics, finance, and sustainability in support of the central themes of the course. 4. Develop students' practical and problem-solving skills through the integration of a broad range of subject material. 5. Teach students to communicate clearly, to argue rationally and to draw conclusions based on a rigorous, analytical and critical approach to data and systems. 6. Develop the transferable skills expected of a diplomate who will work in multidisciplinary teams with technical, commercial and management staff in industrial and other occupations. 7. Produce diplomates capable of contributing to the profession of Energy/Building Services Engineering in the context of modern industrial practice and sustainable development by promoting advanced techniques and methods and by extending current technologies. 8. Produce diplomates engineers who will have the core competencies and enthusiasm to continue lifelong learning and development.
Course Learning Outcomes	A Students will have knowledge and understanding of: A1 Appropriate mathematical methods. A2 Science appropriate to the discipline. A3 Principles of IT and Communications (ITC) relevant to building services engineering. A4 Characteristics of engineering/ building materials and components. A5 General principles of design. A6 Design techniques specific to building services engineering. A7 Management and business practices (including finance, law, marketing, personnel and quality).

	A8 Professional and ethical responsibilities including the global and social context of engineering. A9 Operational practice. A10 Codes of practice and the regulatory framework requirements for safe operation. B Students will develop their intellectual skills such that they are able to: B1 Use mathematical methods to support practical understanding and analysis of building services engineering problems. B2 Use scientific principles in the development of engineering solutions to practical problems. B3 Use scientific principles in the selection and analysis of engineering systems, processes and products. B4 Analyse systems, processes and components requiring engineering solutions. B5 Select and apply appropriate computer-based methods for calculation and selection of building services engineering solutions. B6 Create system designs through synthesis of ideas from a wide range of sources. B7 Produce solutions to building services engineering problems through the application of engineering. B8 Exploit knowledge and understanding to undertake technical risk evaluation. C Students will acquire and develop practical skills such that they are able to: C1 Use appropriate mathematical methods for calculating and analysing problems in building services engineering. C2 Use computers and current software in quantitative and analytical work, as well as general information technology for communication and data handling. C3 Design a system, component, process, or practical testing of design ideas in laboratory or through simulation, with technical analysis and critical evaluation of results. C4 Research for information to develop ideas further. C5 Apply engineering techniques taking account of industrial and commercial constraints. C6 Manage projects. D Students will acquire and develop transferable skills such that they are able to: D1 Manipulate, sort and present data in forms useful for understanding; select, interpret and validate data, identifying possible errors and inconsistencies. D2 Present data in a variety of ways. D3 Use scientific evidence-based methods in the solution of problems. D4 Use general IT tools.

	D5 Use creativity and innovation in problem solving and design. D6 Work with limited or contradictory information. D7 Communicate effectively. D8 Develop lifelong learning. D9 Develop the engineering approach to the solution of problems. D10 Demonstrate time and resource management. D11 Demonstrate teamwork and leadership.

C. Teaching and Learning Strategy

A1 is introduced in specific Level S and 4 classes and subsequently developed in classes at all levels. Lectures, tutorials and especially laboratory practicals (applications) at all levels cover A2 to A6. Project/Assignment work will develop these areas. Much of the understanding of A7 to A10 will be gained in specific modules, mainly at Levels 4 and 5. Statutory requirements, including safety, feature throughout the course, in practical work in particular.

Most of the curriculum supports Bl through B4: classroom time includes tutorial sessions, where students attempt problems. In private study, students develop skills by writing assignment and laboratory reports, and tackling problems set by the tutor or in past examinations. These are further tested in the solution of 'real' problems in Design Applications modules. B5 is of increasing importance as students progress from Level S up to 6. B6 is developed in Levels 4, 5 and 6 from underlying Level S/l study. The principles of B7 are covered in the Engineering Systems and Design Applications modules in Level 4, 5 and 6. B8 is developed through all subjects.

Lectures and tutorials at all levels cover Cl with the later applications and analysis modules developing these skills in relevant fields. Basic IT skills of C2 for engineering and science are developed in Design Applications modules at Level S and 4, as are experimental methods. Students also learn the principles and study the application of specialist engineering packages in most taught modules. C3 is acquired in practical workshop, laboratory and applications sessions. Projects, especially the final design projects, will be open-ended, developing C4 to C6. The wider aspects of C6 will be covered using assignments/tutorials within the Management lectures.

D1 and D2 are covered in assignment, tutorial, project and laboratory practical work: students for example obtain data from handbooks and computer databases and use it in calculations, graphical solutions and computer applications. The principles of D3 and D4 are covered in lectures with development in all areas of coursework. D5, D6, D7 and D9 are developed with all applications modules. D8 is encouraged throughout the course through exposure to continuing professional development such as the CIBSE ASHRAE group. D10 to D11: time/resource management, teamwork and leadership are developed in laboratory and project-orientated modules throughout the course.

D. Assessment

Most of the assessment for A1, A2 and A4 will be through written examinations, and classroom tests. Students will demonstrate their grasp of A3 in project/assignment reports. A5 and A6 will be principally evidenced in assignment work as will A7 to A10 that will also be assessed through particular Management and Design Applications presentations and examinations.

Written examinations are the main means of assessment for Bl through B4, although these are also tested in laboratory and application assignments, which also contribute particularly to B5. For B2 and B3, project assignments set students increasingly open-ended problems to which they are expected to apply basic concepts. Project work provides an open-ended method for the assessment of B5 to B8 with Level 5 and 6 projects allowing the student to evidence further knowledge and understanding within B8.

All aspects are assessed through assignment and design project work. The projects will evidence the appropriate level of attainment in these areas and will be assessed for a critical approach to problem-solving and project management.

D1 to D3 are assessed in many written examination papers. The application modules will also provide the focus for the assessment of these as well as the majority of other areas (D3, D4, D5, D6, D7, D9, D10 and D11). All projects will be marked for a critical approach to problem solving and time/resource management. D10 and D11: time/resource management, teamwork and leadership are assessed directly through application modules which are carried out on a both individual and team basis.

E. Academic Regulations

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

F. Entry Requirements

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

Typical offer

- 64 UCAS Tariff points

All

- Applicant must be at least 18 years old - with GCSE Mathematics (C+) and English (C+) or equivalent)

Accepted Qualifications

GCE

- Maths at Level 3

  A-level (E+) in Mathematics or relevant science

  AS-level (C+) in Mathematics or relevant science

Irish and Scottish

As GCE above, points assessed in accordance with published UCAS tariff

EdExcel

National Award (D) / National Certificate/Diploma (MM/MPP) in building services or a relevant engineering

Vocational Qualifications and other International qualifications defined as equivalent by URIC.

- We consider many relevant level 3 vocational qualifications alongside mature candidate applicants.

Mature applicants and

Mature: Mature candidates without the normal academic qualifications will be considered if they have a Level 3 vocational qualification (NVQ or C and G) in a relevant discipline and have significant relevant industrial experience. Initially, they may be considered for entry to our Extended Degree course — this will provide one year of preparatory study before the HND.

AP(E)L {Accreditation of Prior (Experiential) Learning}

Applicants may use their experience (in work and life) to demonstrate:

o They have the necessary skills and knowledge for entry to the course;

o They have met the of the learning outcomes of one or more of the course modules and can claim credits without participating in those modules;

o Examples of APEL being a portfolio of prior written work; o References

G. Course structure(s)

Course overview

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

Professional recognition is an important, if not essential, attribute of the course. This is governed by the Engineering Council AHEP for Incorporated (IEng).

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

Full-time study

Year 1

Foundation Engineering Mathematics
Electrical principles
Introduction to building Services Engineering
Thermofluids Principles
Engineering Mathematics and Modelling
Construction Practice B

Year 2

Internal Environment and Comfort
Heating and Ventilation Systems
Thermofluids Engineering
Electrical Services in Buildings
Refrigeration, Air Conditioning and Heat Pumps Engineering

Design applications

Part-time study

Year 1

Foundation Engineering Mathematics
Electrical principles
Introduction to building Services Engineering
Thermofluids Principles

Year 2

Engineering Mathematics
Construction Practice B
Internal Environment and Comfort
Heating and Ventilation Systems

Year 3

Thermofluids Engineering
Electrical Services in Buildings
Refrigeration, Air Conditioning and Heat Pumps Engineering
Design applications

{HND Building Services Engineering – **Full time**

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

{HND Building Services Engineering – **Part time**

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

Placements information

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

H. Course Modules

Module Code	Module Title	Level	Semester	Credit value	Assessment
BEA-S-459	Foundation Engineering Mathematics	S	1	20	Exam 100%
BEA-4-450	Engineering Mathematics	4	1-2	20	Exam 50%, CW 50%
BEA-4-452	Electrical principles	4	2	20	Exam 100%
BEA-4-453	Thermofluids Principles	4	2	20	Exam 100%
BEA-4-485	Construction Practice B	4	1-2	20	CW 100%
BEA-4-455	Introduction to building Services Engineering	4	1	20	CW 100%
BEA-4-456	Internal Environment and Comfort	4	1	20	Exam 70% CW 30%
BEA-4-457	Heating and Ventilation Systems	4	2	20	Exam 50% CW 50%
BEA-5-461	Thermofluids Engineering	5	**2**	20	Exam 100%
BEA-5-462	Refrigeration Air Conditioning and Heat Pumps Engineering	5	2	20	Exam 70% CW 30%
BEA-5-463	Design application	5	2	20	CW 100%
BEA-5-466	Electrical Services in Buildings	5	2	20	Exam 70% CW 30%

I. Timetable information

- Students would receive the timetable close to start of each semester on the personal timetable CMIS system.

Full time HND (541)

FT Year 1 HND	FT Year 2 HND

Semester 1	Semester 2	Semester 1	Semester 2
Foundation Engineering Mathematics (LS) BEA_S_459	Electrical Principles (L4) BEA_4_452	Internal Environment & Comfort L(4) BEA_4_456	Heating & ventilation systems (L4) BEA_4_457
Introduction to building Services (L4) BEA_4_455	Thermofluids Principles (L4) BEA_4_453	Design Applications (L5) BEA_5_463	Refrigeration, Air-Conditioning And Heat Pump Engineering (L5) BEA_5_462
Construction Practice B (L4) BEA_4_485		Electrical Services in Buildings L(5) BEA_5_466	Themofluids Engineering (L5) BEA_5_461
BEA_4_450 Engineering Mathematics (L4)			

Level S: Green, Level 4: Grey, Level 5: Purple

Part Time HND (549)

PT Year 1 HND		PT Year 2 HND		PT Year 3 HND	
Semester 1	**Semester 2**	**Semester 1**	**Semester 2**	**Semester 1**	**Semester 2**
Foundation Engineering Mathematics (LS) BEA_S_459	Electrical Principles (L4) BEA_4_452	Construction Practice B (L4) BEA_4_485 BEA_4_450 Engineering Mathematics (L4)		Design Applications (L5) BEA_5_463	Refrigeration, Air-Conditioning And Heat Pump Engineering (L5) BEA_5_462
Introduction to building Services (L4) BEA_4_455	Thermofluids Principles L4 BEA_4_453	Internal Environment & Comfort L(4) BEA_4_456	Heating & Ventilation Systems (L4) BEA_4_457	Electrical Services in Buildings L(5) BEA_5_466	Themofluids Engineering (L5) BEA_5_461

Level S: Green, Level 4: Grey, Level 5: Purple

J. Costs and financial support

Course related costs

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: Educational Framework (undergraduate courses)
Appendix C: Personal Development Planning (postgraduate courses)
Appendix D: 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.

			Year 1				Year 2				Year 3				
		Title	Introduction to Building Services Engineering	Foundation Engineering Mathematics	Thermofluids Principles	Electrical Principles	Engineering Mathematics-L4	Heating & ventilation systems	Professional Skills	Internal Environment and Comfort	Electrical Services in Buildings	Thermofluids Engineering_L5	REFRIGERATION, AIR-CONDITIONING AND HEAT	Design Applications 5	
		Lev	4	5	4	4	4	4	4	4	5	5	5	5	
		Cred	20	20	20	20	20	20	20	20	20	20	20	20	
		HND/ PLOs													ΣA
Knowledge & Understanding	A1	appropriate mathematical methods		TA	TA	TA	TDA								4
	A2	science appropriate to the building services engineering	T		TA	TA		DA		TDA	DA	TDA	DA		7
	A3	principles of IT and Communications (ITC) relevant to building services engineering						DA		DA				DA	3
	A4	characteristics of engineering/ building materials and components	TA					DA			TDA			DA	4
	A5	general principles of design	T					TDA	TDA		TDA				3
	A6	design techniques specific to building services engineering	T						TDA					TDA	2
	A7	management and business practices (including finance, law, marketing, personnel and quality)								TD			TDA		1
	A8	professional and ethical responsibilities including the global and social context of engineering							TD	TD			TD		0
	A9	operational practice							TDA						1
	A10	Codes of practice and the regulatory framework requirements for safe operation	TA						TDA				DA		3
Intellectual Skills	B1	use mathematical methods to support practical understanding and analysis of building services engineering problems		TA	TA	TA	TDA	TD					TDA		5
	B2	use scientific principles in the development of engineering solutions to practical problems	T		TA	TA	TD			TDA		D		DA	4
	B3	use scientific principles in the selection and analysis of engineering systems, processes and products			T	T		TDA		TDA	TDA	TD	TDA	TDA	5
	B4	analyse systems, processes and components requiring engineering solutions						TD	TD		TDA		DA		2
	B5	select and apply appropriate computer-based methods for calculation and selection of building services engineering solutions						TD	TA		TDA	TDA		TDA	4
	B6	create system designs through synthesis of ideas from a wide range of sources												DA	1
	B7	produce solutions to building services engineering problems through the application of engineering							TD						0
	B8	exploit knowledge and understanding to undertake technical risk evaluation							TA						1
Practical Skills	C1	use appropriate mathematical methods for calculating and analysing problems in building services engineering		TA	TA	TA					TDA		TDA		5
	C2	use computers and current software in quantitative and analytical work, as well as general information technology for communication and data handling.									TDA		TDA	TA	3
	C3	design a system, component, process, or practical testing of design ideas in laboratory or through simulation, with technical analysis and critical evaluation of results						D	TDA	DA					2
	C4	research for information to develop ideas further	TA						D					DA	2
	C5	apply engineering techniques taking account of industrial and commercial constraints							TDA					DA	2
	C6	manage projects											TDA	DA	2
Transferable Skills	D1	manipulate, sort and present data in forms useful for understanding; select, interpret and validate data, identifying possible errors and inconsistencies					TDA	TDA	TDA	DA			DA		5
	D2	present data in a variety of ways	TA	TA	TA	TA	TDA	TDA							6
	D3	use scientific evidence based methods in the solution of problems						Td			TDA		TDA		2
	D4	use general IT tools							TDA					DA	2
	D5	use creativity and innovation in problem solving and design												TDA	1
	D6	work with limited or contradictory information									TDA		TDA	DA	3
	D7	communicate effectively								DA				DA	2
	D8	develop life long learning	DA	TDA	TDA	TDA	TD	TD							4
	D9	develop the engineering approach to the solution of problems						TDA	DA	D			D		2
	D10	time and resource management						TDA	TDA					DA	3

Appendix B: Embedding the Educational Framework for Undergraduate Courses

The Educational Framework at London South Bank University is a set of principles for curriculum design and the wider student experience that articulate our commitment to the highest standards of academic knowledge and understanding applied to the challenges of the wider world.

The Educational Framework reflects our status as University of the Year for Graduate Employment awarded by *The Times and The Sunday Times Good University Guide 2018* and builds on our 125 year history as a civic university committed to fostering social mobility through employability and enterprise, enabling our students to translate academic achievement into career success.

There are four key characteristics of LSBU's distinctive approach to the undergraduate curriculum and student experience:

- Develop students' professional and vocational skills through application in industry-standard facilities
- Develop our students' graduate attributes, self-awareness and behaviours aligned to our EPIIC values
- Integrate opportunities for students to develop their confidence, skills and networks into the curriculum
- Foster close relationships with employers, industry, and Professional, Statutory and Regulatory Bodies that underpin our provision (including the opportunity for placements, internships and professional opportunities)

The dimensions of the Educational Framework for curriculum design are:

- **informed by employer and industry** needs as well as professional, statutory and regulatory body requirements
- **embedded learning development** for all students to scaffold their learning through the curriculum taking into account the specific writing and thinking requirements of the discipline/profession
- **high impact pedagogies** that enable the development of student professional and vocational learning through application in industry-standard or authentic workplace contexts
- **inclusive teaching, learning and assessment** that enables all students to access and engage the course
- **assessment *for* learning** that provides timely and formative feedback

All courses should be designed to support these five dimensions of the Educational Framework. Successful embedding of the Educational Framework requires a systematic approach to course design and delivery that conceptualises the student experience of the curriculum as a whole rather than at modular level and promotes the progressive development of understanding over the entire course. It also builds on a well-established evidence base across the sector for the pedagogic and assessment experiences that contribute to high quality learning.

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

Dimension of the Educational Framework	Minimum expectations and rationale	How this is achieved in the course
Curricula informed by employer and industry need	<u>Outcomes focus and professional/employer links</u> All LSBU courses will evidence the involvement of external stakeholders in the curriculum design process as well as plan for the participation of employers and/or alumni through guest lectures or Q&A sessions, employer panels, employer-generated case studies or other input of expertise into the delivery of the course provide students with access to current workplace examples and role models. Students should have access to employers and/or alumni in at least one module at level 4.	
Embedded learning development	<u>Support for transition and academic preparedness</u> At least two modules at level 4 should include embedded learning development in the curriculum to support student understanding of, and familiarity with, disciplinary ways of thinking and practising (e.g. analytical thinking, academic writing, critical reading, reflection). Where possible, learning development will be normally integrated into content modules rather than as standalone modules. Other level 4 modules should reference and reinforce the learning development to aid in the transfer of learning.	
High impact pedagogies	<u>Group-based learning experiences</u> The capacity to work effectively in teams enhances learning through working with peers and develops student outcomes, including communication, networking and respect for diversity of perspectives relevant to **professionalism** and **inclusivity**. At least one module at level 4 should include an opportunity for group working. Group-based learning can also be linked to assessment at level 4 if	

	appropriate. Consideration should be given to how students are allocated to groups to foster experience of diverse perspectives and values.	
Inclusive teaching, learning and assessment	<u>Accessible materials, resources and activities</u> All course materials and resources, including course guides, PowerPoint presentations, handouts and Moodle should be provided in an accessible format. For example, font type and size, layout and colour as well as captioning or transcripts for audio-visual materials. Consideration should also be given to accessibility and the availability of alternative formats for reading lists.	
Assessment *for* learning	<u>Assessment and feedback to support attainment, progression and retention</u> Assessment is recognised as a critical point for at risk students as well as integral to the learning of all students. Formative feedback is essential during transition into university. All first semester modules at level 4 should include a formative or low-stakes summative assessment (e.g. low weighted in final outcome for the module) to provide an early opportunity for students to check progress and receive prompt and useable feedback that can feed-forward into future learning and assessment. Assessment and feedback communicates high expectations and develops a commitment to **excellence**.	
High impact pedagogies	<u>Research and enquiry experiences</u> Opportunities for students to undertake small-scale independent enquiry enable students to understand how knowledge is generated and tested in the discipline as well as prepare them to engage in enquiry as a highly sought after outcome of university study. In preparation for an undergraduate dissertation at level 6, courses should provide opportunities for students to develop research skills at level 4 and 5 and should engage with open-ended problems with appropriate support. Research opportunities should	

	build student autonomy and are likely to encourage **creativity** and problem-solving. Dissemination of student research outcomes, for example via posters, presentations and reports with peer review, should also be considered.	
Curricula informed by employer and industry need / Assessment *for* learning	<u>Authentic learning and assessment tasks</u> Live briefs, projects or equivalent authentic workplace learning experiences and/or assessments enable students, for example, to engage with external clients, develop their understanding through situated and experiential learning in real or simulated workplace contexts and deliver outputs to an agreed specification and deadline. Engagement with live briefs creates the opportunity for the development of student outcomes including **excellence**, **professionalism**, **integrity** and **creativity**. A live brief is likely to develop research and enquiry skills and can be linked to assessment if appropriate.	
Inclusive teaching, learning and assessment	<u>Course content and teaching methods acknowledge the diversity of the student cohort</u> An inclusive curriculum incorporates images, examples, case studies and other resources from a broad range of cultural and social views reflecting diversity of the student cohort in terms of, for example, gender, ethnicity, sexuality, religious belief, socio-economic background etc. This commitment to **inclusivity** enables students to recognise themselves and their experiences in the curriculum as well as foster understanding of other viewpoints and identities.	
Curricula informed by employer and industry need	<u>Work-based learning</u> Opportunities for learning that is relevant to future employment or undertaken in a workplace setting are fundamental to developing student applied knowledge as well as developing work-relevant student outcomes such as networking, **professionalism** and **integrity**. Work-based learning can take the form of work experience, internships or placements as	

	well as, for example, case studies, simulations and role-play in industry-standards settings as relevant to the course. Work-based learning can be linked to assessment if appropriate.	
Embedded learning development	<u>Writing in the disciplines: Alternative formats</u> The development of student awareness, understanding and mastery of the specific thinking and communication practices in the discipline is fundamental to applied subject knowledge. This involves explicitly defining the features of disciplinary thinking and practices, finding opportunities to scaffold student attempts to adopt these ways of thinking and practising and providing opportunities to receive formative feedback on this. A writing in the disciplines approach recognises that writing is not a discrete representation of knowledge but integral to the process of knowing and understanding in the discipline. It is expected that assessment utilises formats that are recognisable and applicable to those working in the profession. For example, project report, presentation, poster, lab or field report, journal or professional article, position paper, case report, handbook, exhibition guide.	
High impact pedagogies	<u>Multi-disciplinary, interdisciplinary or interprofessional group-based learning experiences</u> Building on experience of group working at level 4, at level 5 students should be provided with the opportunity to work and manage more complex tasks in groups that work across traditional disciplinary and professional boundaries and reflecting interprofessional work-place settings. Learning in multi- or interdisciplinary groups creates the opportunity for the development of student outcomes including **inclusivity**, communication and networking.	
Assessment *for* learning	<u>Variation of assessment</u> An inclusive approach to curriculum recognises diversity and seeks to create	

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

Appendix C: Personal Development Planning

Personal Development Planning (PDP) is a structured process by which an individual reflects upon their own learning, performance and/or achievement and identifies ways in which they might improve themselves academically and more broadly. Course teams are asked to indicate where/how in the course/across the modules this process is supported.

Approach to PDP	Level 7
1 Supporting the development and recognition of skills through the personal tutor system.	
2 Supporting the development and recognition of skills in academic modules/modules.	
3 Supporting the development and recognition of skills through purpose designed modules/modules.	
4 Supporting the development and recognition of skills through research projects and dissertations work.	
5 Supporting the development and recognition of career management skills.	
6 Supporting the development and recognition of career management skills through work placements or work experience.	
7 Supporting the development of skills by recognising that they can be developed through extra curricula activities.	
8 Supporting the development of the skills and attitudes as a basis for continuing professional development.	
9 Other approaches to personal development planning.	
10 The means by which self-reflection, evaluation and planned development is supported e.g. electronic or paper-based learning log or diary.	

Appendix D: Terminology

[Please provide a selection of definitions according to your own course and context to help prospective students who may not be familiar with terms used in higher education. Some examples are listed below]

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