

Programme Specification

Awarding Body/Institution	Queen Mary, University of London
Teaching Institution	Queen Mary, University of London
Name of Final Award and Programme Title	MSc Environmental Science by Research
Duration of Study / Period of Registration	12 months FT/24 months PT
QM Programme Code / UCAS Code(s)	F8S3, F8S4
QAA Benchmark Group	N/A
FHEQ Level of Award	Level 7
Programme Accredited by	N/A
Date Programme Specification Approved	29 Jun 2011
Responsible School / Institute	School of Geography

Schools also involved in teaching part of the programme

Programme Rationale

The MSc in Environmental Science by Research is designed to provide students with advanced level training in environmental science, enabling them to undertake research on a topic of their choice. The programme sits alongside our MSc Environmental Science: Integrated Management of Freshwater Environments (IMFE), but differs from IMFE by having a larger research and smaller taught component. Students registered for the MSc in Environmental Science by Research take 60 credits worth of taught modules alongside pursuing a substantial research dissertation worth 120 credits.

The programme reflects the distinctive research interests and expertise of the School of Geography and is particularly aimed at students planning to undertake further research, perhaps via a PhD. Unlike some other UK Environmental Science MSc degrees, it is a flexible programme that can be tailored to students particular interests.

As well as preparing students for future research, the degree also develops the employability of students. For example, a recent report published by the Environment Research Funders Forum (ERFF) identifies the key skills requirements of the UK environment sector (including business, government and the research base). Several of the 'most wanted' skills identified (e.g. multi-disciplinarity, data management, numeracy, modelling and fieldwork) are addressed by the MSc Environmental Science by Research programme.

The MSc in Environmental Science by Research will appeal to students in the UK who have completed first degrees in Physical Geography, Environmental Science, Earth Science and Biological Sciences. Environmental Science is also a subject area commanding overseas interest, sometimes from practitioners and professionals seeking to develop their skills. A number of overseas governments sponsor students to undertake higher degrees in Environmental Science and this programme should appeal to those seeking to extend their research skills and understanding.

Educational Aims of the Programme

The programme aims to:

- provide students with the opportunity to investigate, in detail and to research standards, a topic of interest to them within environmental science.
- give students the opportunity to explore the main research approaches used within environmental science and the debates on these approaches.
- provide students with training in key research methods and techniques that can be applied to their own research, in industry as an environmental practitioner and for pursuing an academic career.
- introduce students to a wide range of environmental knowledge and understanding at the forefront of the academic discipline informed by active research in the School's Hydrogeomorphological and Biogeochemical Processes, and Environmental Change research groups.
- develop a wide range of intellectual, discipline-specific and key skills.
- develop a critical awareness of, and a continuing sense of enquiry in, environmental science.
- foster a range of personal attributes relevant to the world beyond higher education.

Learning Outcomes

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, skills and other attributes in the following areas. The programme outcomes are referenced to the relevant QAA benchmark statement(s) (see above) and the Framework for Higher Education Qualifications in England, Wales and Northern Ireland (2008), and relate to the typical student. Additionally, the SEEC Credit Level Descriptors for Further and Higher Education 2003 and Queen Mary Statement of Graduate Attributes have been used as a guiding framework for curriculum design.

Knowledge and understanding of:

A 1	The nature and scope of environmental science research.
A 2	The range of research approaches used within environmental science.
A 3	The research process.
A 4	Past and current research literature on a specific topic of interest within environmental science.
A 5	The contribution of your own research to the wider understanding of a specific topic.

Intellectual skills - able to:

B 1	Articulate and investigate testable research questions in environmental science.
B 2	Evaluate the utility of different research approaches for investigating a specific topic.

B3	Design and plan a workable programme of research.
B4	Synthesise information from a range of sources, including your own research.
B5	Critically evaluate and analyse results from a range of sources, including your own research.

Transferable skills - able to:	
C1	Work autonomously and with others.
C2	Develop critical self-awareness and self-management.
C3	Demonstrate initiative, personal responsibility and intellectual integrity.
C4	Communicate effectively in written and oral formats.
C5	Design, implement and manage a project.
C6	Undertake fieldwork and/or laboratory work (including computer laboratory) independently to research standards.

Practical skills - able to:	
D1	Utilise specific laboratory analytical and/or field investigation techniques.
D2	Use appropriate quantitative and/or qualitative methods to analyse data.
D3	Prepare and deliver an oral presentation.
D4	Organise and express ideas and data effectively in written format.

Teaching, Learning and Assessment Strategies

This programme is taught by members of academic staff in the School of Geography. The School of Geography is committed to developing, maintaining and supporting excellence in teaching and learning, to innovation in teaching practice, and to fostering independent learning and critical thinking in our students, whilst providing appropriate levels of support to students in their learning.

The programme is delivered through a selection of taught compulsory modules and an independent research project (core). All modules are assessed via coursework. The taught modules are delivered via lectures, seminars, one-one supervision, and attendance at research presentations by outside speakers and staff within the School. The project is supervised on a one-one basis by a member of the physical geography lecturing staff.

Students have access to a wide range of learning resources within the College. These include: the College Library, the University of London Library at Senate House and the first rate resources of other libraries with London collections (e.g. the British Library); a range of IT resources including networked PCs (with full internet and email privileges), and electronic learning resources (e.g. electronic academic journals); the Graduate School in the Social Sciences and Humanities, including the facilities of the 'Lock Keeper's Cottage' bordering the Regent's Canal (seminar room, a common room with kitchen facilities and three work rooms with additional computing resources).

All students are allocated a supervisor with whom they will meet on a regular, one-to-one basis throughout the programme. Supervisors will have some expertise in the student's proposed area of dissertation research and may be drawn from across the School.

Programme Structure(s) and Requirements, Levels and Modules

The programme has compulsory (30 credits) and elective (30 credits) taught components, which collectively make up one third of the programme (60 credits). The majority of the programme is based around researching and presenting as a dissertation, a piece of independent research (120 credits) which will be supervised by one of the physical geography lecturing staff. The dissertation will be graded by two examiners (one external) as a written piece of work.

The COMPULSORY taught component is as follows:

GEG7206 Environmental Science Research and Practice (15 credits) - COMPULSORY

This module will introduce students to the wider context in which environmental science research is placed and also the research approaches that can be taken. It will enable students to engage with a wide range of research debates in environmental science and to develop understanding of, and skills in, various methods of disseminating research findings, including presentation and communication skills.

GEG7205 Data Analysis (15 credits) - COMPULSORY

Students in Environmental Science require a range of numerical, statistical and modelling skills to undertake higher-level analysis of environmental data-sets. This module provides training and experience in specific approaches to data analysis relevant to individual students or groups of students. This will include one-to-one or small group workshops on specific statistical methods, but the precise content of the teaching will be specific to the needs of the cohort in each year.

The ELECTIVE taught component is as follows:

ONE of the following two modules:

GEG7204 Project-specific Research Training (15 credits) - ELECTIVE

OR

GEG7306 Field and Laboratory Methods for Freshwater Environmental Science (15 credits) - ELECTIVE

AND any ONE of the following modules:

GEG7301 Aquatic Systems: Hydrological, Hydrochemical and Geomorphological Processes (15 credits) - ELECTIVE

GEG7303 Biogeochemistry: Carbon, Nutrients and Pollutants in Aquatic Systems (15 credits) - ELECTIVE

GEG7304 Catchment Hydrology: Managing Water Resources and Hydrological Extremes (15 credits) - ELECTIVE

GEG7305 Desk Study (15 credits) - ELECTIVE

GEG7307 Hydrogeomorphology: River and Floodplain Appraisal and Management (15 credits) - ELECTIVE

The remainder of the programme is made up of an independent research project.

GEG7202 Independent Research Project (120 credits) - CORE

The remainder of the programme (120 credits) will consist of researching, and presenting as a dissertation, a piece of independent research, which will be supervised by one of the physical geography lecturing staff.

The pass mark for each unit of assessment, each module and for the dissertation is 50%. A mark of 70% or above is a distinction. Candidates must pass ALL modules to be awarded the MSc. One failed module may be condoned at the discretion of the MSc Geography Examination Board if the failure is considered of a marginal nature (a mark of between 30% and 49%).

A candidate for the Masters degree who achieves an average mark of 70% over all elements of the programme, and a mark of at least 65% in the dissertation, may be recommended for the award of the degree with Distinction. A candidate for the Master's Degree who achieves an average of 65% or above over the whole programme of study may be recommended for the award of the degree with Merit.

	Module Title	Module Code	Credits	Level	Module Selection Status	Academic Year of Study	Semester
X	Environmental Science Research and Practice	GEG7206	15	7	Compulsory	1	Semester 1
X	Aquatic Systems: Hydrological, Hydrochemical and Geomorphological Processes	GEG7301	15	7	Elective	1	Semester 1
X	Biogeochemistry: Carbon, Nutrients and Pollutants in Aquatic Systems	GEG7303	15	7	Elective	1	Semester 2
X	Catchment Hydrology: Managing Water Resources and Hydrological Extremes	GEG7304	15	7	Elective	1	Semester 2
X	Field and Laboratory Methods for Freshwater Environmental Science	GEG7306	15	7	Elective	1	Semester 1
X	Hydrogeomorphology: River and Floodplain Appraisal and Management	GEG7307	15	7	Elective	1	Semester 2
X	Data Analysis	GEG7205	15	7	Compulsory	1	Semester 1
X	Desk Study (TBC)	GEG7305	15	7	Elective	1	Semester 2
X	Project-specific Research Training	GEG7204	30	7	Elective	1	Semesters 1 & 2
X	Independent Research Project	GEG7202	120	7	Core	1	Semesters 1-3

Criteria for Admission to the Programme

Normally an upper second class honours degree or higher in Geography, Earth or Environmental Sciences or a cognate discipline (or equivalent international qualification) together with two supportive academic references. We actively encourage applications from students who have developed an interest in any aspect of environmental science at undergraduate level, and/or who have relevant work experience. Candidates are expected to have good English language ability and to meet the standard of the IELTS – or equivalent – at a level of 7.0. International students should refer to the country-specific admissions information on the 'International students' webpage (www.qmul.ac.uk/international/).

Quality Assurance Mechanism

Include details of: SSLC meetings, student feedback mechanisms, personal tutor arrangements, programme induction, programme review and monitoring.

Programme Review and Management will be undertaken as and when necessary under the direction of the MA/MSc Director, the Teaching and Learning Committee and the School Quality Enhancement Committee. A module and programme evaluation system is also undertaken whereby students can feedback their experiences and report any problems. In addition, an opportunity for students to meet with the programme's external examiner at the end of the degree to discuss their experiences is provided. Programme convenors are also required to fill in an annual review of their programme taking both student evaluations and achievements into account. These feed back to the Teaching and Learning Committee.

Programme convenor arrangements are overseen by the MA/MSc director. The Programme convenor is responsible for the overall running of the MSc. They will hold one-to-one individual meetings with students during induction week to assist in

selecting modules, and allocating a supervisor. The Programme Convenor is the first person for students to consult in relation to queries about the structure of the programme. They also act as a point of liaison between the student and other members of staff and between the students and the College (in relation to registration etc). The Programme Convenor is the first person to be consulted if illness or other problems result in difficulties in meeting coursework deadlines. If the problem escalates then the MA/MSc Director will be consulted. All complaints about the programme are raised first with the Programme Convenor. If these cannot be resolved the issue will be raised with the MA/MSc Director who may contact the Head of School or the College Academic registrar. A guide for masters students is provided as a hard copy during the induction day and it is also available online.

Comprehensive programme induction is delivered via an induction day in the School of Geography that is provided for all incoming students during Welcome Week (the week before formal teaching commences). This is used as an opportunity to acquaint new students with the format of the programme and expectations of them. Students also receive a library induction. All students meet with the programme Convenor during this week to talk about module selection and how to manage the enrolment process. Students with special educational needs have the opportunity to talk to their adviser about how the College can best support them, and to agree with the students how to communicate those needs to appropriate members of staff. The student mentor scheme involves new MSc students being assigned a postgraduate mentor from the Graduate School. This will be a fellow student who can help with information and advice about the school and the experience of being a postgraduate.

Graduate School Committee provides a formal means of communication and discussion between the School and its postgraduate students. The committee consists of postgraduate student representatives together with some members of staff (including the Director of Graduate Studies, the MA/MSc Director and programme convenors). There are elections for postgraduate members at the start of each academic year. It is designed to respond to the needs of students and meets regularly throughout the year. Taught postgraduate students also sit on the School's Staff-Student Liaison Committee, providing an additional mechanism for communication. Matters raised in these committees are reported to the rest of the School staff (via the Teaching and Learning Committee, the School Quality Enhancement Committee or the School Board Meeting) so that they can take action as appropriate.

Programme-specific Assessment Regulations (if applicable)

In the case of programmes that deviate / do not comply with the Academic Regulations further information regarding the nature of any difference and/or deviation should be stipulated in detail.

N/A

Employers Links

Please provide details of any links with employers e.g.

- Details of advisory panels that include current or potential employers;
- Organisations that regularly employ graduates from this programme and the roles that graduates undertake.
- Student prizes donated by organisations that may offer employment to graduates from this programme.

If there are no links with employers consider the learning outcomes and transferable skills and explain how these might be used to inform employers about the qualities and skills a graduate from this programme might be expected to have.

The programme will equip students with a range of transferable skills and attributes sought by diverse graduate employers, in line with the Queen Mary Statement of Graduate Attributes. In addition, the programme will provide students with knowledge and understanding relevant to employment in organisations such as Environment Agency, Defra, Natural England, Centre for Ecology and Hydrology, British Geological Survey and environmental consultancies. The opportunity to develop links with partner organisations as part of the research project will create work experience opportunities and provide insights into the structure and operation of these organisations.

Programme Title: MSc Environmental Science By Research

Programme Specification Approval

Person completing Programme Specification

Dr Lisa Belyea

Person responsible for management of programme

Dr Lisa Belyea

**Date Programme Specification produced/amended
by School or teaching and learning committee**

**Date Programme Specification approved by
Programme and Module approval Board**

29 Jun 2011