

Programme Specification

Geophysics (2017-18)

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.

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|---|---|
| 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 |
| 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 | F660 |
| Programme code | 4957 |
| QAA Subject Benchmark or other external reference | Earth Sciences, Environmental Sciences And Environmental Studies 2007, Master's Degree Characteristics 2010 |
| Programme Lead | Timothy Henstock (then) |

Programme Overview

Brief outline of the programme

Geophysics is the application of physics-based principles and techniques to studying and understanding the Earth. This goes from the physics controlling how Earth behaves as a planet, and for example how heat is lost from the interior of the Earth, to using waves to determine structure beneath the surface on scales from a few cm to 1000s of km and for different applications from archaeology and engineering to hazard assessment

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 degree will equip you with a broad knowledge of contemporary geophysics and a range of geophysical, geological and mathematical skills, including 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, 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

The MSci courses 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 Academic Unit 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

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. The MSci Geophysics with study abroad programme in addition allows students to benefit from study abroad during their third year at one of a number of leading international research universities. Compared with the conventional MSci programmes, this programme aims to provide students with an opportunity to study in a different cultural environment and to receive instruction from research leaders in a top international university.

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 Academic Unit based at the NOCS.

The specific aims of these programmes 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 project at the forefront of geophysical science in a professional research environment. [MSci programmes only].

Programme Learning Outcomes

Knowledge and Understanding

On successful completion of this programme a student will have knowledge and understanding of:

- A1. The need for both a multidisciplinary and an interdisciplinary approach in advancing knowledge and understanding of Earth and Marine systems, drawing, as appropriate, from the natural sciences.
- A2. The processes which shape the natural world at different temporal and spatial scales, and their influence on and, conversely, their modification by human activities.
- A3. The terminology, nomenclature and classification systems used and developed within Geophysics.
- A4. The fundamentals of mathematics, physics and geology as relevant to geophysics.
- A5. Theory, acquisition, analysis and interpretation of geophysical, oceanographic and mathematical data across a range of geophysical applications, including exploration geophysics, solid earth geophysics and advanced geophysical research techniques, with a critical understanding of the appropriate contexts for the use of different geophysical techniques.
- A6. Computing techniques used for analysis, interpretation and presentation of geophysical data in a range of applications
- A7. Application of the principles of mathematics and physics to studying problems of the Earth system.
- A8. The significance of geophysical techniques in addressing research topics across a broad range of Earth science problems.
- A9. The concepts of Earth observation and remote data acquisition skills.
- A10. Issues concerning the availability and sustainability of resources, for example, the different value sets relating to the Earth's resources as commodities and/or heritage.
- A11. The contribution of Marine and Earth scientific expertise to debates on environmental issues and how knowledge of these forms the basis for informed concern about the Earth and its people.
- A12. The contribution of your subject to the development of knowledge about the world we live in.
- A13. The relevance of knowledge and skills acquired on your programme of study to professional activity, environmental impact and the world of work.

Subject Specific Intellectual and Research Skills

On successful completion of this programme a student will be able to:

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

- B6. 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. The identification of rocks, minerals, and geological structures.
- B8. Collection and documentation of geological information in the field, including the production and interpretation of geological maps.
- B9. Surveying and measurement both in the field and laboratory, and using qualitative, quantitative and instrumental techniques.
- B10. The exploration for, and the development and exploitation of, Earth resources.
- B11. Geohazards and their impacts on human societies.
- B12. Earth science perspectives on sustainability and social awareness (e.g. renewable versus non-renewable resources, climate change, the history of life and biodiversity).
- B13. A specialist selection of topics currently at the frontiers of research in Earth science and many of the specialist techniques used to investigate them [MSci programme will significantly increase this knowledge base].

Transferable and Generic Skills

On successful completion of this programme a student will be able to:

- C1. Recognise and use geophysical theories, paradigms, concepts and principles.
- C2. Critically analyse, synthesise and summarise information, including prior research.
- C3. Collect and integrate several lines of evidence to formulate and test hypotheses.
- C4. Apply knowledge and understanding to address familiar and unfamiliar problems, including experimental design of geophysical field surveys.
- C5. Recognise the moral and ethical issues of investigations and appreciating the need for professional codes of conduct.
- C6. Plan, design, conduct and report, both verbally and in writing, on investigations, including the use of secondary data.
- C7. Collect, record and analyse primary data using appropriate techniques in the field and laboratory.
- C8. Undertake field and laboratory investigations in a responsible and safe manner, paying due attention to risk assessment, rights of access, relevant health and safety regulations, and sensitivity to the impact of investigations on the environment and stakeholders.
- C9. Locate, retrieve, read, use and reference the geophysical work of others in an appropriate manner.
- C10. Design a geophysical survey.
- C11. Produce and interpret maps and other aids to visualisation.
- C12. Plan and execute an investigative geophysical research project.
- C13. Communicate effectively to a variety of audiences in written, verbal and graphical forms.
- C14. Select and use the appropriate method and means of communication for a range of different situations.
- C15. Absorb and respond to a variety of information sources (e.g., textual, numerical, verbal, graphical).
- C16. Appreciate issues of sample selection, accuracy, precision and uncertainty during collection, recording and analysis of data in the field and in the laboratory.
- C17. Prepare, process, interpret and present data, using appropriate qualitative and quantitative techniques, univariate and multivariate statistical analyses and computer software packages, including geographic

information systems.

- C18. Develop computing and data analysis skills in a wide range of geophysical techniques.
- C19. Solve numerical problems.
- C20. Critically use the Internet as a means of communication and as a source of information.
- C21. Identify individual and collective goals and responsibilities and perform in an appropriate manner.
- C22. Appreciate the concepts of experimental learning in groups and team performance.
- C23. Recognise and respect the views and opinions of other team members.
- C24. Develop the skills necessary for self-managed and life-long learning (e.g. working independently, time management and organisation skills).
- C25. Identify and work toward targets for personal, academic and career development.
- C26. Develop an adaptable and flexible approach to study and work.

Programme Structure

The programme structure table is below:

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

Part I

Typical course content

The programme is offered as a full-time course. The MSci programmes normally last for four years and the BSc for three years.

Study is undertaken in three parts for the BSc, and four parts for the MSci, 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.

At Southampton the programme is divided into individual study modules for each Part. Each study module is accredited as being 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.

All geophysical sciences students take the same Part 1 modules, which lay a solid foundation in the basic disciplines of geophysics: mathematics, physics and geology. More specialised geophysical training and options that enable diversification commence in Part 2.

In Parts 3 and 4, students are exposed to the forefronts of geophysical knowledge, with the opportunity to conduct supervised original research. If studying for an MSci, in Part 4 you will undertake a major research project which may involve external stakeholders and in which you will play a significant role in the design stage.

Part I Compulsory

This is an indicative list of options. We cannot guarantee to offer every option each year.

| Code | Module Title | ECTS | Type |
|----------|---|------|------------|
| SOES1002 | Dynamic Earth 2017-18 | 7.5 | Compulsory |
| SOES1008 | Earth and Ocean System 2017-18 | 7.5 | Compulsory |
| SOES1001 | Earth Materials 2017-18 | 7.5 | Compulsory |
| PHYS1022 | Electricity and Magnetism 2017-18 | 5 | Compulsory |
| MATH1008 | Introduction to Mathematical Methods 2017-18 | 7.5 | Compulsory |
| SOES1003 | IT Communication, Field and Laboratory Skills 2017-18 | 7.5 | Compulsory |
| MATH1009 | Math Methods for Scientist 1b 2017-18 | 7.5 | Compulsory |
| PHYS1011 | Waves, Light and Quanta 2017-18 | 7.5 | Compulsory |

Part I Optional

One of the following modules must be taken

| Code | Module Title | ECTS | Type |
|----------|-------------------------------|------|----------|
| PHYS1013 | Energy and Matter 2017-18 | 7.5 | Optional |
| PHYS1015 | Motion and Relativity 2017-18 | 5 | Optional |

Part II

Part II Compulsory

The following modules are compulsory and must be taken:

| Code | Module Title | ECTS | Type |
|----------|--|------|------------|
| MATH2015 | Mathematical Methods for Scientists 2018-19 | 7.5 | Compulsory |
| SOES2035 | Physics, Fieldwork & Key Skills for Geophysicists 2018-19 | 15 | Compulsory |
| SOES2033 | Structural Geology, Exploration Geophysics, GIS and Remote Sensing 2018-19 | 15 | Compulsory |

Part II Optional

THREE modules should be chosen from the recommended list below. However, students may be able to choose ONE option from the approved list, provided the timetable allows and you have the correct pre-requisites.

| Code | Module Title | ECTS | Type |
|----------|--|------|----------|
| PHYS2006 | Classical Mechanics 2018-19 | 7.5 | Optional |
| SOES2024 | Coastal and Estuarine Oceanography I 2018-19 | 7.5 | Optional |
| SOES2018 | Geochemistry 2018-19 | 7.5 | Optional |
| SOES2003 | Geohazards and Earth Resources 2018-19 | 7.5 | Optional |
| SOES2004 | Igneous and Metamorphic Petrology 2018-19 | 7.5 | Optional |
| SOES2010 | Physical Oceanography II 2018-19 | 7.5 | Optional |
| SOES2013 | Sedimentary Systems and Processes 2018-19 | 7.5 | Optional |

Part III

Part III Compulsory

The following modules are compulsory and must be taken:

| Code | Module Title | ECTS | Type |
|----------|--|------|------------|
| SOES6004 | Applied and Marine Geophysics 2019-20 | 7.5 | Compulsory |
| SOES3042 | Computational Data Analysis for Geophysicists and Ocean Scientists 2019-20 | 7.5 | Compulsory |
| SOES3032 | Global Tectonics 2019-20 | 7.5 | Compulsory |

Part III Optional

THREE modules must be chosen from the recommended list below. However, students may be able to choose ONE option from the approved list, provided the timetable allows and you have the correct pre-requisites.

| Code | Module Title | ECTS | Type |
|----------|---|------|----------|
| SOES3014 | Coastal Sediment Dynamics 2019-20 | 7.5 | Optional |
| SOES3041 | Communicating and Teaching in the Undergraduate Ambassador Scheme 2019-20 | 7.5 | Optional |
| SOES3008 | Environmental and Engineering Geology 2019-20 | 7.5 | Optional |
| SOES3015 | Palaeoclimate Change 2019-20 | 7.5 | Optional |
| SOES3002 | Petroleum Geology and Mineral Resources 2019-20 | 7.5 | Optional |
| SOES3006 | The Evolving Earth 2019-20 | 7.5 | Optional |
| SOES3020 | Volcanic and Mantle Processes 2019-20 | 7.5 | Optional |

Part IV

Part IV Compulsory

The following modules are compulsory and must be taken:

| Code | Module Title | ECTS | Type |
|----------|--|------|------------|
| SOES6001 | Contemporary Topics 2020-21 | 7.5 | Compulsory |
| SOES6030 | MSci Advanced Independent Research Project 2020-21 | 22.5 | Compulsory |

Part IV Optional

A total of THREE modules must be chosen.

******For those students who choose to take SOES6059 Basin Analysis there will be an opportunity to work on data related to, and to potentially compete, in the American Association of Petroleum Geologists (AAPG) Barrel Award (SOES6064) in Semester 2. This option is only available to a small number of students, selected from those who would like to take the course. Students should be aware that participating in SOES6064 will prevent choosing other modules in Slot A of Semester 2 and may involve some overlap between work on this module and a module in Slot B.

| Code | Module Title | ECTS | Type |
|----------|---|------|----------|
| SOES6059 | Basin Analysis 2020-21 | 7.5 | Optional |
| SOES6007 | Biogeochemical Cycles in the Earth system 2020-21 | 7.5 | Optional |
| SOES6006 | Climate Dynamics 2020-21 | 7.5 | Optional |
| SOES6064 | Imperial Barrel Award 2020-21 | 7.5 | Optional |
| SOES6005 | Large Scale Ocean Processes 2020-21 | 7.5 | Optional |
| SOES6011 | Modelling Coastal Processes 2020-21 | 7.5 | Optional |
| SOES6024 | Seafloor Exploration and Surveying 2 2020-21 | 7.5 | Optional |

Progression Requirements

The programme will follow the University's regulations for [Progression, Determination and Classification of Results: Undergraduate and Integrated Masters Programmes](#) or the University's regulations for [Progression, Determination and Classification of Results: Standalone Masters Programmes](#) as set out in the General Academic Regulations in the University Calendar: <http://www.calendar.soton.ac.uk/sectionIV/sectIV-index.html>

Appendix 1: Learning Outcomes and Assessment Methods mapping

| 2017/18 | MSci Geophysics | Knowledge and Understanding | | | | | | | | | | | | Subject Specific Intellectual and Research Skills | | | | | | | | | | | | | Transferable and generic skills | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|--|-----------------------------|---|---|---|---|---|---|---|---|----|----|----|---|---|---|---|---|---|---|---|---|---|----|----|----|---------------------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|--|--|--|--|
| Module Code | Module Title | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | | | | | |
| Part 1 | All programmes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SOES1001 | Earth Materials | | X | X | X | | | | | | X | | X | | | X | | X | | X | | | | | | | | | X | | X | | | | | | | | | X | | | | X | X | X | | | | X | | | | | | | | |
| SOES1002 | Dynamic Earth | | X | X | X | | | | X | X | X | | X | | X | X | X | X | X | X | X | | | | | | | X | | X | | | X | | | | | X | | | X | | | X | X | X | | | | X | | | | | | | | |
| SOES1003 | IT, Communication, Field & Lab Skills | X | X | X | X | X | X | | X | | | X | X | X | | | | | | | X | X | X | | | | | X | X | X | X | X | X | X | X | X | X | | | X | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | |
| SOES1008 | Earth & Ocean System | X | X | X | X | | | | X | | X | X | X | | X | X | X | X | X | X | | | | | | | | X | | | | | | | | | | | | X | | | | X | | | | | | | | | | | | | | |
| MATH1008 | Introduction to Mathematical Methods 1A | | | | X | | | X | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | X | | | X | X | X | X | X | | | | | | | | | | | |
| MATH1009 | Mathematical Methods for Scientists 1B | | | | X | | | X | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | X | | | X | X | X | X | X | | | | | | | | | | |
| PHYS1011 | Wave, Light and Quanta | | | | X | | | X | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | X | | | X | X | X | X | X | | | | | | | | | | |
| PHYS1015 | Motion and Relativity | | | | X | | | X | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | X | | | X | X | X | X | X | | | | | | | | | | |
| PHYS1022 | Electricity and Magnetism | | | | X | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | X | | | | X | | | | | | | | | | | | |
| PHYS1013 | Energy and Matter | | | | X | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | X | | | | X | | | | | | | | | | | | |
| Part 2 | All Programmes:- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SOES2033 | Structural Geology, Exploration Geophysics, GIS and Remote Sensing | | X | X | X | X | X | X | X | X | | | X | | | X | | | | | X | | | X | | | | | | X | | | | | | | | | | | | | X | X | | | | | | | | | | | | | | |
| SOES2035 | Physics, Fieldwork and Key Skills for Geophysicists | X | X | X | X | X | X | X | X | | | | X | X | | X | | | | | X | X | X | | | | | | X | X | X | | X | X | X | X | | X | X | X | X | X | | X | X | | X | X | X | X | X | X | X | | | | | |

[illegible]

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 and 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

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, Faculty Programmes Committee, OES Education and Quality Committee OR providing comments to your student representative to feed-back 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.
- Joining a panel of students to meet with the External Examiners.

The ways in which the quality of your programme is checked, both inside and outside the University, are:

- Regular module and programme reports which are monitored by the Faculty.
- Programme validation, normally every five years.
- External examiners, who produce an annual report.
- Accreditation carried out by the Geological Society of London.
- A national Research Assessment Exercise (our research activity contributes directly to the quality of your learning experience).
- Institutional Review by the Quality Assurance Agency.

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

Criteria for admission

The University's Admissions Policy applies equally to all programmes of study. The following are the typical entry criteria to be used for selecting candidates for admission. The University's approved equivalencies for the requirements listed below will also be acceptable.

A Levels: Our typical offers are:

We require a minimum of three A-levels for entry onto our courses, and for Geophysics these must include Maths and Physics. The third subject is less important, however we encourage applicants with a third science subject, and require a third science subject for MSci Geophysics with study abroad.

Science Foundation Year

The University of Southampton Science Foundation Year is designed to provide you with a route to a science degree if you do not have the traditional entry qualifications. This programme may suit you if you are studying for A-levels in subjects different from those normally required for these degrees. It may also interest you if you are a mature applicant, with skills and experience from employment and can show recent study, or if you come

from a part of the world where the education system is different from the British A level system. For more information, please click on the link below:
http://www.southampton.ac.uk/engineering/undergraduate/courses/foundation_year/science_foundation_year.page

International applications

International applicants should refer to the General Entry Requirements – visit our International Office website at <http://www.southampton.ac.uk/international/> or the NARIC website at <http://ecctis.co.uk/naric/> for further information on qualifications.

| Qualification | Grades | Subjects required | Subjects not accepted | EPQ Alternative offer (if applicable) | Contextual Alternative offer (if applicable) |
|-----------------------------|---|---|-----------------------|---------------------------------------|--|
| International Baccalaureate | <p>We are pleased to receive applications from candidates (including mature candidates) with equivalent national and international qualifications. The degree subject requirements are shown in the A-level table on the website at: http://www.southampton.ac.uk/oes/undergraduate/apply/entry_requirements.page?#qualifications.</p> <p>Applicants studying the International Baccalaureate should take Maths and Physics at HL and ideally a third preferred subject at SL or an equivalent standard in other qualifications approved by the University.</p> | | | | |
| A Level | AAB grade A-levels, or an equivalent standard in other qualifications approved by the University | To include Maths and Physics, one of which must be an A grade | | | |

Mature applicants

Studying for a degree later in life can be extremely rewarding and mature students are often among our most successful.

We are pleased to receive applications from mature candidates with equivalent national and international qualifications. For more information, please click on the 'Entry Requirements' link below:
http://www.southampton.ac.uk/oes/undergraduate/apply/entry_requirements.page?#qualifications

Recognition of Prior Learning (RPL)

The University has a [Recognition of Prior Learning Policy](#)

Students are accepted under the University's recognition of prior learning policy; however, each case will be reviewed on an individual basis.

English Language Proficiency

The table below sets out the English proficiency requirements for this programme in terms of the IELTS test. We accept a range of other English proficiency tests including TOEFL and Cambridge Advanced/Proficiency. For full details of the recognised tests and the equivalent requirements in those tests please see

www.southampton.ac.uk/admissions-language.

| Overall | Reading | Writing | Speaking | Listening |
|---------|---------|---------|----------|-----------|
| 6.5 | 5.5 | 5.5 | 5.5 | 5.5 |

Career Opportunities

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 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

Dr James Wookey Bristol University

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 s/he takes 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 |
|------------------------------------|---|
| Software Licenses | Will be provided by the University where appropriate |
| Clothing | You will need to wear suitable clothing when attending field courses, e.g. waterproofs, walking boots. You can purchase these from any source. |
| Hardware | It is advisable that students provide their own laptop or personal computer, although shared facilities are available across the University campus. |
| Computer discs or USB drives | Students are expected to provide their own data storage device |
| 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> |
| Laboratory Equipment and Materials | Laboratory equipment and consumables will be provided where appropriate. |
| 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. The University approved models are Casio FX-570 and Casio FX-85GT Plus. These may be purchased from any source and no longer need to carry the University logo. |
| Fieldwork: logistical costs | <p>Fieldwork: introduction</p> <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 Independent Geology 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. To provide an example: students on the MSci Marine Biology programme undertaking the field course to Bermuda will be charged the full cost of the field course if they later choose to transfer to the BSc Marine Biology degree programme.</p> |

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| | <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 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>SOES3025: Independent Geology Mapping Precise costs depend on specific arrangements made by students and on individual destinations. The department undertakes to cover the costs for accommodation and travel up to the cost of the least expensive destination, and currently provides £500 per student.</p> <p>SOES6052: Tropical Field Course This field trip is optional and open only to MSci Marine Biology and MSci Biology with Marine Biology students. Students are expected to fund their travel and to provide their own snorkelling equipment, including 3mm-thick wetsuit. The total cost is currently expected to be no more than £800-900. The department provides full board, IT and lab facilities and course-related travel whilst on Bermuda.</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> |
| Field Equipment and Materials | <p>Fieldwork equipment</p> <p>Geology and Geophysics students · Geology and Geophysics students will need a minimum amount of field equipment and this is provided by the department. Most will be provided during Induction. · Geology students receive: compass-clinometer; geological hammer; hand lens; waterproof field notebooks (quantity depends on degree programme); 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. · Geophysics students receive: compass-clinometer; hand lens; waterproof field notebooks (quantity depends on degree programme); 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. · All Geology and Geophysics students are recommended to purchase the following items: a pair of compasses; set squares; protractor; pencils (including coloured); eraser; University-approved calculator. · Geology and Geophysics students will also need to provide their own walking</p> |

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|---------------------------------|--|
| | boots, waterproof clothing, and a rucksack; some students purchase a 'Weather writer' which affords more protection for maps in wet weather. 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. |
| 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. The University printing costs for taught students are currently:</p> <p>A4 - 5p per side (black and white) or 25p per side (colour) A4 - 4.5p double sided (black and white) or 24p double sided (colour) A3 - 10p per side (black and white) or 50p per side (colour)</p> <p>A3 - 9.5p double sided (black and white) or 48p double sided (colour)</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>You will be given a printing allowance towards the costs of printing lecture hand-outs or you may choose to use digital versions only during lectures.</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 http://www.southampton.ac.uk/printcentre/copyrooms/service.page. They also provide a large format printing service, e.g. Academic posters. Current costs can be found in http://www.southampton.ac.uk/printcentre/exhibition/academicposters.page.</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.