

**Programme Specification**

**Title of Course:** MSc Structural Design and Construction Management

Including the pathway:

MSc Structural Design and Construction Management with Sustainability

**Date Specification Produced:** Dec 2012

**Date Specification Last Revised:** Feb 2020

This Programme Specification is designed for prospective students, current students, academic staff and potential employers. It provides a concise summary of the main features of the programme and the intended learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. More detailed information on the teaching, learning and assessment methods, learning outcomes and content of each module can be found in Student Handbooks and Module Descriptors.

**SECTION 1: GENERAL INFORMATION**

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| **Title:** | MSc Structural Design and ConstructionManagementIncluding the pathway:MSc Structural Design and ConstructionManagement with Sustainability |
| **Awarding Institution:** | Kingston University |
| **Teaching Institution:** | Kingston University |
| **Location:** | Penrhyn Road, Kingston |
| **Programme Accredited by:** | Joint Board of Moderators (JBM) comprising The [Institution of Civil Engineers](https://www.ice.org.uk/) (ICE), the [Institution of Structural Engineers](http://www.istructe.org/Pages/SeDefault.aspx) (IStructE), the [Chartered Institution of Highways and Transportation](http://www.iht.org/) (CIHT), and the [Institute of Highway Engineers](http://www.ihie.org.uk/) (IHE) |

**SECTION 2: THE PROGRAMME A. Programme Introduction**

This postgraduate course is designed for graduate civil and / or structural engineers with developing careers in the construction industry who aspire to move into senior management positions in structural design practice and / or management of construction projects. It is a unique course both in terms of its delivery that is designed for part time students in full employment and, its combination of subjects that open the horizons of employment in either consulting engineering practices or construction contracting organisations. The course is also ideal for graduate engineers starting their career in the construction industry as it would enhance their employability potential.

This degree is accredited by the Joint Board of Moderators (JBM), who represent four professional industry bodies, under licence from the Engineering Council, as a non-technical MSc contributing to the requirements for Further Learning for a Chartered Engineer (CEng) for candidates who have already acquired an Accredited CEng (Partial) BEng (Hons) or an Accredited IEng (Full) BEng/BSc (Hons) undergraduate first degree.

The course provides a strategic overview of construction management issues as well as a deep and broad knowledge of advanced structural engineering. The structural engineering part includes structural design of standard and innovative structures and substructures using modern materials, state-of-the-art techniques and latest codes of practice. The management part covers financial, legal and contractual problems associated with the construction process and, application of management techniques and contract administration in the supervision of construction projects.

The research dissertation enables students to conduct a sustained, in-depth, original research related to complex theoretical arguments within a technical field of the construction industry.

**Pathway**: Students taking the Sustainability pathway consider the concept of Sustainable Development (i.e. "development that meets the needs of the present without compromising the ability of future generations to meet their own needs") and its implementation in the Construction Industry. The programme focuses on the challenges and opportunities for the

Cement & Concrete Industry in meeting the demands of sustainability and it is supported by

The Concrete Centre.

With sustainability being a key issue for the 21st century, students studying this pathway will acquire specialist sustainability knowledge and skills that enable them to perform distinct but highly needed roles, such as “sustainability manager” for both Consultants and Contractors.

The programme also helps develop employment-ready students through an integrated industrial experience in the form of a professional work placement on the two year version of the programme.

This integrated placement provides students with an exciting opportunity to apply and develop their knowledge and skills in a real-world setting, which enables them to develop their self-confidence. Students undertaking such placement activities are in a stronger position to gain the skills and experience that employers desire today.

**B. Aims of the Course**

The course aims to:

 Produce graduates with a detailed advanced knowledge and understanding of structural design and construction management and to allow graduates to acquire interpersonal, problem-solving & subject-specific skills and, the ability to analyse, evaluate and reflect upon issues in those areas

 Develop graduates with research and investigative skills and a critical and research- oriented approach to the study of structural design and construction management

 Provide graduates with Further Learning as required to contribute to the educational base for a Chartered Engineer

 Offer an opportunity to graduates for life-long learning and continuing professional development that meets current and future market demands and significantly enhances their career opportunities

 Create a unique and dynamic educational environment that seeks to benefit from the practical experience of mature and part-time students

In addition, the aim of the course with pathway Sustainability is to:

 Produce graduates with a detailed advanced knowledge and understanding of sustainable construction.

**C. Intended Learning Outcomes**

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, cognitive skills and subject practical skills as outlined in the following table. The learning outcomes are referenced to the QAA subject benchmarks for Engineering (2015) and the Framework for Higher Education Qualifications in England, Wales and Northern Ireland (2008)

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| **Programme Learning Outcomes** |
|  | **Knowledge and Understanding**On completion of the course students will be able to: |  | **Intellectual Skills**On completion of the course students will be able to: |  | **Subject Practical Skills**On completion of the course students will be able to: |
| A1 | Advanced methods in the design ofstructures in concrete and steel | B1 | Submit areas studied to critical analysis andevaluation | C1 | Carry out the conceptual & detaileddesign of modern structures in concrete or steel using state-of-the- art design techniques and up-to- date design codes |
| A2 | Advanced methods in the design of structures subjected to seismic actions**(MSc Structural Design and****Construction Management only)** | B2 | Analyse problems and issues, taking due account of any incompleteness of data or information, and arrive at well-reasoned and supportable conclusions**(MSc Structural Design and Construction****Management only)** | C2 | Carry out sophisticated analysis and design of structures subjected to seismic actions using latest methods and design codes**(MSc Structural Design and****Construction Management only)** |
| A3 | Advanced methods in the design ofsubstructures and foundations | B3 | Carry out independent data collection andsynthesise it so as to resolve problems/issues | C3 | Design and critically reviewsolutions to substructures and foundations |
| A4 | Procurement strategies, estimating &tendering procedures and controlling cost of projects | B4 | Think originally, creatively and imaginativelyto solve problems | C4 | Advise on the appropriateprocurement route, the evaluation of tender returns and the conversion of an estimate into a tender |
| A5 | Project management tools and techniquesincluding risk, health & safety and quality management | B5 | Carry out a critical literature review and,design & develop a programme of independent research and data collection/analysis | C5 | Use project management tools andtechniques to assess risk and control quality |
| A6 | Sustainable construction and theenvironmental, social and economic credentials of concrete as applied in practice**(MSc Structural Design and Construction Management with Sustainability only)**  | B6 | Analyse problems and issues, taking dueaccount of any incompleteness of data or information, and arrive at well-reasoned and supportable conclusions**(MSc Structural Design and Construction****Management with Sustainability only)** | C6 | Analyse, evaluate and reflect uponissues of sustainable structural design and construction management using concrete **(MSc Structural Design and****Construction Management with****Sustainability only)** |

In addition to the programme learning outcomes identified overleaf, the programme of study defined in this programme specification will allow students to develop a range of Key Skills as follows:

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| **Key Skills** |
| **Self Awareness Skills** | **Communication Skills** | **Interpersonal Skills** | **Research and****information Literacy****Skills** | **Numeracy Skills** | **Management &****Leadership Skills** | **Creativity and Problem****Solving Skills** |
| Take responsibility forown learning and plan for and record own personal development | Express ideas clearlyand unambiguously orally and in writing | Work effectively withothers in a group | Search for and selectrelevant sources of information | Collect data fromprimary and secondary sources and use appropriate methods to manipulate and analyse these data | Determine the scopeof a task or project | Apply scientific andother knowledge to analyse and evaluate information and data and to find solutions to problems |
| Recognise ownacademic strengths and weaknesses, reflect on performance and respond to feedback | Present, challengeand defend ideas and results effectively orally and in writing | Work flexibly andrespond to change | Critically evaluateinformation and use it appropriately | Present and recorddata in appropriate formats | Identify resourcesneeded to undertake the task or project and schedule andmanage the resources | Work with complexideas and justify judgements made through effective use of evidence |
| Organise effectively,agreeing and setting realistic targets, accessing support and managing time to achieve targets | Listen actively andrespond appropriately to ideas of others | Discuss and debatewith others and make concessions to reach agreement | Apply the ethical andlegal requirements in the access and use of information | Interpret andevaluate data to inform and justify arguments | Show the ability tosuccessfully complete and evaluate a task or project, revising the plan where necessary |  |
| Work effectively with limited supervision | Prepare reports in prescribed andrecommended forms | Give, accept and respond toconstructive feedback | Accurately cite and reference informationsources using the recommended standard method | Be aware of issues of selection, accuracyand uncertainty in the collection and analysis of data | Motivate and direct others to enable aneffective contribution from all participants |  |
|  |  | Show sensitivity and respect for diversevalues and beliefs | Use software and ICTas appropriate |  |  |  |

**D. Entry Requirements**

The minimum entry qualification for the programme is a good honours degree (not less than

2.2) or academic equivalent in Civil Engineering or a construction related discipline, and/or suitable industrial experience. The requirement of an honours degree may be waived for

exceptional applicants with substantial industrial experience in related subject areas. Overseas students are required to satisfy the Admissions Officer that they have reached an

equivalent academic standard as those required for home students.

A minimum International English Language Testing System (IELTS) score of 6.5 overall with

6.0 in Writing and 5.5 in Reading, Listening and Speaking or equivalent is required for those for whom English is not their first language.

**E. Course Structure**

This course is made up of modules that are designated at level 7. The course comprises four taught modules worth 30 credits each and a dissertation worth 60 credits. The dissertation comprises research methods, a research proposal, an oral presentation and the final dissertation. The minimum requirement for an MSc is 180 credits i.e. the successful completion of the four 30-credit modules and the dissertation. The minimum requirement for a PgDip is 120 credits i.e. the completion of the four 30-credit modules. The minimum requirement for a PgCert is the successful completion of 60 credits. The course offers the PG Certificate as an exit award only and is based on the student passing any coherent subset of the taught modules. All students will be provided with information about the regulations in the student handbook.

The Course is offered as 1 year full-time, and normally 2-3 years part-time. Students are able to commence the programme in September or January each year. Taught module lectures and tutorials will be held from September to May each academic year. Students will work on their dissertation between May and the following September. Part-time students will normally complete their taught modules over the course of the two years and complete their dissertation between May and September of their second year.

Normally, each module will include approximately 60 hours contact time, followed by directed learning resulting in a total of 300 hours of student effort. The dissertation is the equivalent of two modules and requires 600 hours of student effort.

**E1. Professional and Statutory Regulatory Bodies**

JBM comprising the Institution of Civil Engineers, the Institution of Structural Engineers, the Chartered Institution of Highways and Transportation, and the Institute of Highway Engineers and CIOB (Chartered Institute of Building).

**E2. Work-based learning, including sandwich programmes**

The 2-year version of the programme is designed to include work-based learning through assessments and the reflective report. Many of the students on the programme are already working and they can use that experience to relate to theoretical concepts and to evaluate the relationship between theory and practice.

While it is the responsibility of individual students to secure such placements, the Careers and Employability Service support offers each student support at all stages of the application process, including writing CVs, completing application forms, participating in mock interviews, assessment centre activities and psychometric tests. The process of applying for a placement gives students the opportunity to experience a real-life, competitive job application process.

The business experience period enables students to apply their learning in the real-world work environment, to reflect upon their own personal experience of working in an applied setting, to focus on aspects of this experience that they can clearly relate to theoretical concepts and to evaluate the relationship between theory and practice. Students will be assessed during and at the end of this period, normally through a portfolio. This will be marked as pass/fail.

Students who undertake work-based placements often benefit greatly from the experience, gaining real experience and work achievements.

**E3. Outline Programme Structure**

All students will be provided with the University Regulations and specific additions that are sometimes required for accreditation by professional bodies. Full details of each module will be provided in module descriptors and module information on Canvas.

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| **MSc Structural Design and Construction Management (all core) level 7** |
| **Compulsory modules** | **Module code** | **Credit****Value** | **Level** | **Teaching****Block** |
| Management of Project Risk,Quality and Safety | CE7011 | 30 | 7 | 1 |
| Seismic Design of Structures andSubstructure Design | CE7111 | 30 | 7 | 1 |
| Structural Design in Concrete andSteel | CE7112 | 30 | 7 | 2 |
| Estimating, Tendering andProcurement | CE7013 | 30 | 7 | 2 |
| Technical Dissertation | CE7116 | 60 | 7 | 3 |
| *Professional Placement (optional)* | *CI7900* | *30* | *7* | *See below* |

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| **MSc Structural Design and Construction Management with Sustainability (all core) level 7** |
| **Compulsory modules** | **Module code** | **Credit****Value** | **Level** | **Teaching****Block** |
| Management of Project Risk,Quality and Safety | CE7011 | 30 | 7 | 1 |
| Sustainable Construction andSubstructure Design | CE7113 | 30 | 7 | 1 |
| Structural Design in Concrete andSteel | CE7112 | 30 | 7 | 2 |
| Estimating, Tendering andProcurement | CE7013 | 30 | 7 | 2 |
| Technical Dissertation | CE7116 | 60 | 7 | 3 |
| *Professional Placement (optional)* | *CI7900* | *30* | *7* | *See below*  |

Students starting the course in September and January will work on the placement for between 10 – 12 months. The suitability of the placement requires the approval of the Course Leader.

Students on placement must complete a portfolio assessment which includes a reflection on how the theories they have learnt during their teaching year have helped them in their placement and demonstrate ability to apply their teaching in a real world situation

**F. Principles of Teaching, Learning and Assessment**

This Course has been designed taking into account the Kingston University Curriculum Design Principles to help develop student learning from dependent to independent learning and encourage lifelong learners. A wide range of teaching and learning methods is utilised, allowing students to be fully engaged throughout the Course. Teaching, learning and assessment methods are constructed to suit the learning outcomes and syllabus content of the modules. The assessment regime of a module is designed to provide formative opportunities that allow students to improve their performance following feedback in preparation for later summative assessment. Key skills are developed throughout the Course, which are assessed formatively and summatively. Students also have access to the Academic Success Centre for additional support on a drop-in basis giving students the opportunity to take responsibility for their own achievements and consequent learning. Generally the Course will be delivered by instructional lectures whilst associated tutorials and design classes are used to enhance the lecture material.

The learning and teaching strategies are formulated to promote and develop key transferable skills which are considered central to academic, vocational and personal development. These skills underpin how students learn, their ability to recognise their own achievements and the ability to review and evaluate that achievement and identify future learning requirements. The Course is devised to encourage and develop students with confident interpersonal and communication skills, as well as emphasising group work, data analysis and ICT skills.

Computer aided practical sessions are a fundamental part of the course, enabling students to apply the design process through practical application and offering another form for communicating ideas. Technology enhanced learning is used throughout many of the modules in the course. Examples in structures modules include Computer Aided Learning packages for steel and concrete design. In a number of Management modules, the use of different software tools has a direct connection to the students’ employability skills when suitably developed.

**Teaching and Learning Strategies: Taught Modules**

Module information on Canvas, which is published before the start of each module, provide guidance to students on the scope, aims, outcomes and demands of each module and of the preparatory reading and reflection required for each seminar. It is intended that lectures and tutorials be used to provide an opportunity for the student to develop and practise the skills required for the module assessment (such as the analysis of problem scenarios, the critical evaluation of rules, ideas and opinions, group work etc.), to give guidance on private study and to provide an opportunity for the exchange and development of ideas by means of group interaction.

In general, there is no regulatory attendance requirement for the taught modules. However, a student cannot submit the Research Proposal and the Dissertation without having first attended the Research Methods.

The majority of the learning time of the student in relation to the taught modules will be spent in Guided Independent Study, consisting of:

 Directed learning, giving the student specific tasks in preparation for, and in support of, class-based programmes, for example, the preparation of oral or written presentations, case analysis etc.

 Private learning time, comprising the preparation of material for seminars and workshops, reviewing of ideas introduced during contact time and directed research and development through reading, using recommended reading as a starting point.

 Preparation of assessed work.

**Teaching and Learning Strategies: Technical Dissertation**

*The Research Methods*

The Research Methods (which will comprise the equivalent of three days of seminars) aims to equip students with the knowledge and skills sufficient to plan and complete the

dissertation.

*The Research Proposal and Dissertation*

This will involve preparation of a proposal, an evolving discussion of that proposal between student and supervisor, data collection (if appropriate), literature search, analysis and

conclusions. The precise subject-matter of the dissertation must be technical and connected with a subject related to structural design.

**Assessment Strategies**

The overall aims of the assessment strategies are to enable the student to demonstrate that they have met the aims and outcomes of each individual module, to help facilitate the achievement of the overall course aims, to enable the student to measure their level of achievement at each stage of the programme, to highlight individual strengths and weaknesses of the student and to accurately reflect the student’s abilities in determining the award to be made to the student.

A combination of assessment methods will be used throughout the course. These elements include module assignments, module examinations, in-class tests, experiment reports, industrial visit reports, seminars, oral presentations and the project dissertation. Each module leader is responsible for ensuring that the method of assessment reflects the aims and learning objectives of the module, is demanding and stimulating and at the appropriate Masters level.

**Research Informed Teaching**

Many academic staff are engaged in a range of research and consultancy activities funded by the Research Councils, the European Union, the Government, trade unions and industry. These activities ensure our staff are in touch with the latest industry thinking and bring best practice to your studies. Current PhD students are also invited to provide lectures on their area of research where it is relevant to the taught programme.

In many of the modules guest lectures are given by professionals from industry who are expert in their field. The use of guest lecturers provides students with up-to-date information on current industry practices.

Engineering research within the Faculty of Engineering, Computing and the Environment is organised into a number of research centres, which provide focus and encourage the cross- fertilisation of ideas. In addition, the School’s strategy is fully supported by an active Industrial Advisory Board comprising of academics and professionals from industry who meet quarterly.

The School’s Centre for Engineering, Environment and Society Research (CEESR) provides a vibrant research community that students’ join right from the start. PhD students assist in the classroom and the labs and many PG students choose a research subject for their dissertation and, sometimes, follow it up with a PhD. With regard to Professional Practice, the School is pushing the boundaries of learning through professional practice by a) providing teaching that is continuously informed by professional practice b) employing academics who actively engage in the development of their professional discipline and c) enabling students to fulfil professional employment.

The research themes in CEESR cover a wide range of topics including:

1. Civil Engineering and Construction

2. Earth, Environmental and Social Sciences

3. Fire, Explosion and Fluid Dynamics

4. Nano-materials and Composites

5. Medical Engineering

6. Ground and Aerospace Transportation Engineering

7. Energy

**G. Support for Students and their Learning**

Students are supported by:

 A Module Leader for each module

 A Course Leader to help students understand their programme structure and provide academic support

 A Personal Tutor to provide academic and personal support

 A Student Support Officer who provides additional pastoral and practical advice and support, especially to students with difficulties

 A dedicated Postgraduate Course Administrator

 An induction programme and study skills sessions at the start of each academic year

 An Academic Success Centre to provide support and advice to students on a daily ‘drop-in’ basis

 Canvas – a versatile on-line interactive intranet virtual learning environment (VLE)

accessible both on-site and remotely

 A Student Voice Committee (SVC) with student Course Representatives for each level

 A University Careers and Employability Service

 Comprehensive university support systems including the provision of advice on finance, regulations, legal matters, accommodation, international student support,

disability and equality support.

 The Students’ Union

 An Academic Team that seek to maintain an open door policy in the spirit of supporting students.

**Personal Tutor Scheme (PTS) in the School of Engineering and the Environment**

The following provides the aims and structure of the Personal Tutor Scheme (PTS) for the School of Engineering and the Environment. It is intended that the PTS is embedded within the core curriculum module in each MSc course.

**Aims**

 To build a rapport between staff and students and contribute to personalising

students’ experience within the School of Engineering and the Environment

 To support students in the development of their academic skills providing appropriate advice and guidance to students throughout their time at Kingston, while monitoring

their progress, helping to identify individual needs and referring students to other

University services as appropriate

 To help students to develop the ability to be self-reliant and confident self-reflective learners who use feedback to their best advantage

 To explore students’ research aspirations

 To reflect on how to use feedback at Masters level, and also contribute to, and learn from constructive peer review

 To encourage students to reflect learning relates to a wider context and their professional career development

**Allocation of Personal Tutors**

Personal tutors will be allocated during induction week on a course basis. Students will keep the same tutor throughout their course of study





The PTS is embedded in core curriculum modules in each MSc course and for all students in the module CE7016 Dissertations, and it is adopted practice the allocated supervisors to be the personal tutors. For the short period before allocating dissertation supervisors the Course Leader is acting as Personal Tutor for all students.

There are specific aims and outcomes for each course that will be assessed, as the PTS is a progressive and cumulative scheme building on the skills developed at undergraduate levels. Formative assessment will be provided in the form of regular feedback during meetings when the student will be able to put forward draft work for evaluation. Reference to the PTS is also included in the standard agenda on SSCCs, with the purpose of promoting a two-way conversation between students and staff.

**Specific aims of PTS at Level 7: Getting the most out of the Masters Course**

 To help students to make the transition to Masters level study and understand how to use feedback on the postgraduate course

 To encourage students to be proactive in making links between their course and their professional and/or academic aspirations

 To explore students’ research aspirations

 To help students gain confidence in contributing to, and learning from, constructive peer review

 To encourage students to become part of a wider disciplinary and/or professional community

 To help students to prepare for the dynamics of supervision

**H. Ensuring and Enhancing the Quality of the Course**

The University has several methods for evaluating and improving the quality and standards of its provision. These include:

 External Examiners

 Boards of Study with student representation

 Annual review and development

 Periodic review undertaken at the subject level

 Student evaluation

 Moderation policies

Quality is also assured by the requirement for professional bodies (CIOB and JBM) reaccreditation, generally at a five year interval.

**I. Employability Statement**

This curriculum embeds the development of employability skills throughout the course and is designed to equip students with the ability to relate the knowledge and skills that they have learnt to real world contexts in which they work or may work in the future. The use of expert guest lecturers from industry and having an active Industrial Advisory Board are both important assets for students attending the programme.

In order to stimulate student and academic interaction the social and professional media network ‘LinkedIn’ is utilised to encourage discussion and promote business opportunities for both current and former students.

This Course has been designed to support the curriculum requirements of Further Learning for Chartered Engineer (CEng) status. Most graduates already will aspire to have careers in the construction industry and to becoming Chartered Engineers. The course will give them the educational base to achieve the latter. Graduates develop careers in all branches of the civil engineering industry, both in the UK and throughout the world; as contractors and consulting engineers, and within local authorities, water authorities, government organisations and the defence industry

This programme will also prepare graduates for senior technical and managerial positions such as Civil/ Structural Engineer, Technical Manager, Designer/ Consultant, Project Engineer, Construction Engineer, Construction Manager, Engineering Consultant, Project Manager.

**J. Approved Variants from the Postgraduate Regulations**

There are no variants from PG Regulations

**K. Other sources of information that you may wish to consult**

Engineering subject benchmark:

<http://www.qaa.ac.uk/docs/qaa/subject-benchmark-statements/sbs-engineering-15-masters.pdf?sfvrsn=fb91f681_16>

Professional bodies: [www.ice.org.uk/](http://www.ice.org.uk/) [www.istructe.org/](http://www.istructe.org/)

[www.](http://www/)[theihe.org/](http://theihe.org/)

[www.ciht.org.uk/](http://www.ciht.org.uk/)

Professional accreditation (Structural Engineering):

[www.jbm.org.uk/](http://www.jbm.org.uk/)

<http://www.engc.org.uk/>

Construction Management accreditation:

<https://www.ciob.org/>

School Website:

<https://www.kingston.ac.uk/faculties/science-engineering-and-computing/about/schools/engineering/>

**Technical Annex**

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| **Final Award(s):** | MSc Structural Design and Construction ManagementMSc Structural Design and Construction Management with Professional PlacementMSc Structural Design and Construction Management with SustainabilityMSc Structural Design and Construction Management with Sustainability with Professional Placement |
| **Intermediate Award(s):** | Postgraduate Diploma (PgDip)Postgraduate Certificate (PgCert) – as an exit award only |
| **Minimum period of registration:** | Full-time = 1 year Part-time = 2 years |
| **Maximum period of registration:** | Full-time = 2 years Part-time = 4 years |
| **FHEQ Level for the Final Award:****Credit rating by level:** | Masters180 credits @ level 7 or 300 credits @ level 7 with PP |
| **QAA Subject Benchmark:** | N/A |
| **Modes of Delivery:** | Full-time, Part-time and Full-time with Professional Placement |
| **Language of Delivery:** | English |
| **Faculty:** | Engineering, Computing and the Environment |
| **School:** | Engineering and the Environment  |
| **JACS code:** | H200   |
| **UCAS Code:** | N/A |
| **Course Code: SDCM (FT/PT/PP)**  **SDCM with Sust. (FT/PT/PP)** | PFSDE2CMN01/ PPSDE2CMN03/ PFSDE2CMN99 PFCMS1CMS01 / PPCMS1CMS01 / PFCMS1CMS99 |
| **Route Code: AS ABOVE** |  |