MSc in Environmental Management (full-time)
For students entering in 2014/5

Awarding Institution:	University of Reading
Teaching Institution:	University of Reading
Relevant QAA subject Benchmarking group(s):	n/a
Faculty:	Science Faculty
Programme length:	1 year
Date of specification:	14/Oct/2014
Programme Director:	Dr Elizabeth Shaw
Programme Advisor:	
Board of Studies:	Soils and Environmental Pollution
Accreditation:	none

Summary of programme aims
This MSc aims to provide a thorough understanding of the key scientific and socio-economic principles of environmental management and their relationships with current policy and regulatory processes. It also aims to equip students with relevant technical, research and business skills that underpin the application of environmental management in society, industry and government.

It is intended that students will gain an understanding of (i) the human impact on the natural environment and natural resources; and (ii) how that impact can be managed from a natural and social science perspective.

Transferable skills
The following transferable skills are provided:

* information technology;
* quantitative and qualitative problem-solving;
* communication in written, visual and oral forms

Programme content
Compulsory modules (140 credits):

Code	Module title	Credits	Level
APME58	Resource and Environmental Economics	10	7
GVMWEM	Waste and Environmental Management	10	7
APMA91	Environmental Management: Principles and Practice	10	7
HEM01	Research Skills and Career Learning	10	7
APMA102	Ecosystem Services	10	7
GVMRSD	Resilience for Sustainable Development	20	7
LWMTEE	EU Environmental Law	10	7
GVMRPEM	Research Project	60	7

Optional modules
Students should choose optional modules totalling 40 credits from the lists below. Choices must be made in consultation with the Programme Director and subject to timetabling constraints and availability, with no less than 160 credits out of the total 180 being at Level 7. When choosing modules, students are encouraged to align their options to one of the streams indicated below and it is recommended that they take one of the following recommended level 7 modules on qualitative/ quantitative research methods; the choice of module to be informed by past statistical training and likely topic of the research project:
GVMQAD Quantitative Analysis of Environmental Data (10 credits)
APME40 Qualitative Research Methods (10 credits)
Stream1: Contaminated and Urban Environments

Code	Module title	Credits	Level
GVMBIO	Soil Microbiology and Biotechnology	10	7
GVMCON	Soil Contaminants	10	7
GVMTPS	Transport Processes in Soil	10	7
GVMREM	Remediation	10	7
GVMPSIA	Practical Site Investigation and Assessment	10	7

GVMSWQ	Soils and Water Quality	10	7
GVMCLM	Contaminated Land Management	10	7
BIMEY7	Living Landscapes	10	7

Stream 2: The Changing Environment

GV3AP	Air Pollution: Effects and Control	20	6
GV342	Environmental Modelling	20	6
GV362	Water Resources	10	6
APMA90	Climate Change and Food Systems	10	7
GVMESS	Earth Systems Science	10	7
GV3CC	Climate Change	20	6
IDM068	Extractive Industries	10	7
IDM073	Environment and Development: Problems and Policies	10	7
IDM074	Environment and Development: Case Studies	10	7
APME68	The Ecological Economics of Climate Change	10	7
APME69	Climate Change Policy and Governance	10	7
GVMCGC	Carbon and Global Change	10	7

Stream 3: Agricultural and Rural Environments

APMA41	Agriculture in the Tropics	10	7
APMA62	Nematodes as Pests and Beneficials	10	7
APMA89	Water, Agriculture and Irrigation	10	7
APMA90	Climate Change and Food Systems	10	7
APMA92	Rethinking Agricultural Development: Implementing Solutions	10	7
APMA93	Experimental Agriculture	10	7
APME73	Appraisal of Agricultural and Rural Planning	10	7
APME72	Agricultural Project Planning and Management in Developing Countries	20	7
IDM073	Environment and Development: Problems and Policies	10	7
IDM074	Environment and Development: Case Studies	10	7

Part-time or modular arrangements

Part time participants may either follow all the modules taught in the Autumn term in their first year and all the modules taught in the Spring term in their second years or alternatively may follow half the modules form the Autumn and Spring terms in both their first and second years. The most appropriate arrangements for the individual applications will be discussed with the Programme Director. Part time students will be encouraged to consider running a long-term research project over the two years that they are registered on the course but may carry out their research project in either their first or second year, again as is appropriate to their circumstances.

Progression requirements
n/a

Summary of Teaching and Assessment

Teaching is through a combination of lectures, seminars, practicals, computer-based self-taught exercises, site visits and talks by invited speakers. Assessment is through a combination of exams, assessed practicals, essays, scientific reports and presentations.

The University's taught postgraduate marks classification is as follows:

Mark Interpretation
70 - 100% Distinction
60 - 69% Merit
50 - 59% Good standard (Pass)

Failing categories:
40 - 49% Work below threshold standard
0 - 39% Unsatisfactory Work

For Masters Degrees

To pass the MSc students must gain an average mark of 50 or more overall including a mark of 50 or more for the dissertation. In addition the total credit value of all modules marked below 40 must not exceed 30 credits and for all modules marked below 50 must not exceed 55 credits.

Students who gain an average mark of 70 or more overall including a mark of 60 or more for the dissertation and have no mark below 40 will be eligible for a Distinction. Those gaining an average mark of 60 or more overall including a mark of 50 or more for the dissertation and have no mark below 40 will be eligible for a Merit.

For PG Diplomas

To pass the Postgraduate Diploma students must gain an average mark of 50 or more. In addition the total credit value of all modules marked below 40 must not exceed 30 credits and for all modules marked below 50 must not exceed 55 credits.

Students who gain an average mark of 70 or more and have no mark below 40 will be eligible for the award of a Distinction. Those gaining an average mark of 60 or more and have no mark below 40 will be eligible for a Merit.

For PG Certificate

To pass the Postgraduate Certificate students must gain an average mark of 50 or more. In addition the total credit value of all modules marked below 40 must not exceed 10 credits.

Normally, candidates registered for a diploma will complete the taught courses offered in the Autumn and Spring terms and candidates registered for a certificate will complete the taught courses offered in the Autumn or Spring term.

Admission requirements

Entrants to this programme are normally required to have obtained a second class honours degree in a related field, e.g. Environmental Science, Earth / Geoscience, Chemistry, Biology, Geography and Agriculture. Applications from those with no first degree but who have previous experience may also be considered.

Admissions Tutor: Dr. E. J. Shaw

Support for students and their learning

University support for students and their learning falls into two categories.   Learning support is provided by a wide array of services across the University, including: the University Library, the Careers, Placement and Experience Centre (CPEC), In-sessional English Support Programme, the Study Advice and Mathematics Support Centre teams, IT Services and the Student Access to Independent Learning (S@il) computer-based teaching and learning facilities. There are language laboratory facilities both for those students studying on a language degree and for those taking modules offered by the Institution-wide Language Programme.   Student guidance and welfare support is provided by Personal Tutors, School Senior Tutors, the Students' Union, the Medical Practice and advisers in the Student Services Centre. The Student Services Centre is housed in the Carrington Building and offers advice on accommodation, careers, disability, finance, and wellbeing, academic issues (eg problems with module selection) and exam related queries. Students can get key information and guidance from the team of Helpdesk Advisers, or make an appointment with a specialist adviser; Student Services also offer drop-in sessions and runs workshops and seminars on a range of topics. For more information see www.reading.ac.uk/student

Career prospects

On completion of this course, graduates may expect to find employment in the Environmental Sector, specifically within consultancies, local government and government research agencies, industry and within academia.

Opportunities for study abroad or for placements

During their research projects, students may be based abroad or with the UK at consultancies, governmental agencies, research institutes or industrial bodies provided the Programme Director is satisfied that suitable facilities and supervision are available to them.

Programme Outcomes

Knowledge and Understanding

A. Knowledge and understanding of:

1. Environmental and natural resource problems arising from the activity of humans
2. Scientific and socioeconomic principles of the management of human impacts on natural environments
3. Managed environments and the ecosystem services they provide
4. Techniques and processes involved in site investigation and risk assessment
5. Sources, processing and disposal of waste materials
6. Issues associated with population change, pollution, resource use, poverty and climate change at global and local scales
7. Key areas of environmental law and regulation in England and Wales and Europe
8. Statistical methods and their application to environmental data
9. Experimental and survey design and sampling strategy

Teaching/learning methods and strategies

Lectures, laboratory and field practicals, seminars, group discussions, videos, presentations by industrial practitioners, site visits, data handling exercises, computer-based exercises.

Assessment
Practical reports, examination, essays, computer and laboratory-based practicals

Skills and other attributes

B. Intellectual skills - *able to:*

1. Explain how environmental economics can be used to understand the processes which have given rise to environmental problems and identify appropriate policy measures to contradict them.
2. Explain the main issues and concepts associated with sustainable development and assess the process of change to more sustainable systems
3. Evaluate ecosystem services provided in a range of environments and the impact of human activities on their provision.
4. Outline strategies and procedures for site investigation, risk assessment and environmental management
5. Illustrate sources and pathways of pollution and disposal routes for industrial and domestic waste
6. Discuss key areas of environmental law and regulation in England and Wales, including the impact of EU law
7. Plan and carry out a research project

Teaching/learning methods and strategies

Lectures, laboratory and computer based practicals

Assessment
Exams, essays, team debates, written reports, project thesis and presentation.

C. Practical skills - *able to:*

1. Analyse environmental data using classical and spatial statistical methods
2. Use computer packages to graphically present field data
3. Carry out risk assessments and site

Teaching/learning methods and strategies

Laboratory practicals, seminars, lectures, independent research project

Assessment
Laboratory and/or field reports, project thesis and

investigations

4. Use laboratory skills to characterise the biological, physical and chemical components of the environment
5. Plan and carry out a research project

D. Transferable skills - *able to:*

1. Produce word documents containing tables, numbered and bulleted lists, a variety of fonts, graphics and pictures.
2. Sort data and perform basic arithmetic and statistical procedures within Excel
3. Produce charts and graphs in a variety of formats using Excel
4. Produce slides for a presentation within the PowerPoint package that include text, bullet points, drawings, use of pre-set animations for the appearance of text
5. Give clear presentations on science and social science topics
6. Effectively use library and internet resources to search and retrieve information
7. Produce clearly-written scientific reports
8. Work in teams
9. Plan and carry out research projects including managing time in an efficient fashion
10. Reflect and evaluate own academic progress and its implications for career planning

presentation.
These skills are assessed primarily with reference to specific modules (see module descriptions for details) and will depend on choice of optional modules and topic of research project.

Teaching/learning methods and strategies

Lectures, self-taught computer packages, seminars, tutorials, individual research projects, data exercises, team-based presentations, mock interviews.

Assessment
Transferable skills are largely assessed indirectly through individual assignments (essays, scientific reports). Skill 9 is assessed through the individual research project and skill 10 is assessed directly on the research skills and career learning module.

Please note - This specification provides a concise summary of the main features of the programme and the 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 learning outcomes, content and teaching, learning and assessment methods of each module can be found in the module description and in the programme handbook. The University reserves the right to modify this specification in unforeseen circumstances, or where the process of academic development and feedback from students, quality assurance process or external sources, such as professional bodies, requires a change to be made. In such circumstances, a revised specification will be issued.