Course Addendum: Changes to 2020/21 Teaching In Response to Covid-19

Whilst we hope to deliver as much activity on-campus as possible, the government's guidance and social distancing measures will inform how much teaching we can deliver face-to-face in the 2020/21 academic year. Working to government guidelines we have adapted the delivery of our courses to a model of blending learning, which consists of a mix of online and on-campus activities. We are equipped to move between blended learning to fully online, or face–to–face, as the Covid-19 situation evolves.

The learning outcomes of your course remain the same but there are changes to its delivery, assessment and structure, as set out in the Changes section of this document. The subsequent pages of this document contain the original teaching and learning schedule of this course, for your reference.

24th July 2020

Course Details

Course Title(s) Course Code(s)	Mechanical Engineering & Design BEng (Hons) Advanced Vehicle Engineering (FT) 4705 BEng (Hons) Advanced Vehicle Engineering (FT) 5656 BEng (Hons) Advanced Vehicle Engineering (PT) 5657 BEng (Hons) Advanced Vehicle Engineering (PT) 4706 BEng (Hons) Mechanical Engineering (FT) 5652 BEng (Hons) Mechanical Engineering (FT) 591 BEng (Hons) Mechanical Engineering (PT) 5653 BEng (Hons) Mechanical Engineering (PT) 592 BEng (Hons) Mechanical Engineering and Design (Top Up) (FT) 5095 BSc (Hons) Engineering Product Design (FT) 5661 BSc (Hons) Engineering Product Design (FT) 593 BSc (Hons) Product Design (FT) 5660 BSc (Hons) Product Design (FT) 3143 MEng (Hons) Advanced Vehicle Engineering (FT) 5658 MEng (Hons) Advanced Vehicle Engineering (FT) 4707 MEng (Hons) Advanced Vehicle Engineering (PT) 5659 MEng (Hons) Mechanical Engineering (FT) 5654 MEng (Hons) Mechanical Engineering (FT) 4527 MEng (Hons) Mechanical Engineering (PT) 5655 MEng (Hons) Mechanical Engineering (PT) 4530 MSc Mechanical Engineering (FT) 4323 MSc Mechanical Engineering (PT) 4324
Course Director	All Course Directors. Details given in 'additional information'
Shared Modules?	

Changes to sequencing of modules:

3143	**BSc (Hons) Product Design (FT)**	
Module code and name (please list by level)	**S2→S1**	**S1→S2**

Level 5 Design Interactions ENG_5_549	Module can be delivered via online teaching so 'switched' to semester 1 (as evidenced by Module Leader's experience of delivering during initial lockdown)	
Level 5 Design Futures and emerging technologies ENG_5_548		Module 'switched' to semester 2

4622 / 4623	**MEng (Hons) Electrical Engineering and Power Electronics FT/PT**	
Module code and name (please list by level)	**S2→S1**	**S1→S2**
Systems for Environmental Services ENG_7_529		√
Advanced Power Electronics and Renewable Energy EEB_7_404	√	

4526 / 4529	**MEng Electrical and Electronic Engineering FT/PT**	
Module code and name (please list by level)	**S2→S1**	**S1→S2**
Advanced Instrumentation and Design EEE_7_AID		√
Advanced Power Electronics and Renewable Energy EEB_7_404	√	

4321 / 4322	**MSc Electrical and Electronic Engineering**	
Module code and name (please list by level)	**S2→S1**	**S1→S2**
Advanced Power Electronics and Renewable Energy EEE_7_PRE	√	
Advanced Instrumentation and Design EEE_7_AID		√

Changes to the mode of delivery and course composition

Subject to Government advice and in line with our commitment to the safety of our staff and students, from September we are planning the following:

- *Labs, workshops and small group tutorials will be delivered on site, where possible*
- *Lectures will be online, with remote alternatives, during the first semester, including live online discussions/tutorials with lecturers and other students*
- *Support materials and lecture notes will be available on our virtual learning environment, Moodle*
- *Module teaching teams and personal tutors will be available throughout the semester via email and virtual office hours*

Importantly, we will ensure that we provide equivalent resources and support to students who are unable to join us on campus for these sessions.

Your overall amount of contact will be the same as if it were delivered fully on campus.

Additional information

Any additional information

COURSES	COURSE DIRECTORS	CONTACT EMAIL
Computer Science & Informatics		
BSc (Hons) Information Technology: BSc (Hons) Information Technology (FT) 5453 BSc (Hons) Information Technology (PT) 4156 BSc (Hons) Information Technology (PT) (6yrs) 4935 BSc (Hons) Information Technology (Top Up) (FT) 5454 BSc (Hons) Information Technology (Top Up) (PT) 4006	Maria Lemac	lemacm@lsbu.ac.uk
BSc (Hons) Extended Degree (Foundation) 569	Paul Carden	cardenp@lsbu.ac.uk
BSc (Hons) Computer Science: BSc (Hons) Computer Science (FT) 4637 BSc (Hons) Computer Science (PT) 4638 BSc (Hons) Computer Science (Top Up) (FT) 5455	Mike Child	childm@lsbu.ac.uk
BSc (Hons) Digital Professional (Apprenticeships) BSc (Hons) Digital and Technology Solutions Professional (Business Analyst) (PT) (Apprenticeship) 5197 BSc (Hons) Digital and Technology Solutions Professional (Cyber Security Analyst) (PT) (Apprenticeship) 5198 BSc (Hons) Digital and Technology Solutions Professional (Data Analyst) (PT) (Apprenticeship) 5199 BSc (Hons) Digital and Technology Solutions Professional (IT Consultant) (PT) (Apprenticeship) 5200 BSc (Hons) Digital and Technology Solutions Professional (Network Engineer) (PT) (Apprenticeship) 5201 BSc (Hons) Digital and Technology Solutions Professional (Software Engineer) (PT) (Apprenticeship) 5202	Paul Carden	cardenp@lsbu.ac.uk
MSc Data Science MSc Data Science (FT) 4940 MSc Data Science (PT) 5084	Daqing Chen	chend@lsbu.ac.uk
Mechanical Engineering & Design		
BEng + MEng (Hons) Mechanical Engineering	Ravee Sundararajan	sundarr2@lsbu.ac.uk
BEng (Hons) Mechanical Engineering and Design (Top-up)	Ravee Sundararajan	sundarr2@lsbu.ac.uk
BEng + MEng (Hons) Advanced Vehicle Engineering	Alessio Corso	corsoa@lsbu.ac.uk
BSc (Hons) Engineering Product Design	Ben Lishman	lishmanb@lsbu.ac.uk
BSc (Hons) Product Design	Andrew Forkes	forkesa@lsbu.ac.uk
MSc Mechanical Engineering	Abas Hadawey	hadaweya@lsbu.ac.uk
Electrical and Electronic Engineering		
BEng (Hons) Electrical and Electronic Engineering	Ya Bao	baoyb@lsbu.ac.uk
BEng (Hons) Electronic and Computer Systems Engineering	Stavros Dimitriou	dimitrsa@lsbu.ac.uk

BEng (Hons) Electrical Power Engineering	Manoj Ponugubati	ponugubm@lsbu.ac.uk
BEng (Hons) Electrical and Electronic Engineering (Apprenticeship)	Manoj Ponugubati	ponugubm@lsbu.ac.uk
MSc Electrical and Electronic Engineering	Tony Vilches	vilchesa@lsbu.ac.uk
HND Electrical and Electronic Engineering	Saim Memon	s.memon@lsbu.ac.uk
BEng (Hons) Computer Engineering (old program - L5/L6 live)	Stavros Dimitriou	dimitrsa@lsbu.ac.uk
BEng (Hons) Computer Systems and Networks Engineering (old program - L5/L6 live)	Zhanfang Zhao	zhaoza@lsbu.ac.uk
BEng (Hons) Electrical Engineering and Power Electronics (old program - L5/L6 live)	Manoj Ponugubati	ponugubm@lsbu.ac.uk
Chemical and Energy Engineering		
BEng/MEng (Hons) Chemical Engineering	Anna-Karin Axelsson	axelssa2@lsbu.ac.uk
BEng/MEng (Hons) Chemical & Energy Engineering	Anna-Karin Axelsson	axelssa2@lsbu.ac.uk
Beng/MEng (Hons) Chemical & Process Engineering	Anna-Karin Axelsson	axelssa2@lsbu.ac.uk
HND Chemical Engineering	Achilleas Constantinou	constaa8@lsbu.ac.uk
Extended Degree Programme in Engineering	Maria Centeno	centenom@lsbu.ac.uk
MSc Petroleum Engineering	Maria Centeno	centenom@lsbu.ac.uk
MSc Chemical Engineering and Process Management	Anna-Karin Axelsson	axelssa2@lsbu.ac.uk

Original Course Specification

For reference, the following pages contain the original teaching and learning schedule of this course, prior to the changes implemented in response to Covid-19.

<table>
<tr><th colspan="5">A. Course Information</th></tr>
<tr><td>Final award title(s)</td><td colspan="2">BEng(Hons) Top-up in Engineering</td><td>Course Code(s)</td><td>5095</td></tr>
<tr><td>Intermediate award title(s)</td><td colspan="4"></td></tr>
<tr><td>Awarding Institution</td><td colspan="4">London South Bank University</td></tr>
<tr><td>School</td><td colspan="4">☐ ASC ☐ ACI ☐ BEA ☐ BUS ☒ ENG ☐ HSC ☐ LSS</td></tr>
<tr><td>Division</td><td colspan="4">Mechanical Engineering and Design</td></tr>
<tr><td>Delivery site(s) for course(s)</td><td colspan="4">☒ Southwark ☐ Havering
☐ Other: please specify</td></tr>
<tr><td>Mode(s) of delivery</td><td colspan="4">☒Full time ☐Part time ☐ Both</td></tr>
<tr><td>Length of course</td><td colspan="4">Full time:1 year</td></tr>
<tr><td rowspan="3">Approval dates:</td><td colspan="2">Course(s) validated</td><td colspan="2"></td></tr>
<tr><td colspan="2">Course specification last updated
and signed off</td><td colspan="2"></td></tr>
<tr><td colspan="2">Version number</td><td colspan="2"></td></tr>
<tr><td>Professional, Statutory & Regulatory Body accreditation</td><td colspan="4">Non-accredited top-up programme</td></tr>
<tr><td rowspan="2">Reference points:</td><td>Internal</td><td colspan="3">– LSBU Mission Statement and Strategic Plan;
– LSBU Core Skills Policy;
– LSBU Academic Regulations</td></tr>
<tr><td>External</td><td colspan="3">– QAA -Subject benchmark statement Engineering, 2015
– Framework for Higher Education Qualifications (QAA, 2015)
– THE ACCREDITATION OF HIGHER EDUCATION PROGRAMMES- UK Standard for Professional Engineering Competence (AHEP3 2014)</td></tr>
<tr><td colspan="5">B. Course Aims, Features and Outcomes</td></tr>
<tr><td>Distinctive features of course</td><td colspan="4">The BEng (Hons) Top-up degree in Mechanical Engineering and Design is distinctive in that it enables students with a HND from selected partner institutions to enhance their knowledge in key areas of interest. It builds on the course taught at HND level, in areas of Manufacturing, Power & Plant Engineering and develops and extends knowledge and understanding further, coupled with the required software tools that together enable graduates to tackle complex and challenging projects in the broader</td></tr>
</table>

	Engineering world, at a graduate level. Students benefit from an established

	academic team that maintains a strong research output. The course has significant laboratory-based practical teaching to support the rigorous lecture material. Successful completion of the BEng (Hons) Top-up course would allow graduates access to our suite of postgraduate taught master's degrees and potentially the option to pursue Membership of the relevant professional body and ultimately registration as an Incorporated or Chartered Engineer.
Course Aims	**<u>General Course aims:</u>** The programme shares with other BEng engineering programmes the aim to produce engineering graduates who have demonstrated the following abilities. • Systematic understanding of key aspects of their field of study, including acquisition of coherent and detailed knowledge, at least some of which is at, or informed by, the forefront of defined aspects of a discipline. • Ability to deploy accurately established techniques of analysis and enquiry within a discipline. • Conceptual understanding that enables them: o To devise and sustain arguments, and/or to solve problems, using ideas and techniques, some of which are at the forefront of a discipline. o To describe and comment upon particular aspects of current research, or equivalent advanced scholarship, in the discipline. • Appreciation of the uncertainty, ambiguity and limits of knowledge. • Ability to manage their own learning and to make use of scholarly reviews and primary sources (for example, refereed research articles and/or original materials appropriate to the discipline). • Ability to apply the methods and techniques that they have learned to review, consolidate, extend and apply their knowledge and understanding, and to initiate and carry out projects. • Be able to critically evaluate arguments, assumptions, abstract concepts and data (that may be incomplete), to make judgments, and to frame appropriate questions to achieve a solution - or identify a range of solutions - to a problem. • Know how to communicate information, ideas, problems and solutions to both specialist and non-specialist audiences. • Have the qualities and transferable skills necessary for employment requiring: o The exercise of initiative and personal responsibility. o Decision-making in complex and unpredictable contexts. o The learning ability needed to undertake appropriate further training of a professional or equivalent nature. • Be able to apply a professional engineering approach in their activities including innovation and enterprise. **<u>Specific course aims (Mechanical Engineering and Design)</u>**

	From a more technical point of view, the BEng (Hons) Top-up in Engineering aims to produce graduates who have acquired and can use a broad base of active knowledge in the area of Mechanical Engineering. Apart from acquiring the basic knowledge there is also scope to learn skills necessary to update, extend and deepen it for career development or further study. This includes: • Committed and able to follow a career in Mechanical Engineering allowing progression to Chartered Engineer professional status. • Awareness of best current practice within industry, and future trends. • Industry-critical skills such as working effectively as part of a team and/or providing the leadership for the team. • Effective communication skills enabling the exchange of ideas with specialist professionals and with the public at large. • Continual Professional Development (CPD) skills including critical self-awareness, reflection, independent judgement, responsibility for decisions, original thinking, managing own learning and making use of scholarly reviews and primary sources. • Systematic and broad understanding of the key topics within Mechanical Engineering together with the skills needed to update, extend and deepen in further study and future career development. • Understanding of a cognitive map of topics within the Mechanical Engineering subject area incorporating knowledge and understanding of core Mechanical Engineering topics such as Thermofluids, design analysis and Manufacturing Systems underpinned by understanding of relevant science and engineering topics such as Mathematics, Statics, Materials Science, Computing and Control Systems. • Competent practical skills including basic manufacturing and measurement skills, awareness of advanced manufacturing and instrumentation techniques to inform design choices. • Ability to set up projects and manage them, approach design problems with creativity and see all tasks to successful completion underpinned by an understanding of innovation and enterprise.
Course Outcomes	The defined learning outcomes used in this course specification are those published by the Engineering Council in the UK Standard for Professional Engineering Competence (UK-SPEC): **General Learning Outcomes** (UK-SPEC) **Knowledge and Understanding:** Graduates must be able to demonstrate their knowledge and they must have an appreciation of the wider multidisciplinary engineering context and its underlying principles. They must appreciate the social, environmental, ethical, economic and commercial considerations affecting the exercise of their engineering judgement. **Teaching and learning strategies:** Acquisition of knowledge and understanding is in the main through the following modules:

- Innovations and Enterprise L6
- Design Analysis L6
- Manufacturing Systems L6
- Thermofluids and Turbomachinery L6
- Individual BEng Project L6

All of these modules teach and develop knowledge and understanding within a multidisciplinary engineering context and those at higher levels involve a degree of commercial awareness through design of systems to specifications.

Assessment
Assessment is through examinations and also practical work and assignments using logbooks and formal reports.

Intellectual Abilities:
Graduates must be able to apply appropriate quantitative science and engineering tools to the analysis of problems. They must be able to demonstrate creative and innovative ability in the synthesis of solutions and in formulating designs. They must be able to comprehend the broad picture and thus work with an appropriate level of detail.

Teaching and learning strategies:
Acquisition of IA is gained through the specialist level 6 modules as well as the level 6 BEng honours project. In these modules students are taught the appropriate tools to solve engineering problems. Innovation is covered in the module entitled Innovation and Enterprise at level 6 which develops business ideas from innovative research and development activities.
Assessment
Assessment of IA is through presentations and also formal reports at various stages of project work including a feasibility study. Innovation and design skills are assessed by group work as well as a formal report.

Practical skills:
Graduates must possess practical engineering skills acquired through, for example, work carried out in laboratories and workshops; in industry through supervised work experience; in individual and group project work; in design work; and in the development and use of computer software in design, analysis and control. Evidence of group working and of participation in a major project is expected. However, individual professional bodies may require particular approaches to this requirement.

Teaching and learning strategies:
- Acquisition of PS is acquired during the practical laboratory sessions which constitute a part of nearly every module for this course.
- Thermofluids and Turbomachinery at Level 6 offers classical IC engine workshops as well as a variety of computer based

		laboratory exercises. Further development of these skills is acquired in the Level 6 Individual Project.

	• Further development of these skills is acquired in the Level 6 individual project. **Assessment** PS is assessed by log books, coursework assignments and also the level 6 individual project which includes a presentation and a viva voce examination. **General transferable skills:** Graduates must have developed transferable skills that will be of value in a wide range of situations. These are exemplified by the Qualifications and Curriculum Authority Higher Level Key Skills and include problem solving, communication, and working with others, as well as the effective use of general IT facilities and information retrieval skills. They also include planning self-learning and improving performance, as the foundation for lifelong learning/CPD. **Teaching and learning strategies:** Acquisition of GTS is achieved through communication of knowledge in formal reports. These constitute a part of the assessment for the majority of modules on the course to include, ▪ Innovations and Enterprise L6 ▪ Design Analysis L6 ▪ Manufacturing Systems L6 ▪ Thermofluids and Turbomachinery L6 ▪ Individual BEng Project L6 **Assessment** GT skills are assessed by formal reports, presentations and viva voce examinations of the L6 individual project.
C. Entry Requirements	
Pre-requisites for this course	• Higher National Diploma with at least 60 credits at merit in second year modules, or • other equivalent Higher Education qualification in a relevant area • *The course director will ensure that all applicants meet and exceed the required pre-requisites on a case by case basis where a pre-inspection of the L5 or equivalent curriculum has not been performed.*
Co-requisites for this course	None
Qualifications required for this course	We welcome applicants with qualifications from around the world. English language qualifications for international students: IELTS score of 6.0, TOFEL-550 (print-based), TOFEL- 80 (internet-based), Cambridge Proficiency or Advanced Grade C.
D. Additional Information	
Course structure(s)	**This course is delivered across one academic year:**

Course	Semester-1	Semester-2	
BEng(Hons) ***Mechanical Engineering and Design*** *(Top-up)*	*Innovation and Enterprise L6*	Manufacturing Systems L6	120 Credits
	Design Analysis L6	Thermofluids and Turbomachinery L6	
	Individual BEng Project L6		

E. Course Modules

Modules in BEng (Hons) Top-up in Mechanical Engineering and Design				
Module Code	**Module Title**	**Level**	**Semester**	**Credit value**
ENG-6-422	Innovations and Enterprise	6	1	20
ENG-6-???	Design Analysis	6	1	20
ENG-6-452	Thermofluids and Turbomachinery	6	2	20
ENG-6-487	Manufacturing Systems	6	2	20
ENG-6-424	BEng Final Year Project	6	1&2	40

This course delivers 120 credits at L6 over two semesters thereby meeting the minimum requirements for BEng (Hons) degree assuming 240 credits were awarded for credit transfer from the partner institution HND degree. Awards would be classified as per normal honours degree. Students achieving 2.2 and above would be encouraged to progress onto a suitable MSc program

List of Appendices

Appendix A1: Curriculum Map
Appendix A2: LSBU Program Outcomes

Appendix B: Personal Development Planning

Appendix A1: Curriculum Map for BEng (Hons) Mechanical Engineering and Design (Top-up)

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.

Units			Programme outcomes																				
Module Information			Knowledge & Understading			Intellectual Skills				Practical Skills								Transferable Skills				
Level	Title	Code	A1	A2	A3	B1	B2	B3	B4	C1	C2	C3	C4	C5	C6	C7	C8	D1	D2	D3	D4	D5
6	Innovations and Enterprise	ENG-6-422			D									D		TAD		TAD	TA	D	TA	TA
6	Design Analysis	ENG-6-???	TAD	TAD	TAD	TA	TAD	TA			TA	TA			TA	TA		TA	TA	TA		
6	Thermofluids and Turbomachinery	ENG-6-452	TA	TA	TA	TA	TA	TA				TA	TA				TAD					TA
6	Manufacturing Systems	ENG-6-487	TA	TA		TA		TA			TA		TA		TA	TAD	TAD		TA	TA	TA	
6	BEng Final Year Project	ENG-6-424	TAD	TAD	TAD	TAD	TAD	TAD	TAD	TAD	TAD	TAD	TAD	TAD	TAD	TAD	TAD	TAD	TAD	TAD	TAD	TAD

Key to abbreviations used in the above table: T- Taught;
A- Assessed;
D-Developed.

Appendix A2: LSBU Program Outcomes as drawn from the Subject Bench Mark statement for Engineering

Knowledge and Understanding:

A1: Knowledge and understanding of scientific principles and methodology necessary to underpin their education in their engineering discipline, to enable appreciation of its scientific and engineering context, and to support their understanding of historical, current, and future developments and technologies.
A2: Knowledge and understanding of mathematical principles necessary to underpin their education in their engineering discipline and to enable them to apply mathematical methods, tools and notations proficiently in the analysis and solution of engineering problems.
A3: Ability to apply and integrate knowledge and understanding of other engineering disciplines to support study of their own engineering discipline and related disciplines.

Intellectual Skills:

B1: Understanding of engineering principles and the ability to apply them to analyse key engineering processes.
B2: Ability to identify, classify and describe the performance of systems and components through the use of analytical methods and modelling techniques.
B3: Ability to apply quantitative methods and computer based engineering tools, in order to solve both familiar and unfamiliar engineering problems.
B4: Understanding of and ability to apply a systems approach to engineering problems.

Practical Skills:

C1: Understanding of contexts in which engineering knowledge can be applied (e.g. operations and management, technology development, etc).
C2: Extensive knowledge of characteristics of particular materials, equipment, processes, or products.
C3: Workshop and laboratory skills including ability to Communicate their work to technical and non-technical audiences.
C4: Understanding use of technical literature and other information sources.
C5: Awareness of nature of intellectual property and contractual issues.
C6: Understanding of appropriate codes of practice and industry standards.
C7: Awareness of quality issues.
C8: Ability to work with technical uncertainty.

Transferable Skills

D1: Investigate and define a problem and identify constraints including environmental and sustainability limitations, health and safety and risk assessment issues;
D2: Ensure fitness for purpose for all aspects of the problem including production, operation, maintenance and disposal;
D3: Identify and manage cost drivers; Manage the design process and evaluate outcomes. Work individually and as part of a team.
D4: Knowledge of management techniques, which may be used to achieve engineering objectives within that context;
D5: Awareness of the framework of relevant legal requirements governing engineering activities, including personnel, health, safety, and risk (including environmental risk) issues.

Appendix B: Personal Development Planning

A variety of terms are used in higher education to describe a process undertaken by individuals to gather evidence on, record and review their own learning and achievement, and identify ways in which they might improve themselves academically and more broadly. The term Personal Development Planning (PDP) is proposed to describe a structured process undertaken by an individual to reflect upon their own learning, performance and/or achievement and to plan for their personal educational and career development. The purpose of this tool is to help HE
teaching staff to explain where PDP is being used within a course or portfolio of modules.

Approach to PDP	Level 6
1 Supporting the development and recognition of skills through the personal tutor system.	At Level 6 CD and Project Supervisor support the Personal Tutoring system.
2 Supporting the development and recognition of skills in academic modules/modules.	At L6 students keep log books but additional transferable skills are developed by setting longer assignments, dissertations and mini projects involving information selection, retrieval and evaluation, for example: Innovation and Enterprise L6, Individual Project L6.
3 Supporting the development and recognition of skills through purpose designed modules/modules .	Innovation and Enterprise – this module develops skills required to manage the process of gathering, analysing, criticizing and disseminating information which students will use in their engineering career. A series of weekly lectures in S1 provides students with guidance and practical advice to further develop specific skills such as information searches, referencing, software documentation, data presentation, and practical design, prototyping and testing. This module also develops project management skills of students.
4 Supporting the development and recognition of skills through research projects and dissertations work.	The main individual Project will require the student to develop and demonstrate skills including: • Project planning and time management • Keeping a detailed project log book • Technical report writing and presentation • Preparation of material and participation in an oral technical presentation session with other students and staff • Preparation for an individual oral examination (viva). All of these components form part of the project assessment in addition to the technical aspects.
5 Supporting the development and recognition of career management skills.	The Innovations and Enterprise module encourages students to consider the wider context of their course and careers.

6 Supporting the development and recognition of career management skills through work placements or work experience.	This is normally arranged as part of gap year or summer placements for students progressing from L5 to L6. These students, since start at L6, would gain a similar insight through lectures and talks arranged through alumni and guest speakers.
7 Supporting the development of skills by recognising that they can be developed through extra curricula activities.	Generally Developed at L5 study
8 Supporting the development of the skills and attitudes as a basis for continuing professional development.	Students are made aware of the need for CPD in the level 6 module Innovation and Enterprise. Students are encouraged to join their respective professional body (such as the IET, IMechE or IED etc..)
9 Other approaches to personal development planning.	The project supervisor and course director, will help with PDP for L6 students with more coherent advise along the lines of specialist knowledge gained as part of the module, which often is a strong factor in gaining employment in the relevant area.
10 The means by which self-reflection, evaluation and planned development is supported e.g. electronic or paper-based learning log or diary.	Project students meet their supervisors at least once every fortnight where progress is monitored and objectives are discussed. In the individual Project, students are expected to keep a logbook that provides a platform for skills development.