

1. Programme Title(s):

MSc/Postgraduate Diploma*/Certificate* in Environmental Informatics *Exit Awards only

2. Awarding body or institution:

University of Leicester

3. a) Mode of study Part time / Full Time

b) Type of study

Campus based

4. Registration periods:

The normal period of registration is 12 months (full time) and 24 months (part time)

The maximum period of registration is 24 months (full time) and 48 months (part time)

5. Typical entry requirements:

Applicants will normally be expected to have at least an upper second class honours degree or equivalent in a cognate discipline (i.e. environmental science, computer science) in order to be registered for the course. Applicants with a lower second class degree or relevant work experience may be considered with satisfactory references. In particular we give due consideration to prior professional experience gained by mature students in relevant areas of work. In such cases applicants would be expected to provide detailed information on work experience to enable its full evaluation by admissions staff. We also consider alternative qualifications, for example in different subject areas, where these are supported by relevant experience within the field of the MSc programme. Students for whom English is not their first language are required to achieve a minimum IELTS score of 6.5 with at least 6 in all four categories

6. Accreditation of Prior Learning:

7. No accredited prior learning would be accepted for exemption from modules on the programme. Programme aims:

The MSc in Environmental Informatics (EI) aims to provide students with a broad-based education in scientific research, the sustainable management of natural resources (SMNR) and geographical information science (GIS).

More specifically, students taking this course will gain:

- knowledge, skills and understanding that are generic to scientific research;
- knowledge and understanding of concerns, philosophies and methods in the contemporary sustainable management of natural resources and geographical information science, and their interactions;
- critical reflexive thinking and an appreciation of difference; and
- development and application of skills in qualitative, quantitative, textual and (carto) graphic techniques presentation skills; and skills in research project assessment and report writing to GIS and the analysis of sustainable resource management issues.
- training in the design and implementation of a research programme, the collection and analysis of primary data, and the writing and presentation of a research report.

8. Reference points used to inform the programme specification:

- QAA Frameworks for Higher Education Qualifications in England Wales and Northern Ireland
- QAA <u>Master's Degree Characteristics</u>
- QAA Benchmarking Statement Geography (2014)
- PDR report (May 2008)
- University Learning Strategy
- University Employability Strategy
- Graduate Survey (2014)
- First Destination Survey
- External Examiner's Reports

9. Programme Outcomes:

a. Master's Degree

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
	(a) Subject and Professional sk	ills
	Knowledge	
Core knowledge of GIS; the place of GIS in a geographical context; the spatial database and principles of spatial data analysis.	Lectures, seminars, targeted reading, practical classes, self- directed project work, self-directed research work, field-trips.	Essays, project reports, practical exercises, oral seminar presentations, dissertation
	Concepts	
Geographical Information Systems and Geographic Information Analysis; Spatial Information Science; philosophical and practical approaches within GIS	Lectures, seminars, targeted reading, practical classes, self- directed project work, self-directed research work, field-trips	Essays, project reports, practical exercises, oral seminar presentations, dissertation
	Techniques	
Practical application of GIS; development and execution of spatial data management strategies; GIS-based analysis of spatial data	Lectures, seminars, targeted reading, practical classes, self- directed project work, self-directed research, field trips	Practical exercises, project reports, essays, oral seminar presentations, dissertation
	Critical analysis	·
Critical appraisal of published material. Ability to apply understanding of concepts with independence, rigour and self- reflexivity	Lectures, seminars, targeted reading, practical classes, self- directed project work, self-directed research work	Essays, project reports, oral seminar presentations, dissertation
	Presentation	-
Presentation of: project results to professional standard; thematic data analyses to professional standard. Ability to organise and structure research material; ability to deliver written and oral seminar reports and summaries	Seminars, self-directed project work, self- directed research work	Essays, project reports, oral seminar presentations, dissertation

Intended Learning	Teaching and Learning	How Demonstrated?
Outcomes	Methods	
	Appraisal of evidence	
Ability to analyse and assess a variety of complex geographical issues. Ability to assess the relevance and quality of a substantial range of primary and secondary literatures and materials. Ability to mount and sustain an independent level of inquiry at an advanced level. Ability to identify, assemble, analyse and manage complex datasets; ability to analyse and assess a body of thematic data using appropriate techniques	Appraisal of evidence Seminars, targeted reading, practical classes, self-directed project work, self- directed research work	Project reports, practical exercises, oral seminar presentations, dissertation
and data models.		
	(b) Transferable skills	
	Research skills	Desire standard and still a large still a standard stand
Ability to: analyse complex ideas and construct sophisticated critical arguments; plan and manage projects using human geographical spatial data; locate, organise and analyse evidence; report on findings; demonstrate GIS and data analytical skills.	Core lectures, practicals and seminars, problem- oriented practical exercises, project work	Project reports, practical exercises, oral seminar presentations, exams, dissertation
	Communication skills	
Ability to: deliver oral presentations; respond to questions; write clearly and concisely; make effective use of graphical summaries	Seminars, problem- solving exercises	Oral seminar presentations, essays, seminar reports, project reports, exams, dissertation
	Data presentation	
Ability to: present project results clearly and effectively; use appropriate IT resources; to undertake basic statistical summaries and analysis; employ appropriate and effective graphical representations and summaries	Targeted seminar and practical sessions, essay, seminar, dissertation and practical report feedback	Seminar reports, group-project reports, dissertation
	Information technology	
The GIS related ILOs are centered a	round information technology	
Solving Spatial problems	Research methods module; practical classes, project work	Project reports, practical exercises, exams, dissertation
	Working relationships	
Project management; organisational skills; time management; ability to contribute and comment on ideas; working in groups	Problem-oriented practical exercises, seminars, dissertation proposal meeting, coordinator- student meetings	Oral seminar presentations, seminar reports, group-project reports, meeting coursework deadlines

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
	Managing learning	
Identifying a credible research project; establishing an effective research timetable; managing information; reflecting on and writing up results. Developing specialised analytical skills	Components of Induction week and research methods module; seminars, practical classes, project work	Project reports, practical exercises, oral seminar presentations, exams, dissertation
	Career management	
The ability to see how skills learnt in a university can be used in 'real world' settings; appreciation of the knowledge and skills required by specialists in an industrial setting	Talks by outside speakers from Industry, many of whom are past graduates of our MSc degrees	Discussions with personal tutors and in GY7021 tutorials concerning career progression and the applications of GIS

b. Postgraduate diploma

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
	(a) Subject and Professional ski	lls
	Knowledge	
Core knowledge of GIS; the place of GIS in a geographical context; the spatial database and principles of spatial data analysis.	Lectures, seminars, targeted reading, practical classes, self- directed project work, field-trips.	Essays, project reports, practical exercises, oral seminar presentations
	Concepts	
Geographical Information Systems and Geographic Information Analysis; Spatial Information Science; philosophical and practical approaches within GIS	Lectures, seminars, targeted reading, practical classes, self- directed project work, field-trips	Essays, project reports, practical exercises, oral seminar presentations
	Techniques	
Practical application of GIS; development and execution of spatial data management strategies; GIS-based analysis of spatial data	Lectures, seminars, targeted reading, practical classes, self- directed project work, field trips	Practical exercises, project reports, essays, oral seminar presentations
	Critical analysis	
Critical appraisal of published material. Ability to apply understanding of concepts with independence, rigour and self- reflexivity	Lectures, seminars, targeted reading, practical classes, self- directed project work	Essays, project reports, oral seminar presentations
	Presentation	1
Presentation of: project results to professional standard; thematic data analyses to professional standard. Ability to organise and structure research material; ability to deliver written and oral seminar reports and summaries	Seminars, self-directed project work	Essays, project reports, oral seminar presentations

Intended Learning	Teaching and Learning	How Demonstrated?	
Outcomes	Methods		
	Appraisal of evidence		
Ability to analyse and assess a variety of complex geographical issues. Ability to assess the relevance and quality of a substantial range of primary and secondary literatures and materials. Ability to identify, assemble, analyse and manage complex datasets; ability to analyse and assess a body of thematic data using appropriate techniques and data models	Seminars, targeted reading, practical classes, self-directed project work	Project reports, practical exercises, oral seminar presentations	
and data models.	(b) Transferable skills		
	Research skills		
Ability to: analyse complex ideas and construct sophisticated critical arguments; plan and manage projects using human geographical spatial data; locate, organise and analyse evidence; report on findings; demonstrate GIS and data analytical skills	Core lectures, practicals and seminars, problem- oriented practical exercises, project work	Project reports, practical exercises, oral seminar presentations, exams, dissertation	
	Communication skills		
Ability to: deliver oral presentations; respond to questions; write clearly and concisely; make effective use of graphical summaries	Seminars, problem- solving exercises	Oral seminar presentations, essays, seminar reports, project reports, exams, dissertation	
	Data presentation		
Ability to: present project results clearly and effectively; use appropriate IT resources; to undertake basic statistical summaries and analysis; employ appropriate and effective graphical representations and summaries	Targeted seminar and practical sessions, essay, seminar, dissertation and practical report feedback	Seminar reports, group-project reports, dissertation	
	Information technology		
The GIS related ILOs are centered a	The GIS related ILOs are centered around information technology		
Solving Spatial arabiama	Problem solving	Project reporte practical	
Solving Spallal problems	practical classes, project work	exercises, exams, dissertation	
	Working relationships		
Project management; organisational skills; time management; ability to contribute and comment on ideas; working in groups	Problem-oriented practical exercises, seminars, dissertation proposal meeting, coordinator- student meetings	Oral seminar presentations, seminar reports, group-project reports, meeting coursework deadlines	
	Managing learning	Due in et non onte in resultion i	
reflecting on and writing up results. Developing specialised analytical skills	components of induction week and research methods module; seminars, practical classes, project work	Project reports, practical exercises, oral seminar presentations, exams	

c. Postgraduate certificate

Intended Learning	Teaching and Learning	How Demonstrated?
Outcomes	Methods	
	(a) Subject and Professional ski	lls
	Knowledge	
Core knowledge of GIS; the place of GIS in a geographical context; the spatial database and principles of spatial data analysis.	Lectures, seminars, targeted reading, practical classes, self- directed project work, field-trips.	Essays, project reports, practical exercises, oral seminar presentations
	Concepts	1
Geographical Information Systems and Geographic Information Analysis; Spatial Information Science; philosophical and practical approaches within GIS	Lectures, seminars, targeted reading, practical classes, self- directed project work, field-trips	Essays, project reports, practical exercises, oral seminar presentations
	Techniques	1
Practical application of GIS; development and execution of spatial data management strategies; GIS-based analysis of spatial data	Lectures, seminars, targeted reading, practical classes, self- directed project work, field trips	Practical exercises, project reports, essays, oral seminar presentations
	Critical analysis	
Critical appraisal of published material. Ability to apply understanding of concepts with independence, rigour and self- reflexivity	Lectures, seminars, targeted reading, practical classes, self- directed project work	Essays, project reports, oral seminar presentations
	Presentation	
Presentation of: project results to professional standard; thematic data analyses to professional standard. Ability to organise and structure research material; ability to deliver written and oral seminar reports and summaries	Seminars, self-directed project work	Essays, project reports, oral seminar presentations
	Appraisal of evidence	
Ability to analyse and assess a variety of complex geographical issues. Ability to assess the relevance and quality of a substantial range of primary and secondary literatures and materials. Ability to identify, assemble, analyse and manage complex datasets; ability to analyse and assess a body of thematic data using appropriate techniques and data models.	Seminars, targeted reading, practical classes, self-directed project work	Project reports, practical exercises, oral seminar presentations

Intended Learning	Teaching and Learning	How Demonstrated?
Outcomes	Methods	
	(b) Transferable skills	
	Research skills	
Ability to: analyse complex ideas and construct sophisticated critical arguments; plan and manage projects using human geographical spatial data; locate, organise and analyse evidence; report on findings; demonstrate GIS and data analytical skills.	Core lectures, practicals and seminars, problem- oriented practical exercises, project work	Project reports, practical exercises, oral seminar presentations, exams, dissertation
	Communication skills	
Ability to: deliver oral presentations; respond to questions; write clearly and concisely; make effective use of graphical summaries	Seminars, problem- solving exercises	Oral seminar presentations, essays, seminar reports, project reports, exams, dissertation
	Data presentation	
Ability to: present project results clearly and effectively; use appropriate IT resources; to undertake basic statistical summaries and analysis; employ appropriate and effective graphical representations and summaries	Targeted seminar and practical sessions, essay, seminar, dissertation and practical report feedback	Seminar reports, group-project reports, dissertation
	Information technology	
The GIS related ILOs are centered a	round information technology	
	Problem solving	
Solving Spatial problems	Research methods module; practical classes, project work	Project reports, practical exercises, exams, dissertation
Working relationships		
Project management; organisational skills; time management; ability to contribute and comment on ideas; working in groups	exercises, seminars, dissertation proposal meeting, coordinator- student meetings	Oral seminar presentations, seminar reports, group-project reports, meeting coursework deadlines
	Managing learning	
Managing information; reflecting on and writing up results. Developing specialised analytical skills	Components of Induction week and research methods module; seminars, practical classes, project work	Project reports, practical exercises, oral seminar presentations, exams

10. Special features:

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11. Indications of programme quality:

The Course has been accredited by the Royal Institute of Chartered Surveyors (RICS).

12. Scheme of Assessment

Assessment: The pass mark at postgraduate level is 50%. The details of the assessments for individual modules are set out in the relevant Module descriptions. All programmes within the Department of Geography follow the standard University Postgraduate Scheme of Assessment (Senate Regulation 6).

13. Progression points

This programme complies with <u>Senate Regulation 6</u> governing taught postgraduate programmes. In cases where a student has failed to meet a requirement to progress under Senate Regulation 6 he or she will be required to withdraw from the course and a recommendation will be made to the Board of Examiners for an intermediate award where appropriate. Additionally, a candidate who does not pass their dissertation proposal at the second attempt will not be able to progress to the dissertation component of the Degree and therefore can only, at best, graduate with a PG Diploma.

14. Rules relating to re-sits or re-submissions:

This programme complies with <u>Senate Regulation 6</u> governing taught postgraduate programmes. Course regulations allow for candidates to re-sit examinations or resubmit course work in relation to an individual module on one occasion only. The mark obtained for resubmitted work or a re-sit is capped at 50%.

15. Additional information [e.g. timetable for admissions]

Admissions are in October only. Students admitted in October undertake their dissertation work during the summer of the following year and typically submit their dissertation in September (12 months in total).

Examinations are taken in January for first semester modules and in May/June for second semester ones, where applicable.

Transfers

Students may be allowed to transfer from this programme to other taught MSc programmes in the Department at the discretion of Course Directors and depending on their background and qualifications. If these are not appropriate or if other MSc programmes are at capacity, they will not be allowed to transfer between programmes. Any such transfers may only be considered within the first three weeks of Semester 1.

16.External Examiners

The details of the External Examiner(s) for this programme and the most recent External Examiners' reports can be found <u>here</u>.

MSc in Environme	ntal Informatics	
	SEMESTER 1	
Core Modules		Credits
GY7000	INDUCTION	(
GY7051	DISSERTATION TUTORIAL	(
GY7021	INTRODUCTION TO GIS	20
Optional Modules		
10 CREDITS SELECT	ED FROM:	
GY7028	EARTH OBSERVATION AND REMOTE SENSING	20
GY7022	PROGRAMMING IN R	20
GY7309	SUSTAINABLE MANAGEMENT OF BIOLOGICAL RESOURCES: ECOSYSTEM AND BIODIVERSI CONSERVATION	TY 20
GY7301	ENVIRONMENTAL ECONOMICS	20
GY7104	GLOBAL CLIMATE AND ENVIRONMENTAL CHANGE	20
	Semester Total	60
	SEMESTER 2	
Core Modules		Credits
GY7027	GEOGRAPHIC VISUALISATION	20
GY7050	GIS RESEARCH METHODS IN THE FIELD	20
Optional Modules		
20 credits selected	from	
GY7406	LIVING WITH ENVIRONMENTAL CHANGE	20
GY7108	ECOLOGICAL AND ENVIRONMENTAL ASSESSMENT	20
	Semester Total	60
	SUMMER	
Core Modules		Credits
GY7029	DISSERTATION	60
	Total Credits	180

Appendix 1: Programme structure (programme regulations)

Appendix 2: Module Specifications

See module specification database http://www.le.ac.uk/sas/courses/documentation