

PROGRAMME SPECIFICATION FOR

MSc IN WATER SCIENCE, POLICY AND MANAGEMENT

1. Awarding institution/body	University of Oxford
2. Teaching institution	University of Oxford
3. Programme accredited by	n/a
4. Final award	MSc
5. Programme	Water Science, Policy and Management
6. UCAS code	n/a
7. Relevant subject benchmark statement	n/a
8. Date of programme specification	Update September 2008

9. Educational aims of the programme

- To equip students with theoretical knowledge and applied skills necessary to make a significant contribution to water management at local, regional or global scales.
- To provide an advanced understanding of the legal, policy and political dimensions of water management, development and allocation.
- To foster a critical perspective and grounded understanding of issues relating to water development, use and access under considerations of scarcity, equity and sustainability.
- To introduce students to transferable research skills necessary to undertake further advanced study by research at Oxford, or elsewhere.
- To enhance students' personal and professional development, and their employment-related skills.

10. Programme outcomes

A. Students will develop a knowledge and understanding of:

1. The physical, chemical and biological nature of water and their variations in time and space.
2. The key concepts concerning nature and society in relation to water use and sustainability.
3. Practical techniques for water resource assessment, monitoring and management.
4. The key components of water conventions and directives, legislation and the role of statutory agencies, paying particular attention to the integration of theory and practice.
5. The key research skills and methods of analysis for water management.
6. Specialist topics consistent with candidate's particular interests and the competency of the School.

Related teaching/learning methods and strategies

1. Lectures provided by faculty staff.
2. Print, audio-visual and audio material focused upon the topics covered in lecture courses.
3. Research seminars by staff and visiting faculty, including opportunities for the candidates to develop public presentation skills.
4. Problem sets and projects designed to develop and test research skills.
5. Material designed to distinguish between different methods of research including qualitative and quantitative skills.
6. Tutorials in particular areas of knowledge and skills as required.
7. Field courses to develop relevant field skills and gain an appreciation of water management in practice.
8. The preparation of a research dissertation.
9. Assessment of candidates' knowledge and competency through the preparation of extended essays, examinations and research projects.
10. Emphasis on critical appreciation of current arguments in the field of sustainable water management and related issues of environmental policy.

Assessment

1. Three three-hour examinations at the end of the course based on the core courses and covering substantive issues related to water science, policy and management.
2. A dissertation.
3. Submitted assessed essays based upon option courses with marks contributing to final degree award.
4. Problem sets re research methods, data collection and acquisition, and statistical techniques.
5. Critical feedback on candidates' own research and seminar presentations.

B. Skills and other attributes

Students will have the opportunity to develop the following skills during the course:

I. Intellectual skills

1. Critical analysis and appreciation of the relevant literature.
2. Advanced analytical skills relevant to the formation and assessment of water science, policy and management.
3. Assemble data from a variety of sources, and discern and establish connections.
4. Advanced skills of research design including data collection, analysis, integration and evaluation.
5. Plan, conduct and report an individual research programme.
6. Advanced skills in the presentation of academic and research argument

Teaching/learning methods and strategies

As indicated above through the multiple modes of teaching throughout the course and its end.

Assessment:

As indicated above through the multiple modes of assessment throughout the course and at its end

II. Transferable skills

1. Field data collection strategies, accurate observations, methods and techniques.
2. Critical appreciation of argument and knowledge
3. Laboratory analysis and procedures.
4. Advanced computing skills in data analysis, GIS and remote sensing.
5. Integrated structuring and analysis of multiple data sets for problem solving.
6. Write for different audiences: to prepare essays, reports, presentations, and a dissertation including layout, format and structure and design.

Teaching/learning methods and strategies

As indicated above through the multiple modes of teaching throughout the course and its end.

Assessment

As indicated above through the multiple modes of assessment throughout the course and at its end.

11. Programme Structure and Features

- The Course is offered on a full-time basis, beginning in Michaelmas Term and extending over three eight-week terms to the end of Trinity Term, followed by a dissertation to be handed in by the first weekday in September of the following year.
- The Course begins with a residential induction programme in the UK.
- The Course is based on nine compulsory core modules, assessed by written examination, and two option courses, assessed by essays, plus an extended dissertation of up to 15,000 words.
- Field courses will take place during the term looking at various aspects of water science, management and technology.
- The examinations are normally scheduled in the second half of Trinity Term, and extend over a week.

12. Support for Students and their learning

1. Residential induction programme for course orientation and for the staff and students to get to know each other.
2. Comprehensive course handbook including information on the University, School of Geography and the Environment, course aims, objectives and staff, and core modules, comprising the rationale, teaching approach, assessment and core readings on lecture by lecture basis.
3. A Virtual Learning Environment tool, WebLearn, to post all relevant course information and teaching materials (only available internal to the University).
4. An Academic Director who is responsible for maintaining the academic rigour and pedagogical effectiveness of the course and provide intellectual leadership on the course through teaching flagship modules.
5. A Course Director who is responsible for the day-to-day running of the course in close liaison with the Academic Director, including teaching core and option modules, timetabling, course development, engagement with government, enterprise, academic and civil society constituencies, course assessment, budgeting, strategic development, recruitment, supervision and general student pastoral duties.
6. Faculty supervisors who provides academic guidance to the individual student and overseeing their academic progress.
7. A college tutor who is responsible for the general welfare of the student and is available to deal with any problems that may arise regarding academic and personal issues.
8. The course can be fully catered for through the libraries of Bodleian, The School of Geography and the Environment, Social Studies, Law, Said Business School, and Earth Sciences. With the increasing availability of electronic resources, it is also anticipated that the additional pressure on reading space and hardcopies in the libraries will be minimal.
9. University and School staff provide support and training for statistical and GIS-related analysis.
10. The School of Geography and the Environment has workstations available for postgraduate students in addition to library and college facilities, including access to networked computers in their colleges and the majority of college rooms are connected to the University network.
11. In addition to their college tutor, students have access to college and university hardship schemes in the case of financial hardship, Women's Advisors, Deans of Divinity etc. in colleges and ultimately to the Head of the College. The University has a counseling service which provides advice both immediate and long term to students in need. There are college nurses and all colleges have a college doctor and many a college dentist.

13. Criteria for Admission

Candidates for admission apply to the University Graduate Studies Office who forward applications first to the department for academic assessment. The criteria for admission will take account of the previous academic record, references, a submitted statement and evidence of English language competence where appropriate. Previous undergraduate training in water science, policy and/or management is not required, but candidates should either have some knowledge of a relevant discipline or be able to show evidence of aptitude for critical enquiry.

The formal requirements for admission are:

1. Academic excellence: First Class or good Upper Second Class degree, or its equivalent;
2. A passion for water: demonstrated through a personal statement submitted with the application, such as previous professional, research or practical experience of water management.

In addition, for candidates whose first language is not English and who have not undertaken a course of study in an institution where the principal medium of instruction is English are required to demonstrate minimum scores in one of the standard language tests (IELTS, TOEFL). The requirements are a score of 7.0 in IELTS or 600 (or 250 in the new computer-based test) in TOEFL;=

Each successful application is then sent to colleges for consideration and the offer of a college place made subject to confirmation of adequate financial resources.

14. Methods for evaluating and improving the quality and standards of learning

Mechanisms for review and evaluation of teaching, learning and assessment:

annual staff appraisal;

student feedback;

external examiners' reports (considered initially by the course committee [decisions made about whether to adopt recommendations of external examiner, and feedback ultimately provided to external], then the Divisional Graduate Studies Committee and the Educational Policy and Standards Committee);

divisional review of the course after first five years of operation (2009-10);

review of the department and its component parts, undertaken by the Educational Policy and Standards Committee every 12 years, with a divisional review of the department held at the half way point in each cycle.

Committees with responsibility for monitoring and evaluating quality and standards:

board of examiners;

SoGE MSc sub-Committee

SoGE Graduate Studies Committee;

SoGE Departmental Meetings;

Divisional Graduate Studies Committee;

Educational Policy and Standards Committee.

Mechanisms for gaining student feedback on the quality of teaching and their learning experience:

feedback questionnaires on each lecture course or set of classes;

end-of-year reports on the course as a whole;

student/staff discussions of general issues raised by the feedback questionnaires or by the student representatives;

JCC meetings every term; recommendations from JCC are brought to MSc, Graduate Studies and to Department Committee meetings

Staff development priorities include:

regular discussions with the Head of Department;

workshops held jointly with the Institute for the Advancement of University Learning (IAUL) to reflect on and develop teaching methods;

weekly informal research seminars for staff and students.

15. Regulation of assessment

General Regulations

The examinations shall be under the supervision of the Social Sciences Divisional Board. The subjects of each examination shall be determined by the Board of Examiners subject to the approval of the School's Graduate Studies Committee and the Departmental meeting of the School. The Course Director and Academic Director (subject to the Graduate Studies Committee) shall have power to arrange lectures and courses of instruction for the examination.

No candidate shall be permitted to take an examination unless he or she has been admitted as a candidate for the examination in question by the body responsible for the course and has satisfied any other conditions prescribed in the regulations for that course.

The Board of Examiners shall have power to prescribe that examiners be appointed for candidates individually in such manner as shall be appropriate for the course of study.

A candidate who has failed to satisfy the examiners in the examination may enter again for the examination on one, but not more than one, subsequent occasion.

The Board of Examiners may prescribe by regulation that students undertaking a particular course of study shall take the examination in a specific term as a condition of admission, and a student wishing to take an examination later than one to which he or she has been admitted must apply to the board for permission to do so.

Except where otherwise indicated, all material submitted for examination (dissertations, extended essays, etc.) shall be accompanied by a certificate signed by the candidate indicating that it is the candidate's own work, except where otherwise specified. This certificate must be submitted separately in a sealed envelope addressed to the chairman of examiners.

The MSc Course Committee shall from time to time meet to assess and co-ordinate marking schemes.

As well, the MSc Course Committee shall use established University and School conventions as set-out below. The total course grade shall be distributed between (1) the two assessed essays (10% each); (2) the three final examinations (40%); and the dissertation (40%).

The grades for MSc completion are:

70 and above	Distinction
50 – 69	Pass
49 or less	Fail

Note: Any candidate wishing to proceed to PRS status and thence to the DPhil., must be awarded a) a distinction overall, or b) a distinction grade for the dissertation.

Marking Procedure

The Board of Examiners consists of two internal examiners and one external examiner. Candidates are anonymous. All papers are double-blind marked. Dissertations are marked by the two internal Examiners and the External. *Viva voce* examinations may be held in exceptional circumstances.

An Examiner, having received a paper, assigns a mark using the marking scale as shown in the table below. Where the marks assigned by the two Examiners differ by only two or three points (and do not involve a difference of grade), they are averaged to produce an agreed mark for the question; in other cases, a mark is agreed through negotiation, and may not necessarily be a simple average of the two marks. Where Internal

Examiners cannot reach agreement, the External Examiner is asked to adjudicate. In addition, the External Examiner may query any mark assigned to a question, even if the Internal Examiners are unanimous in their judgement. Any differences of opinion are discussed fully at the Examiners' meeting, and if still unresolved may (in very rare instances) form the basis of questions in the *viva voce* examination.

MSc Marking Guidelines

CLASS OR GRADE	MARK RANGE %	DESCRIPTIVE EQUIVALENT FOR EXAMS	DESCRIPTIVE EQUIVALENT FOR PROJECTS/ESSAY	DESCRIPTIVE EQUIVALENT FOR DISSERTATIONS
DISTINCTION	81+	A comprehensive and complete answer that clearly demonstrates a deep understanding of the subject, high intellectual quality and comprehensive knowledge of the facts. As good as could have been expected under examination conditions.	Worthy of retaining for future reference and application to teaching or research. Outstanding work based on a critical appraisal of a good volume of material that makes an original contribution to the subject.	Potentially publishable as a journal paper with editing and minor revision.
	80 70	Goes beyond simply answering the question. Perceptive focused use of a good depth of material. Original ideas or structure of argument and critical evaluation of the literature.	Wide breadth and intensity of accessed data or literature plus critical contribution or original finding relevant to the topic.	Identification with professional research approach. Full completion of task, achievement of stated objectives and good philosophical review of shortcomings. Clear critical appreciation of subject, study methods and findings.
MSc PASS	69 63	Perceptive analytical and critical understanding of the issues plus a coherent, well read and good presentation. MUST show evidence of wide background reading around the subject and a deep approach to study that goes beyond reproducing material given in lectures and seminars.	Thorough, clear treatment showing an understanding of arguments, contribution and context. Efficient use of literature. No serious flaws or misconceptions. Engages with the major issues and comes to sound and coherently argued conclusion.	Clear programme of study and worthwhile objectives. Well conceived and executed. A highly satisfactory piece of work but with some unfulfilled potential.
MSc PASS	62 58 55 50	A “correct” answer based largely on lecture material. Little detail or originality but presented in an adequate framework. Lacks evidence of significant outside reading and, while sound, does not penetrate the subject sufficiently, nor display much critical evaluation.	Adequate treatment of literature or data but with little spark or critical insight. Efficiently reproduces material covered in lectures/seminars but adds only a little that comes from the student’s own course of personal research and investigation.	Good effort and sound outcome but pedestrian or lacking in imagination and critical insight. Failure to achieve objectives fully. Programme of work not particularly ambitious or innovative. Satisfactory, but not stylish or perceptive.
FAIL	49 45 40	Engages with question but is a poorly structured answer based entirely on lecture material and containing several important errors of concept and/or fact. Overall, concepts are disordered or flawed, factual material is poorly presented and there is only shallow consideration of issues.	Basic approach to a narrow or misguided selection of material. Lacking in background or flawed in arguments. Lines of thought are not sustained and conclusions and not supported by the text/project analysis.	Deficient in effort or arguments/discussions poorly resourced. Uncritical use of literature. Little sign of analytical techniques or depth. No clear programme of work and insufficiently clear objectives.
FAIL	39 30	Attempts to engage with the question but with significant errors of content and scope, or poor in knowledge, structure and expression. No evidence of relevant outside reading.	Work is shallow and poorly presented. Lacking in sustained lines of thought or reasoning. No conclusions or conclusions incorrect. No evidence or relevant outside reading.	Low input of effort and superficial write-up conveying little of the context or value of the research. Barely adequate effort given the dissertation’s importance.

FAIL	29-	Significant inability to engage with the question. Either, an answer to an imaginary question, or mostly irrelevant material to the question posed.	Inadequate and without any serious scholarly content.	Insufficient effort to complete a reasonable piece of work. An inadequate thesis.
	0	Copied or plagiarised answer with no intellectual input from the student resulting in immediate academic failure from the module, OR work penalised for late submission submitted without the granting of a specific dated extension by the lecturer of the appropriate module.		

16. Indicators of quality and standards

1. New lecturers are given mentors who are available to advise on teaching.
2. Students are asked to fill in questionnaires on the various lecture courses, and points raised and discussed in JCC.
3. Colleges obtain feedback from students during graduate collections, and liaise with departments where appropriate
4. Careful analysis by the MSc Course Committee and the Graduate Studies Committee of the School and the Division of reports from both internal and external examiners and appropriate action taken.
5. RAE and previous QAA evidence of the quality of Geography at Oxford
6. Success rates and careers of graduates
7. View of External Advisory Panel.