Programme Specification
MSc Environmental Sustainability

Date of Publication to Students [2015]

NOTE: This specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if s/he takes advantage of the learning opportunities that are provided. More detail on the specific learning outcomes, indicative content and the teaching, learning and assessment methods of each module can be found (1) at https://icity.bcu.ac.uk/cebe, (2) in the Module Specifications and (3) in the Student Handbook.

The accuracy of the information contained in this document is reviewed by the University and may be checked within independent review processes undertaken by the Quality Assurance Agency.

Awarding Institution / Body:	**Birmingham City University**
Teaching Institution:	**Faculty of Computing, Engineering & The Built Environment (CEBE)** **Birmingham City University (BCU)**
Interim Awards and Final Award:	**PG Certificate, PG Diploma, MSc**
Programme Titles:	**Environmental Sustainability (Strategy & Management)**
	Environmental Sustainability (Design & Construction)
Main fields of Study:	**Dynamic Natural Environments; Society, Economics & Environment; Sustainable Futures; Green Design; and Energy Trends and Technologies**
	Dependent on pathway, other subjects studied will include: Management Tools for Sustainability; Complexity, Conflict & Resolution; Management, Leadership & Innovation; or Digital Design Management; Sustainable Design Practice; and Innovation in Construction.
Modes of Study:	**Full & Part time**
Language of Study:	**English**
UCAS Code:	**n/a**
JACS Code:	**n/a**

Professional Status of the programme (if applicable):

This programme will seek accreditation from The Institute of Environmental Management and Assessment (IEMA), The Royal Institution of Chartered Surveyors (RICS) and the The Chartered Institute of Architectural Technologists (CIAT).

Relevant subject benchmark statements and other external reference points used to inform programme outcomes:

QAA Benchmarking Document: Education for sustainable development:
                               Guidance for UK higher education providers
                               QAA763 - June 14

Programme philosophy and aims

Course Overview

This programme is designed to encourage and foster the skills needed for inter-disciplinary working amongst graduates and professionals from a variety of backgrounds employed within the environmental sector.

Sustainability and Sustainable Development are widely used terms with various interpretations and applications across different industrial, commercial, charitable and governmental organisations. Even at the simplest level, a balance between economic profit, social benefit and environmental protection can be difficult to achieve. There are often no easy answers to the problems faced and conflicts of interest between parties are common. The environmental planners, managers and consultants of today and the designers, technologists and policy makers of the future need to understand and assess the 'big picture' if they are to provide realistic, holistic and sustainable solutions.

The programme offers students the possibility of following one of of two different pathways designed to allow for a degree of specialism within the context of this generalist approach. The themes currently offered are 'Strategy & Management' and 'Design & Construction'.

Students take five modules common to both psthways plus three specialist modules. In addition, students undertake a Masters Research Project which may take the form of a dissertation, practice-based study or design study that is linked to their chosen specialism. Further details can be found under the section entitled 'Programme Structure' below.

The course provides a natural progression from existing undergraduate courses at BCU and elsewhere.

Thematic Structure

The programme has a core theme of connectivity. As such students will be exposed to the multi-scalar problems of sustainability to highlight the different levels (or scales) of problems and their associated range of perspectives, and to examine the relationships between these issues. The course particularly emphasises the 'connectedness' within and between economic, social and environmental systems, and how interpretations of problems and proposed solutions are sensitive to their geographical, cultural, commercial, political and/or technological context. For example, a specific solution may appear sustainable at a local level but has implications for the wider environment (e.g. dilute and disperse treatments of pollution). Conversely, a global initiative may struggle to succeed at a local level because of political realities (e.g. implementation of the Kyoto Protocol). This idea that 'local' initiatives have to operate within 'global' confines and that 'global' solutions need translation to the 'local' context will be embedded throughout the course.

The course will also contain sub-themes aimed at ensuring that graduates are equipped with a range of knowledge: environmental planning, management and evaluation tools, design methodologies, and generic employability skills to best position themselves in the job market.

Primary Aim and Objectives of the Programme

The central aim of the programme is:

> **To identify, implement and evaluate the processes and outcomes needed to create a more environmentally sustainable society.**

The objectives of the programme are as follows:

- to critically assesses environmental theory and inform good practice;

- to respond to the growing demand for environmental managers, planning practitioners, technologists and strategists both in the UK and overseas;

- to enable students to develop the skills required to assess, analyse and offer practicable sustainable solutions to environmental problems;

- to provide students with an understanding of the need to interpret law across a wide range of environmental subject areas;

- to enable active and autonomous learning to be developed through the use of real problems and case study materials;

- to develop key skills including problem-solving abilities, practical competencies, critical appraisal and communication skills; and

- to encourage inter-disciplinary working amongst graduates and professionals from a variety of backgrounds employed within the environmental sector.

Intended learning outcomes and the means by which they are achieved and demonstrated:

Learning Outcomes[1]

In order to achieve the aims of the course, the learning outcomes are related to each of the following four main areas:

- Knowledge and understanding;

- Intellectual skills;

- Practical skills;

- Transferable skills.

Knowledge and Understanding

To provide students with a knowledge and understanding of:

1. The principles of sustainable development and its relationship to the environment.

2. The natural processes that shape the environment and the ways in which they have been and are influenced by man.

3. The development of environmental legislation and policy including knowledge of forthcoming legislation.

4. The meaning and nature of environmental governance

5. Business and management methods that enable the successful implementation of appropriate techniques and technologies related to environmental sustainability.

6. The social and economic motivations and implications of environmental decision-making.

Intellectual Skills

Students will be able to:

1. Argue rationally and draw independent conclusions based on a rigorous, analytical and critical approach to demonstration and argument.

2. Synthesise theory and practice to design/implement a range of solutions.

3. Assess and resolve issues relating to competing demands on resources.

4. Demonstrate, through problem solving, a high level of competence and understanding of data manipulation, information presentation and delivery.

---

[1] Guidance on the specification of learning outcomes is available from the Centre for the Enhancement of Learning and Teaching.

5. Appraise new technologies and techniques designed to solve present and future environmental problems.

Practical Skills

Students will be able to:

1. Access information from the internet, journals, books, research papers and appraise its suitability for master's level research.

2. Demonstrate the ability to work autonomously or as a member of a team and accept responsibility for actions taken.

3. Interpret and critically evaluate knowledge, concepts and ideas and/or forms of creative expression, to deliver a quality product or service.

4. Apply the knowledge, skills and methodologies of sustainability to the analysis and solution of complex problems.

5. Use relevant analytical and modelling techniques to plan and complete environmental projects.

Transferable Skills

Students will be able to:

1. Elicit the co-operation of others and contribute to team goals.

2. Manage their time effectively and prioritise workloads.

3. Access and make appropriate use of relevant mathematical, statistical and theoretical information.

4. Use various forms of communication and expression, then to employ them selectively, appropriately and effectively according to the requirements of the solution.

5. Plan and deliver presentations, lead discussions and facilitate arguments in an eloquent and professional manner, making use of a computer-based presentation aids, where appropriate.

6. Show confidence, self-awareness and self-reliance through critical reflection.

Pro-forma issued January 2009

Learning teaching, and assessment methods used

Knowledge and Understanding

- Face-to-face traditional lecture, seminar, tutorial, self-directed study and peer review sessions.

- Directed independent learning activities are encouraged at all stages of the course.

- Knowledge and understanding are acquired through rich media web based curricula and use of collaborative technologies where appropriate.

- Knowledge and competence assessment is undertaken by tutors and peers. This is both formative and summative and includes seminars, viva-voce, coursework, practical case studies, theory projects, time constrained examinations, and practical assessments.

- Students are supported beyond the traditional face-to-face delivery by appropriate tools and technologies developed to support collaborative working.

Intellectual Skills

- Intellectual skills are developed through teaching and learning programme previously outlined.

- Analytical and problem solving skills are further developed using a range of appropriate 'real' and 'theoretical' case-studies and problem based learning scenarios.

- The formative assessments are to be used to monitor progress and to feed this progress back to the student.

- Assessment can include practical work, individual written coursework, group presentations, individual and group reports, practical assessments, closed and open book time constrained examinations.

Practical Skills

- The acquisition of appropriate and transferable practical skills is central to the learning strategy of the programmes.

- Initiative and independence are fostered throughout, and develop incrementally as the course progresses.

- Emphasis is place on guided, self-directed and student-centred learning, with increasing independence of approach, thought and process.

- Learners are encouraged to plan their own work schedules and are required to meet strict deadlines.

Pro-forma issued January 2009

- Learners, who go on to do the MSc element of the course are required to plan and execute a related research or design project.

- The research approaches element of the research project provides the vehicle for the development of research and learning skill developments.

Transferable skills

- Transferable/key skills are core to the learning strategy of the programme. They are pervasive, and are incorporated into work units and assessments as appropriate, for example; team-working skills are fostered through the use of group, task-based practical projects.

- The use of information technology plays an integral role throughout the course.

- A full range of resources are identified including books, journals as well as locally created material.

Assessment Methods

A range of assessment methods are employed, assessment criteria being published in each assignment brief. Knowledge and skills are assessed, formatively and summative, by a number of methods, which may include coursework, examinations, presentations, practical assignments, viva's, online forums, podcasts, and project work.

Programme structure and requirements, levels, modules, credits and awards

Regardless of the pathway followed, students take 4 x 15 credit modules at PG Certificate level and 4 x 15 credit modules at PG Diploma level. The final award of the Masters degree follows successful completion of either a research or consultancy based project worth a total of 60 credits.

Diagrams of the course structure for each pathway are set out below (C = common module; S = module shared with another programme):

Environmental Sustainability (Strategy & Management)

Semester A	Dynamic Natural Environments (C)	Society, Economics & Environment (C)	Green Design (C)	Management Tools for Sustainability
Semester B	Sustainable Futures (C)	Energy Trends & Technologies (C)	Complexity, Conflict & Resolution	Management, Leadership & Innovation
MSc	Masters Research Project			

Environmental Sustainability (Design & Construction)

Semester A	Dynamic Natural Environments (C)	Society, Economics & Environment (C)	Green Design (C)	Digital Design Management (S)
Semester B	Sustainable Futures (C)	Energy Trends & Technologies (C)	Sustainable Design Practice	Innovation in Construction (S)
MSc	Masters Research Project			

Support for Learning including Personal Development Planning (PDP)

Students are encouraged to identify and, with guidance, to reflect on their own learning needs and are offered the following support as appropriate to meet those needs:

- An induction programme dealing with orientation and the dissemination of essential information including the philosophy of the course;

- An introductory session dealing with writing assignments and referencing;

- A Student Handbook, containing information relating to the University, the Faculty and the School, the course and the modules;

- Access to administrative staff and academic staff, including Programme Director and Head of School, at reasonable times;

- Fully resourced Learning Centre available at City Centre Campus;

- A virtual learning environment to support students remotely via collaborative tools

- and technologies;
- An introductory session dealing with using web based technologies and how to learn best using these;
- Access to the services of the Faculty librarian;
- Access to Faculty Student Support Tutors;
- Access to the University's Student Services, including those offered by the careers service, financial advisers, medical centre, disability service, crèche, counselling service, chaplaincy and Centre for Enhancement of Learning and Teaching;
- Group tutorials;
- Individual tutorials: face to face, email correspondence and over the telephone;
- A number of the modules have lectures by practitioners which makes the academic programme more accessible and more useful to practice.

Criteria for admission

Candidates must satisfy the general admissions requirements of the programme, which are as follows:

Applicants must satisfy the general admissions requirements of the programme. One of the following is normally required:

- A good UK honours degree at 2:2 or above / equivalent; or
- An equivalent overseas qualification in a relevant subject

Students who do not possess the above qualifications may, if they have relevant professional experience, be invited to an interview and/or to take a test, at which they will be required to demonstrate the necessary knowledge and understanding for entry onto the course.

Overseas students need to demonstrate a good command of English. The university standard for postgraduate education will be required to enrol on this programme.

Methods for evaluation and enhancement of quality and standards including listening and responding to views of students

The following committees/boards and procedures are in place to ensure the maintenance and enhancement of quality and standards, and also to give students a mechanism for effective communication and consultation:

Committees/Boards:
- School Academic Boards
- Faculty Student Experience Learning and Teaching Committee
- Faculty Academic Board
- Quality Operations Group

Mechanisms for review and evaluation:
- School Academic Boards
- Student Academic Leaders
- School Representatives
- Student Success Advisors
- Review and approval events
- Annual monitoring
- Student feedback questionnaires
- External Examiners' Reports
- Course team meetings and Away Days