

PROGRAMME SPECIFICATION for an award of the University of East Anglia						
1	Title	Environmental Sciences				
2	Course Code(s)	T1F850101 (full time) T2F850201 (part time)				
3	School (s)	Environmental Sciences				
4	Faculty	Faculty of Science				
5	Date of first student intake	Not Applicable – current course, already available				
6	Award	MSc				
7	Interim Award/ degree title	Standard	Certificate of Higher Education and Diploma of Higher Education (UG); Postgraduate Certificate or Postgraduate Diploma (PG).			x
		Non- standard (detail)				
8	Level	Level 6 FHEQ (Bachelors)				
		Level 7 FHEQ (Masters/Integrated Masters)				
		Other (specify)				
9	Award Regulatory Framework	Bachelors and Integrated Masters				
		Common Masters Framework				x
		Other (specify)				
		Award Regulations are published in the <a href="#">Calendar</a>				
10	Course-specific regulatory requirements	N/A				
11	Length of course	One year full-time Two years part-time				
12	Board of Examiners	<a href="https://portal.uea.ac.uk/learning-and-teaching/staff/assessment/exams/board-of-examiners">https://portal.uea.ac.uk/learning-and-teaching/staff/assessment/exams/board-of-examiners</a>				
13	Mode of Attendance	Full-time	x	Part-time	x	Other
14	Professional Accreditation details	N/A				
15	Placement information					
		Professional placement				
		Year Abroad				
		Year in Industry				
		Semester Abroad				

		Other	
		None	X
16	Relevant Subject Benchmark	Web address of the relevant QAA subject benchmark which has been used to inform the academic content and learning outcomes of the course. <a href="http://www.gaa.ac.uk/AssuringStandardsAndQuality/subject-guidance/Pages/Subject-benchmark-statements.aspx">http://www.gaa.ac.uk/AssuringStandardsAndQuality/subject-guidance/Pages/Subject-benchmark-statements.aspx</a>	
17	Course Description	<p>The MSc Environmental Sciences programme conforms to the Benchmark Statement of the Quality Assurance Agency for Higher Education and is broadly concerned with a systems approach to understanding present and past interactions between the processes connecting the natural and human environments in a changing world. The programme includes the scientific study of the atmospheric, oceanic and terrestrial environments coupled to an understanding of their interactions with human society.</p> <p><b>Philosophy</b></p> <p>The MSc programme’s philosophy is to provide a rigorous understanding of the Earth’s natural processes, the impacts of human activities on the global environment and the strategies required for the sustainable management of natural resources. A major study area is to understand the science of climate change and the human adaptive response to increasing global temperatures and sea-level rise. Training in Environmental Sciences also develops abilities in the collection, analysis, interpretation and presentation of diverse datasets and also in the application of analytical tools such as numerical models and geographic information systems (GIS) to aid decision-making.</p> <p><b>Structure</b></p> <p>The MSc programme consists of a total of 180 credits with 100 credits gained from taught components (typically taken in the form of five 20 credit modules) and 80 credits from an independent research project. Of the 80 credits allocated to the research project, 20 credits are determined by the project proposal submitted as coursework for the compulsory Research Skills module while the remaining 60 credits are determined by the final project report. Credits are awarded on the successful completion of the assessment for each module and the attainment of learning outcomes.</p> <p>In discussion with their Advisers and Course Director, MSc students are expected to select their 100 credits of taught modules from the wide programme of Masters-level modules available in the School. With the approval of the Course Director, students are permitted to select Masters-level modules provided by other Schools provided it can be shown that those modules contribute to a coherent</p>	

		<p>programme of study in the field of Environmental Sciences. Individual curriculum pathways may focus on a specific area of environmental sciences or include a range of interdisciplinary subjects.</p> <p>In addition to our core MSc Environmental Sciences course, we also offer two Environmental Sciences Pathways that place particular focus on the issue of sustainability: Science, Society and Sustainability and Ecology and Economics for Sustainability. Students opting for one of the sustainability pathways have to take two additional compulsory 20-credit modules leaving 60 credits for optional modules. For the Science, Society and Sustainability Pathway these compulsory modules are Science, Society and Sustainability and Sustainable Consumption and for the Ecology and Economics for Sustainability Pathway Biodiversity Conservation and Sustainability, and Economics and Ecosystem Services.</p> <p>The MSc is offered as a full-time course of 46 weeks' duration. Taught components are delivered over two semesters with examinations taken in the exam period in the early summer. Planning for the independent research project starts in the Autumn Semester, with a project proposal submitted in February, and the final project report submitted in early August. Students are therefore expected to work on their project from the Spring Semester onwards through the summer.</p> <p>Alternatively the MSc can be taken part-time. In that case the course has duration of 1 year and 46 weeks with taught components delivered over four semesters followed by the research project report submitted in early August of the second year. The usual expectation is that students studying part-time will take the Research Skills module in their first year of study. Accordingly, their project proposal will be submitted in the February of their first year of study and they will then be in a position to work on their research project through the rest of that year and throughout their second year of study.</p>
18	<p><b>Course Profile details</b></p>	<p>The aims of the MSc in Environmental Sciences is to provide a flexible course structure suitable for both students seeking to gain additional training in environmental sciences and for non-environmental science graduates seeking to widen their environmental knowledge and skills. A modular structure to unit choice facilitates these divergent aims within the same programme. The programme permits students to choose from several areas of expertise in the School including Earth sciences, atmospheric sciences, oceanography, ecology and soils, and social sciences and to integrate the knowledge gained with practical methods of environmental impact assessment and</p>

		<p>management. The programme is divided into two elements: the taught programme and the independent research project from which a dissertation is produced. The MSc programme is designed:</p> <ul style="list-style-type: none"> <li>▪ to provide a range of units in subjects that permit students to construct an academic programme appropriate to their varied background, interests and career intentions;</li> <li>▪ to cultivate in students the general intellectual skills of reasoning, self-expression, numeracy, computer literacy, group work and independent research;</li> <li>▪ to foster self-direction and originality in systematically solving problems, while acting autonomously at a professional level;</li> <li>▪ to develop the practical and transferable skills required to undertake research in an area of environmental sciences.</li> </ul> <p>Details of all courses currently offered by the University are available at <a href="https://www.uea.ac.uk/study/undergraduate/degrees">https://www.uea.ac.uk/study/undergraduate/degrees</a> and <a href="https://www.uea.ac.uk/study/postgraduate/taught-degrees">https://www.uea.ac.uk/study/postgraduate/taught-degrees</a></p>
19	Learning Outcomes	<p><b>Knowledge and understanding</b></p> <ul style="list-style-type: none"> <li>• Environmental sciences within an interdisciplinary framework;</li> <li>• Processes governing present and past interactions between the Earth, atmosphere and oceans;</li> <li>• Human-induced environmental change, including a knowledge of climate change and environmental impact assessment and management;</li> <li>• Technical approaches to presenting and interpreting environmental data including data recording, GIS and numerical modelling.</li> </ul> <p>Teaching is delivered through a combination of lecture and seminar classes, practical classes and field visits. MSc students are encouraged to extend their knowledge and understanding through directed reading and assessed coursework assignments. The independent project is a major activity that permits the in-depth acquisition of knowledge and the opportunity to integrate understanding of a selected topic.</p> <p><b>Cognitive Skills</b></p> <ul style="list-style-type: none"> <li>• Comprehend complex environmental processes;</li> </ul>

- Visualise and interpret large data sets;
- Identify and solve environmental problems;
- Reason analytically;
- Show independence of thought;
- Understand environmental paradigms.

Intellectual skills are developed through the teaching and learning programme outlined above. The ability to present ideas both orally and in writing is emphasised as part of the assessed coursework and independent project.

- **Subject Specific/Practical Skills**

- Undertake search and selection of scientific literature and data;
- Use information technology for scientific study of environmental processes and problems;
- Collect and collate information from a variety of sources, including historical and real-time datasets;
- Design and execute laboratory or field programmes or design and implement a questionnaire-based survey;
- Subject quantitative and qualitative data to statistical and mathematical analysis;
- Explain complex environmental processes by means of conceptual and numerical models.

Practical skills training is provided both centrally by the University and individually by unit conveners. Introductory sessions in the use of the University Library resources and IT facilities are provided at induction. Practical training in using PC-based word processing, spreadsheets and specialist software is given as part of the Professional Skills unit and by individual teachers. Each taught unit provides a comprehensive reading list and teaches specific practical skills applicable to the scientific material presented. Specialist training in laboratory and field skills required for the independent project is provided on an

		<p>individual basis with instruction from the project supervisor assisted by the School's technical staff.</p> <p><b>Key Skills and Attributes</b></p> <ul style="list-style-type: none"> <li>• Develop project management skills;</li> <li>• Develop oral and written presentational skills;</li> <li>• Develop personal skills such as time management, team working and assertiveness;</li> <li>• Develop skills in searching for employment, including CV preparation and interview techniques.</li> </ul> <p>Transferable skills are taught as part of a compulsory Professional Skills unit available to all postgraduate students and are also delivered by teachers on individual units. The Professional Skills unit provides a strategy for preparing the research proposal for the independent project. This proposal includes a statement of the hypothesis to be tested and a plan of work that includes a list of deadlines and deliverables.</p> <p>Project planning includes additional skills such as costing the research plan and liaising with staff over practical issues such as safety and general working practices. Ongoing support is provided during the independent project to assist in the production of the dissertation, including training in diagram production, report presentation and writing. Individual teachers will develop transferable skills such as the use of IT facilities to find bibliographic material and techniques for data analysis and interpretation.</p> <p>Depending on the choice of units taken, group project work and seminar and poster presentations enhance personal skills of negotiating, team working, assertiveness and the effective delivery of scientific information. Personal time management is required in meeting published coursework deadlines.</p>
20	<p><b>Graduate Attributes and Employability Skills</b></p>	<ul style="list-style-type: none"> <li>• An open and questioning approach to ideas, independence of thought and the ability to appreciate a range of perspectives on the natural and social environmental issues.</li> <li>• An appreciation of the development and value of your chosen subjects within environmental sciences, awareness of their contexts, the links between them, and awareness of the provisional and dynamic nature of knowledge.</li> </ul>

		<ul style="list-style-type: none"> <li>• Information literacy: the ability to locate, evaluate and synthesise large amounts of frequently conflicting information, ideas and data.</li> <li>• Creativity and problem solving skills using a range of different approaches and techniques, and to determine which techniques are appropriate for the issue at hand.</li> <li>• An appreciation of the social and natural, regional and global implications of environmental issues, including recognition of any ethical implications.</li> <li>• The ability to communicate clearly and effectively in written and verbal forms for different purposes and to a variety of audiences.</li> <li>• The knowledge, skills, self-confidence and self-awareness required for your future career development or academic studies.</li> </ul>
21	<b>Assessment and Feedback Strategy</b>	<p>The principle mode of assessment of knowledge acquisition is through written examinations, independent or group coursework assignments and the independent project. An oral examination may be required at the discretion of the external examiner. The independent project provides the chance to demonstrate understanding of the data obtained in the context of a body of knowledge.</p> <p>Depending on the combination of units chosen, intellectual skills are assessed by a variety of means including essays, seminar presentations, position papers, short reports, problem sheets, mini-projects and the independent project report. The ability to present arguments in a concise and coherent manner reinforces transferable skills training in preparation for either vocational or research oriented careers.</p> <p>Practical skills are primarily assessed through coursework. Essays and reports are in part assessed on the skill with which bibliographic material has been obtained and discussed within the context of the assignment. Problem solving and project-based work allows the assessment of numerical and practical skills. The independent project requires that the majority of Skills a-e are demonstrated in the dissertation. The dissertation enables an assessment of the learner's overall ability as an environmental scientist.</p> <p>The main form of assessment of transferable skills is based on the research project proposal submitted in support of the independent project. Teachers will also assess transferable skills when marking coursework essays, seminar presentations and practical reports, as too will the markers of the project dissertation.</p>
22	<b>Additional course-specific costs that students should expect to meet</b>	None

<b>For Office Use</b>	<b>Programme Specification Update Record</b>	
<b>Faculty</b>	Faculty of Science	<b>School</b> Environmental Sciences
<b>Course Code(s)</b>	T1F850101 (full time) T2F850201 (part time)	<b>Degree Award</b> MSc
<b>Course Title(s)</b>	Environmental Sciences	
<b>Log of annual review - Version and date of production/ revision</b>	<p>The Programme Spec should be reviewed annually and the review logged here:</p> <ol style="list-style-type: none"> <li>1) If there is no change, no new version is required.</li> <li>2) If there are any changes, the version number should be incremented, and a summary of the changes recorded here. This should include a summary of any course profile changes.</li> </ol>	
<b>Review Date</b>	<b>Course Director sign off</b>	
21.6.17	Dr Ros Boar	Signed off by DLT for publication on the website
07.06.17	Dr. Helen He	Reviewed, Minor changes only
<b>Last active academic year</b>	To be completed if course is discontinued	
<b>Date archived</b>	To be completed if course is discontinued	

<b>For Office Use: Admin Action (post-approval publication and annual review)</b>	<b>Date</b>	<b>Name</b>
<b>Course Profile updated on eVision (Team Leader)</b>		
<b>Programme Specification placed in shared drive folder (Team Leader)</b>	27.06.17	R.Rogers, LTS
<b>Web link to External Examiner information added (LTS Web administrator)</b>		
<b>Programme Specification uploaded onto website (LTS Web administrator)</b>		

<b>Planning Office informed of upload of Programme Specification onto website (LTS Web administrator)</b>		
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