

## Programme Specification

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### Geophysics and Geology (2020-21)

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 s/he takes full advantage of the learning opportunities that are provided.

Awarding Institution	University of Southampton
Teaching Institution	University of Southampton
Mode of Study	Full-time
Duration in years	4
Accreditation details	Geological Society
Final award	Integrated Masters degree in Science
Name of award	Geophysics and Geology
Interim Exit awards	Bachelor of Science with Honours (BSc (Hons))
	Bachelor of Science (Ordinary)
	Certificate of Higher Education (CertHE)
	Diploma of Higher Education (DipHE)
FHEQ level of final award	Level 7
UCAS code	GG89
Programme code	8417
QAA Subject Benchmark or other external reference	Earth sciences, environmental sciences and environmental studies 2019
Programme Lead	Timothy Henstock

### Programme Overview

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#### Brief outline of the programme

Geophysics is one of our primary methods for investigating and understanding the Earth, including such topics as plate tectonics and earthquakes, and exploration to discover what is under the Earth's surface. There are a host of different applications and career directions from archaeology and engineering to hazard assessment and sustainable use of resources.

If you are looking for a professional career in geophysics or quantitative Earth science, this is the programme for you. This four-year MSci Geophysics and Geology degree will equip you with a broad knowledge of contemporary geophysics and a range of geophysical, geological and mathematical skills, including excellent field skills and computer programming. These skills transfer readily into the world of work, and our students have been very successful in finding summer placements and subsequent employment in the geophysical industry. As an alternative to, or alongside, traditional solid Earth geophysics, you can study topics such as controls on climate, or how we can study processes within coastal zones.

Ocean and Earth Science (OES) is strongly committed to providing the very best learning experience to all our students in a friendly and stimulating environment. We are known nationally and internationally for our excellence in teaching, and are continually improving the scope and delivery of our activities.

Ocean and Earth Science is housed in the prestigious National Oceanography Centre Southampton (NOCS), which opened in 1995 housing the University of Southampton department and part of the Natural Environment Research Council (NERC)'s National Oceanography Centre. NOCS is one of the world's largest centres devoted to research, teaching and technology development in ocean and Earth science.

Your contact hours will vary depending on your module/option choices. Full information about contact hours is provided in individual module profiles.

### **Learning and teaching**

You will develop core knowledge and understanding, subject specific skills and general and transferable, graduate key skills via compulsory module and specialised option module lectures, tutor and student-led tutorials, student-led seminars and presentations, essay and report writing, effective use of the internet, guided independent study, group study and your own research. Experimental, research, experimental design, data processing and interpretive/analytical skills are further developed through laboratory and practical classes and fieldwork (including boatwork).

### **Assessment**

To test your knowledge and understanding of material presented in the lectures and associated practicals, you will be assessed via a combination of written examinations, essays, group and individual oral presentations, poster presentations and short coursework assignments. Experimental, analytical and research skills are assessed through laboratory experiment write-ups, library based project work, research project reports, field notebooks, fieldwork/boatwork exercises and/or reports.

## **Special Features of the programme**

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The MSci programmes are intended to develop research skills, and computational and quantitative skills in a more multi-disciplinary context than is possible in a three-year degree structure. You will also be exposed to cutting edge research, participating in seminar presentations in wide-ranging topics. There will be an opportunity to choose modules from a wide range of master's level options.

Fieldwork is an essential and exciting component of your degree programmes and is incorporated into various modules. Further information is also available in the Student Handbooks and on the School web pages: <http://www.southampton.ac.uk/oes/>. Details of the individual modules taken in each part are provided in the pathway guides.

**Please note:** As a research-led University, we undertake a continuous review of our programmes to ensure quality enhancement and to manage our resources. As a result, this programme may be revised during a student's period of registration; however, any revision will be balanced against the requirement that the student should receive the educational service expected. Please read our [Disclaimer](#) to see why, when and how changes may be made to a student's programme.

Programmes and major changes to programmes are approved through the University's [programme validation process](#) which is described in the University's [Quality handbook](#).

## Educational Aims of the Programme

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The spectrum of programmes within Ocean and Earth science are all scientifically exciting and challenging, as well as highly relevant to the modern world. Within these particular programmes of study, we aim to develop and enhance your knowledge of and enthusiasm for geophysical sciences.

The overall ethos of the 4-year programmes, compared with the 3-year BSc programme, is to provide a broader knowledge base across the breadth of the subject, and to allow a greater emphasis on research skills. Studying abroad at a leading research university overseas during year 3 is possible through both institutional and departmental links.

Research carried out by academic staff provides direct and enthusiastic input into a challenging and stimulating teaching programme. There are also unique opportunities for you to undertake research projects with scientists outside the School based at the NOCS.

The specific aims of this programme are to:

- Provide you with a coherent programme of study which will offer you an in-depth knowledge and understanding of all aspects of geophysical sciences and to allow you to further develop some degree of specialisation within your field of choice.
- Provide you with a high quality and intellectually stimulating experience of learning in a supportive environment.
- Provide you with a sound background and suitable qualification that would enable you to proceed to a more specialist higher degree at the MSc, MRes or PhD level.
- Provide you with a high-quality education in the geophysical sciences and to equip you for a career in a relevant area of geophysics or in a wide range of other contexts.
- Develop your critical and analytical problem-solving powers in relation to the Earth and ocean sciences in general and to geophysics in particular.
- Develop your intellectual, practical and fieldwork skills in the collection, analysis, interpretation and understanding of geophysical data as they apply to exploration and solid-earth geophysics.
- Develop your powers of observation, analysis and understanding to make decisions with acknowledgement of uncertainties.
- Enhance the development of your interpersonal skills.
- Provide you with opportunities for shared multi-disciplinary learning within the Earth and ocean sciences, particularly geophysical disciplines within these sciences.
- Enable you to engage with life-long learning, study and enquiry, and to appreciate the value of education to society.
- Enable you to fulfil the requirements of the Geological Society of London for admission to Fellowship of the Society.
- Give you the experience of undertaking an original, potentially publishable, research project at the forefront of Geophysics in a professional environment.

## Programme Learning Outcomes

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### Knowledge and Understanding

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On successful completion of this programme you will have:

- A1. Knowledge and understanding of Geophysical and Geological-specific theories, paradigms, concepts and principles.
- A2. An ability to integrate evidence from a range of sources to test findings and hypotheses.

- A3. An ability to consider issues from a range of interdisciplinary and multidisciplinary perspectives.
- A4. An ability to undertake laboratory and fieldwork ethically and safely.
- A4. An ability to analyse, synthesise, summarise and critically evaluate information.
- A5. The capacity to plan, conduct and present an independent project with appropriate guidance.
- A5. An ability to define complex problems and to develop and evaluate possible solutions.
- A6. A critical approach to academic literature, data and other sources of information.
- A7. A holistic view of the present and past interactions between components of the Earth system, including the effects of extraterrestrial influences on these interactions.
- A8. Appreciation of the cycling of matter and the flows of energy into, between and within the solid Earth, the Earth's surface, the hydrosphere, the atmosphere and the biosphere.
- A9. Appreciation of the study of the biological, chemical and physical processes that underpin our understanding of the structure, materials and processes relevant to the Earth and planetary bodies.
- A10. Appreciation of the central paradigms in the Earth sciences: uniformitarianism (the present is the key to the past); the extent of geological time; evolution (the history of life on Earth); and plate tectonics.
- A11. Understanding of geological time, including the principles of stratigraphy, the stratigraphic column, the methods of geochronology, the rates of Earth processes, major events in Earth history, the quaternary and anthropocene.
- A12. An ability to collect and analyse Earth science data in the field, and subsurface, the appropriate presentation, manipulation and extrapolation of these sometimes incomplete data in both two and three-dimensions, including the generation of geological maps and cross sections.
- A13. Appreciation of the study of structures, materials and processes that includes an appreciation of temporal and spatial variations at appropriate scales.
- A14. Appreciation of the study of the structure, the composition and the materials of the solid Earth (core, mantle, crust, asthenosphere, lithosphere and so on), the hydrosphere, the atmosphere, the cryosphere and the biosphere, and the processes operating within and between them.
- A15. An understanding of other planetary bodies.
- A16. Understanding of Earth science terminology, nomenclature and classification of rocks, minerals, and geological structures.
- A17. A capacity to identify rocks, minerals, and geological structures.
- A18. Appreciation of surveying and measurement both in the field and laboratory and using quantitative and instrumental techniques.
- A19. An awareness that the understanding and knowledge gained from the subject and its application has to be considered within a wider socio-economic and environmental context.

### **Subject Specific Intellectual and Research Skills**

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On successful completion of this programme you will be able to:

- B1. Describe the cycling of matter and the flows of energy into, between and within the solid Earth, hydrosphere, atmosphere and biosphere.
- B2. Describe the chemistry, physics, and mathematics that underpin our understanding of Earth structure, materials and processes.
- B3. Describe major geoscience paradigms: the extent of geological time; plate tectonics.
- B4. Describe geological time, including the principles of Stratigraphy, radiometric dating, the stratigraphic column, rates of Earth processes, major events in Earth history.
- B5. Study structures, materials and processes ranging in scale from atoms to planets.
- B6. Describe the structure and composition of the solid Earth (core, mantle, crust, asthenosphere,

lithosphere, etc.), the hydrosphere, the atmosphere, the cryosphere and the biosphere, and the processes operating within and between them.

- B7. Identify rocks, minerals, and geological structures.
- B8. Collect and documentation geological information in the field, including the production and interpretation of geological maps.
- B9. Survey and measure both in the field and laboratory, and using qualitative, quantitative and instrumental techniques.
- B10. Use techniques to explore for and develop and exploit Earth resources.
- B11. Identify geohazards and their impacts on human societies.
- B12. Describe Earth science perspectives on sustainability and social awareness (e.g. renewable versus non-renewable resources, climate change, the history of life and biodiversity).
- B13. Demonstrate awareness of a specialist selection of topics currently at the frontiers of research in Earth science and many of the specialist techniques used to investigate them.

## **Transferable and Generic Skills**

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On successful completion of this programme you will be able to show:

- C1. An ability to communicate effectively to a variety of audiences using a range of formats.
- C2. Good interpersonal communication skills to enable effective team working.
- C3. An ability to argue a case in an effective manner.
- C4. An ability to work effectively as a team member.
- C5. The capacity to recognise and respect the views of others.
- C6. That you can demonstrate an awareness of the importance of risk assessment and relevant legislation.
- C7. The ability to develop the skills for autonomous learning.
- C8. The capacity to identify and work towards targets for personal, career and academic development.
- C9. The capacity to reflect on the process of learning and to evaluate personal strengths and weaknesses.
- C10. An appreciation of developing their graduate skills relevant to career pathways.

## **Subject Specific Practical Skills**

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On successful completion of this programme you will be able to:

- D1. Conduct fieldwork and laboratory investigations competently.
- D2. Describe and record observations in the field and laboratory.
- D3. Interpret and evaluate practical results in a logical manner.
- D4. Prepare, manipulate and interpret data using appropriate techniques.
- D5. Use appropriate mathematical, numerical, computational, and statistical techniques.
- D6. Use appropriate technologies in addressing problems effectively.

## Programme Structure

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The programme structure table is below:

Information about pre and co-requisites is included in individual module profiles.

### Part 1 (Year 1)

The programme is offered as a full-time course. The MSci programmes normally last for four years, diverging from the BSc structure after two years. You have the opportunity to apply to study abroad during the second semester of Part 3 at one of our exchange institutions. The key content of the programme is delivered within the compulsory modules, while options in each year allow you to control specialisation.

At Southampton, the programme is divided into individual study modules for each Part. Each study module is worth a certain number of ECTS points (ECTS = European Credit Transfer Scheme). Normally up to 60 hours comprises contact teaching (lectures, practicals, tutorials, etc.), and the remainder of the time is for your own independent study. You need to acquire 60 ECTS at each level. Most modules are generally assessed at the end of each semester, but some are assessed entirely by coursework throughout the duration of the module. Information about pre and co-requisites is included in individual module profiles.

Study is undertaken in four parts, each part corresponding to one year of full-time study. At Southampton the programme is delivered in a semester pattern, each semester having 12 weeks for teaching and learning and 2-3 weeks for examinations.

In Part I you will learn the basics of Earth Science, alongside developing Maths skills significantly beyond A-level. You will gain an overview of how the Earth works as a system, including the interactions between the solid Earth and the oceans and atmosphere. You will learn about the minerals which are the basic constituent parts of rocks, their chemical compositions, and how to identify them both in hand specimens and using a microscope. You will start to learn how to interpret geological maps, and understand geological processes within a plate tectonic framework. In addition you will start to build field skills with both geological and geophysical field courses. You will also start to learn technical software (such as Geographic Information Systems) and programming skills, which will continue throughout the degree.

The modules in Part I are designed so that they are accessible to students who have not studied Geology A-level, but will still stretch those who have.

### Part 1 (Year 1) Compulsory

The following modules are compulsory and must be taken:

Code	Module Title	ECTS	Type
SOES1002	Dynamic Earth 2020-21	7.5	Compulsory
SOES1008	Earth and Ocean System 2020-21	7.5	Compulsory
SOES1001	Earth Materials 2020-21	7.5	Compulsory
SOES1014	Key Skills for Geoscientists 2020-21	7.5	Compulsory
MATH1009	Math Methods for Scientist 1b 2020-21	7.5	Compulsory
MATH1008	Mathematical Methods for Scientists 1a 2020-21	7.5	Compulsory

### Part 1 (Year 1) Optional

Two of the following modules must be taken. If you have not taken A-level Chemistry we recommend SOES1005; if you have not taken A-level Physics we recommend SOES1004. SOES1004 is a prerequisite for SOES2010 in year 2.

Code	Module Title	ECTS	Type
GEOG1002	Dynamic Landscapes 2020-21	7.5	Optional
SOES1005	Introduction to Ocean Biogeochemistry 2020-21	7.5	Optional
SOES1004	Physics of the Ocean 2020-21	7.5	Optional

### Part II (Year 2)

Part II builds on the material from Part I, and gives you a grounding in all the skills that you need to be effective as a Geophysicist. You will start to understand the controls on how rocks deform, and methods for quantitative analysis of field deformation data. You will see how we can use geophysical exploration for a range of targets, including engineering onshore. You will develop the understanding of how igneous rocks form, and how rocks can be metamorphosed at high temperatures and pressures. You will see how we can use principles from chemistry to investigate processes within the Earth, and how we can use chemical isotopes to date those processes. You will also start to learn about the way that materials can be transported and deposited to form sedimentary rocks.

Your technical skills will be enhanced by regular use of GIS and by further developing your programming skills to analyse large geophysical datasets. Your field skills will be developed by two courses which will include independent mapping of small regions. In addition you will further strengthen your Maths skills.

### Part II (Year 2) Compulsory

The following modules are compulsory and must be taken:

Code	Module Title	ECTS	Type
SOES2038	Exploration Geophysics and Remote Sensing 2021-22	7.5	Compulsory
SOES2039	Fieldwork and Key Skills for Geophysics and Geology 2021-22	15	Compulsory
SOES2018	Geochemistry 2021-22	7.5	Compulsory
SOES2004	Igneous and Metamorphic Petrology 2021-22	7.5	Compulsory
MATH2015	Mathematical Methods for Scientists 2021-22	7.5	Compulsory
SOES2013	Sedimentary Systems and Processes 2021-22	7.5	Compulsory
SOES2037	Structural Geology and GIS 2021-22	7.5	Compulsory

### Part III (Year 3)

During Part III there is a focus on synthesising the material from the previous years. You will study the long-term evolution of the Earth, and how it has become and remained a suitable place for life. You will engage with the core observations that sit behind ideas such as plate tectonics, working with current research data during guided exercises exploring how to analyse it, and see how an Earth scientist must combine different types of data in order to make progress. You will develop your knowledge and ability to apply geophysical exploration methods. In addition you will see how the geological processes that you have studied earlier in the degree are critical for formation of resources that support modern society.

You will continue to develop and consolidate your geological field skills by carrying out an independent mapping project, and gain experience using geophysical equipment in the field by designing your own surveys to investigate the near-surface geology of a region.

#### Part III (Year 3) Compulsory

The following modules are compulsory and must be taken:

Code	Module Title	ECTS	Type
SOES6004	Applied and Marine Geophysics 2022-23	7.5	Compulsory
SOES3021	Geophysical Field Methods 2022-23	7.5	Compulsory
SOES3032	Global Tectonics 2022-23	7.5	Compulsory
SOES3025	Independent Mapping Project 2022-23	15	Compulsory
SOES3002	Petroleum Geology and Mineral Resources 2022-23	7.5	Compulsory
SOES3006	The Evolving Earth 2022-23	7.5	Compulsory

#### Part III (Year 3) Optional

One module must be chosen from the recommended list below. For SOES3020 there is a fieldtrip to Tenerife and you will be asked to pay towards some of the costs, which in previous years has been approximately £300.

Code	Module Title	ECTS	Type
SOES3014	Coastal Sediment Dynamics 2022-23	7.5	Optional
SOES3041	Communicating and Teaching in the Undergraduate Ambassadors Scheme 2022-23	7.5	Optional
SOES3042	Computational Data Analysis for Geophysicists and Ocean Scientists 2022-23	7.5	Optional
SOES3008	Environmental and Engineering Geology 2022-23	7.5	Optional
SOES3010	Large Scale Ocean Processes and Climate 2022-23	7.5	Optional



SOES3015	Palaeoclimate Change 2022-23	7.5	Optional
SOES3029	Seafloor Exploration and Surveying 2022-23	7.5	Optional
SOES3020	Volcanic and Mantle Processes 2022-23	7.5	Optional

#### Part IV

During Part IV you will be working at the edges of current Earth science knowledge. You will spend much of the year working on your advanced independent research project, developing in-depth technical skills by working alongside active researchers in a scientific area of your own interests. You will develop high-level critical skills by working to synthesise current literature on a topic, while also developing your writing and presentation abilities. You will further strengthen your programming skills. You will also look at the Physics and Maths that allow us to understand the large-scale structure of the Earth.

#### Part IV Compulsory

The following modules are compulsory and must be taken:

Code	Module Title	ECTS	Type
SOES6025	Computational Data Analysis for Geophysicists and Ocean Scientists 2023-24	7.5	Compulsory
SOES6001	Contemporary Topics in Geology and Geophysics 2023-24	7.5	Compulsory
SOES6037	Geodynamics and Solid Earth Geophysics 2023-24	7.5	Compulsory
SOES6077	MSci Advanced Independent Research Project (GS) 2023-24	30	Compulsory

#### Part IV Optional

One module must be chosen.

Code	Module Title	ECTS	Type
SOES6059	Basin Analysis 2023-24	7.5	Optional
SOES6007	Biogeochemical Cycles in the Earth System 2023-24	7.5	Optional
SOES6006	Climate Dynamics 2023-24	7.5	Optional
SOES6047	Global Climate Change: Past and Future 2023-24	7.5	Optional
SOES6005	Large Scale Ocean Processes and Climate 2023-24	7.5	Optional

SOES6061	Marine Geoarchaeology 2023-24	7.5	Optional
SOES6011	Modelling Coastal Processes 2023-24	7.5	Optional
SOES6024	Seafloor Exploration and Surveying 2 2023-24	7.5	Optional

## Progression Requirements

The programme follows the University's regulations for [\*Progression, Determination and Classification of Results : Undergraduate and Integrated Masters Programmes\*](#). Any exemptions or variations to the University regulations, approved by AQSC are located in [\*section VI of the University Calendar\*](#).

## Support for student learning

There are facilities and services to support your learning some of which are accessible to students across the University and some of which will be geared more particularly to students in your particular Faculty or discipline area.

The University provides:

- library resources, including e-books, on-line journals and databases, which are comprehensive and up-to-date; together with assistance from Library staff to enable you to make the best use of these resources
- high speed access to online electronic learning resources on the Internet from dedicated PC Workstations onsite and from your own devices; laptops, smartphones and tablet PCs via the Eduroam wireless network. There is a wide range of application software available from the Student Public Workstations.
- computer accounts which will connect you to a number of learning technologies for example, the Blackboard virtual learning environment (which facilitates online learning and access to specific learning resources)
- standard ICT tools such as Email, secure filestore and calendars.
- access to key information through the MySouthampton Student Mobile Portal which delivers timetables, Module information, Locations, Tutor details, Library account, bus timetables etc. while you are on the move.
- IT support through a comprehensive website, telephone and online ticketed support and a dedicated helpdesk in the Hartley Library.
- Enabling Services offering support services and resources via a triage model to access crisis management, mental health support and counselling. Support includes daily Drop In at Highfield campus at 13.00 – 15.00 (Monday, Wednesday and Friday out of term-time) or via on-line chat on weekdays from 14.00 – 16.00. Arrangements can also be made for meetings via Skype.
- assessment and support (including specialist IT support) facilities if you have a disability, long term health problem or Specific Learning Difficulty (e.g. dyslexia).
- the Student Services Centre (SSC) to assist you with a range of general enquiries including financial matters, accommodation, exams, graduation, student visas, ID cards
- Career and Employability services, advising on job search, applications, interviews, paid work, volunteering and internship opportunities and getting the most out of your extra-curricular activities alongside your degree programme when writing your CV
- Other support that includes health services (GPs), chaplaincy (for all faiths) and 'out of hours' support for students in Halls and in the local community, (18.00-08.00)
- A Centre for Language Study, providing assistance in the development of English language and study skills for non-native speakers.

The Students' Union provides

- an academic student representation system, consisting of Course Representatives, Academic Presidents, Faculty Officers and the Vice-President Education; SUSU provides training and support for all these representatives, whose role is to represent students' views to the University.
- opportunities for extracurricular activities and volunteering
- an Advice Centre offering free and confidential advice including support if you need to make an academic appeal
- Support for student peer-to-peer groups, such as Nightline.

Associated with your programme you will be able to access:

- A personal tutor system - our tutorial system aims to provide personalised pastoral and academic care for all students. You will be allocated a member of the academic staff as your personal academic tutor on arrival at University, and he/she will be charged with your guidance throughout your undergraduate career. You will also have a shadow tutor for contact if your personal academic tutor is absent. You can also approach the Programme Leader for Geophysics, or the Senior Tutor if necessary.
- Programme and module guides/information. Hard copies are available, but are mainly published on the web: [www.southampton.ac.uk/oes](http://www.southampton.ac.uk/oes) and [www.blackboard.soton.ac.uk](http://www.blackboard.soton.ac.uk).
- Two large computer clusters at the NOCS for dedicated use by undergraduate students, with extra computer resources for Integrated Masters students. Additional computer clusters are available for your use on the other University campuses, as well as at the Halls of Residence.
- Teaching staff via email and personal contact.
- Support from the academic studies administrative staff, which is readily available during the normal working day.
- A pool of geological and geophysical equipment is available for laboratory and field- and boat-based learning, and the standard field equipment is available for purchase.
- A research-led environment at the NOCS, which provides a high quality learning environment for students.
- A wide range of well-equipped laboratories which are available for student project work, and specific study rooms.
- Close collaboration between Ocean and Earth Science and staff from the Natural Environment Research Council's NOCS provides additional support for student learning, particularly with regard to independent research projects.
- Specialised teaching labs and lecture theatre at the NOCS.

## Methods for evaluating the quality of teaching and learning

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You will have the opportunity to have your say on the quality of the programme in the following ways:

- Completing student evaluation questionnaires for each module of the programme.
- Acting as a student representative on various committees, e.g. Staff/Student Liaison Committees, School Programmes Committee OR providing comments to your student representative to feedback on your behalf.
- Serving as a student representative on Faculty Scrutiny Groups for programme validation.
- Taking part in programme validation meetings by joining a panel of students to meet with the Faculty Scrutiny Group.

Further details on the University's quality assurance processes are given in the [Quality Handbook](#).

## Career Opportunities

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The strength and prestige of our geophysics degree will open doors to a wide range of employment opportunities. Potential employers view graduates of our Ocean and Earth Science programmes as superbly qualified scientists with excellent personal and transferable skills in numeracy, communication and team working.

The integrated masters MSci Geophysics degree programme has close links to industry, through a combination of summer placements, one-year industry placements and the opportunity to undertake research in parts three and four.

- Oil, gas and mineral sectors
- Private, public and military organisations
- Site investigations for onshore and offshore structures, e.g. oil and gas platforms; pipelines; wind farms; and sea defences
- Hazard monitoring, archaeological geophysics
- Teaching
- Research laboratories
- Further postgraduate study

## External Examiner(s) for the programme

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Name: Dr Stewart Fishwick - University of Leicester

Students must not contact External Examiner(s) directly, and external examiners have been advised to refer any such communications back to the University. Students should raise any general queries about the assessment and examination process for the programme with their Course Representative, for consideration through Staff: Student Liaison Committee in the first instance, and Student representatives on Staff: Student Liaison Committees will have the opportunity to consider external examiners' reports as part of the University's quality assurance process.

External examiners do not have a direct role in determining results for individual students, and students wishing to discuss their own performance in assessment should contact their Personal Academic Tutor in the first instance.

**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 they take full advantage of the learning opportunities that are provided. More detailed information can be found in the programme handbook.

# Appendix 1:

Students are responsible for meeting the cost of essential textbooks, and of producing such essays, assignments, laboratory reports and dissertations as are required to fulfil the academic requirements for each programme of study. In addition to this, students registered for this programme also have to pay for:

## Additional Costs

Type	Details
Approved Calculators	Candidates may use calculators in the examination room only as specified by the University and as permitted by the rubric of individual examination papers. These may be purchased from any source and no longer need to carry the University logo.
Clothing	You will need to wear suitable clothing when attending field courses, e.g. waterproofs, walking boots, rucksack. You can purchase these from any source.
Computer discs or USB drives	Students are expected to provide their own data storage device.
Field Equipment and Materials	<ul style="list-style-type: none"> <li>- A minimum amount of field equipment will be required and this is provided by the department, mostly during induction. Students will however bear the cost of replacements if lost or damaged</li> <li>- Geophysics and Geology students will receive: compass-clinometer; hand lens; rock hammer; waterproof field notebooks; steel tape measure; safety helmet; clip board; safety goggles; bottle for dilute hydrochloric acid; outdoor first aid kit; 3 mapping pens; grain size comparator cards.</li> <li>- Students are also recommended to purchase the following items: a pair of compasses; set squares; protractor; pencils (including coloured); eraser; University-approved calculator.</li> <li>- Some students purchase a 'Weather writer' which affords more protection for maps in wet weather.</li> <li>- Some of the items not included in the induction pack can be purchased from the department/University. Please visit Room 161/05, Level 1, NOCS.</li> </ul>
Fieldwork: logistical costs	<p>Experience of working in the field is an essential part of your learning process and is also widely regarded as valuable in personal development.</p> <p>Please note that circumstances may dictate that some field-courses are timetabled within part of the vacation period.</p> <p>For compulsory residential field courses, accommodation and travel are provided (for SOES3025 Independent Mapping a fixed amount is provided to cover these costs for the least expensive area). You are usually expected to cover the costs of food and drink, although some courses may include meals. For optional field courses, students are asked to make a contribution to the travel and/or accommodation costs. Details are provided in the table below.</p> <p>Please note that if a field course is compulsory for your degree programme and you later move from that degree programme to one where that field course is optional, you will be charged for the cost of that field course.</p> <p>In addition to the field courses mentioned in this booklet, there are also one-day field courses associated with specific modules; students are expected to cover food and drink costs for these days, but transport is arranged and paid for by the department. As the department arranges transport, should students wish to make their own way to or from field courses, then they must meet these costs themselves.</p>

	<p>Additional Information</p> <p>SOES3020: Tenerife Field Course This is an optional module that includes a field course for which a contribution from students is required. In previous years this has typically been approximately £300. As this is an overseas field course which requires the department to make early flight bookings to minimise costs, students who pre-register for this module will be liable for the full flight costs if they subsequently opt not to take the module.</p> <p>Notes:</p> <p>Where a student contribution is made, invoices will be issued approximately 2 weeks prior to the start of a field course and payment will be due within 7 days.</p> <p>Dates and costs are correct at the time of going to press.</p> <p>Insurance (travel, medical, personal property and baggage) - Students are automatically insured whilst on University organised field courses undertaken as part of their official studies, including field courses in the UK involving an overnight stay.</p>
Hardware	It is advisable that students provide their own laptop or personal computer, although shared facilities are available across the University campus.
Laboratory Equipment and Materials	Laboratory equipment and consumables will be provided where appropriate.
Printing and Photocopying Costs	<p>Coursework such as essays, projects and dissertations may be submittable on line. However, some items will require submission as a printed copy including some items where it is not possible to submit online. A list of the University printing costs can be found here: <a href="http://www.southampton.ac.uk/isolutions/students/printing-for-students.page">http://www.southampton.ac.uk/isolutions/students/printing-for-students.page</a></p> <p>Please remember that we are unable to refund any credit that has not been used by the end of your course, so please consider this when topping up your printing/copy account.</p> <p>The University Print Centre also offer a printing and copying service as well as a dissertation/binding service. Current printing and copying costs can be found in <a href="http://www.southampton.ac.uk/printcentre/copyrooms/service.page">http://www.southampton.ac.uk/printcentre/copyrooms/service.page</a>. They also provide a large format printing service, e.g. Academic posters. Current costs can be found in <a href="http://www.southampton.ac.uk/printcentre/exhibition/academicposters.page">http://www.southampton.ac.uk/printcentre/exhibition/academicposters.page</a>.</p>
Software Licenses	Will be provided by the University where appropriate.
Stationery	You will be expected to provide your own day-to-day stationery items, e.g. pens, pencils, notebooks, etc. Any specialist stationery items will be specified under the Additional Costs tab of the relevant module profile.
Textbooks	<p>Where a module specifies core texts these should generally be available on the reserve list in the library. However, students may prefer to buy their own copies. These can be purchased from any source.</p> <p>Some modules suggest reading texts as optional background reading. The library may hold copies of such texts, or alternatively you may wish to purchase your own copies. Although not essential reading, you may benefit from the additional reading materials for the module.</p>

In some cases you'll be able to choose modules (which may have different costs associated with that module) which will change the overall cost of a programme to you. Details of such costs will be listed in the Module Profile. Please also ensure you read the section on additional costs in the University's Fees, Charges and Expenses Regulations in the University Calendar available at [www.calendar.soton.ac.uk](http://www.calendar.soton.ac.uk).