Environmental Science
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Explore
Study in the field in exciting locations such as California.

Challenge
Tackle the big problems facing our changing environment.

Discover
Learn in our award-winning £23 million Central Teaching Laboratories.

Excel
Wide range of different assessment approaches allowing you to achieve your potential.
Why choose Environmental Science at Liverpool?

Studying Environmental Science at Liverpool will provide you with an in-depth understanding of both naturally and human induced environmental issues impacting the world today. Liverpool’s strengths in environmental science are both the expertise of our staff and the wide range of facilities and approaches that we use to teach our students.

**Benefit from a wide range of study opportunities**

Our Environmental Science degree provides an exceptional range of study opportunities delivered by world leading researchers from across the School of Environmental Sciences. You can choose from an extensive range of modules delivered by experts in their field using state-of-the-art equipment and techniques.

Our degree gives students the option of ‘module pathways’ themed around:

- Earth and surface processes
- Oceans
- Ecology
- Society, sustainability and the environment
- Digital environments (focusing on coding/geospatial data analysis).

These pathways ensure that our students graduate with the specialist skills and knowledge needed for their future careers, while also having the benefit of a wide-ranging education in environmental science.

**Gain skills highly relevant for your future career**

Our degree programme provides you with the key skills and knowledge required to pursue a career in environmental science, which are also highly transferable to other sectors. Degree accreditation from the Institution of Environmental Sciences provides our students with free membership of a professional body, setting them on course for achieving Chartered Scientist or Chartered Environmentalist status.

**Award-winning teaching facilities**

You will learn through a combination of individual and group work, including practicals in our purpose built £23 million Central Teaching Laboratories. In addition to making the most of Liverpool’s coastal location, you will also have the opportunity to undertake residential fieldwork in locations such as Snowdonia, Pembrokeshire, Peak District as well as Portugal, Iceland and California.

**Accredited degree programme**

Environmental Science, F750, is accredited by the Institution of Environmental Sciences. Accreditation by this long established, highly reputable professional body recognises the high quality of BSc Environmental Science at Liverpool.
**Fieldwork requirements**
A number of the School’s degree programmes involve laboratory and field work. Fieldwork is carried out in various locations, ranging from inner city to coastal and mountainous environments. We consider applications from prospective disabled students on the same basis as all other students, and reasonable adjustments will be considered to address barriers to access.

**How you learn**
Our degree focuses on applied skills that are relevant to careers in environmental science, providing you with expertise in monitoring, modelling and managing the environment. From your first week to your final year, field classes and laboratory practicals are an integral part of your learning, and provide a firm grounding in the latest techniques and technologies in environmental science. Lectures, fieldwork and laboratory work are assessed through a wide range of different assessment approaches, allowing you to achieve your potential. These include “real world” assessments (eg writing of industry style briefing notes), oral presentations and report writing preparing you with experience of skills required in the workplace.

Each student is assigned a member of academic staff as their adviser, to provide both pastoral care and develop job application skills such as CV and cover letter writing, and conducting mock interviews.

To help students meet the intellectual and practical challenges of studying environmental science, our courses are taught using a student-centred approach, involving a range of learning experiences. These include:

- Hands-on experience of cutting-edge laboratory technologies
- An emphasis on active, problem-based learning (learning by doing)
- High levels of field and lab-based teaching within the School of Environmental Sciences and in Europe’s most advanced teaching laboratories
- Small tutor groups (typically 6-8 students) through all years.

Supervised independent and group project work, including a final year independent research-based dissertation supervised by a dedicated expert in the field.
Study abroad

As part of your Environmental Science degree programme you have the opportunity to spend a semester studying abroad. Recent destinations have included Canada, Sweden, Australia and China, where our students have had the chance to live and study in different environments. Our students also have the option to add a further year to their degree course, studying for the ‘Year in China’ option (see below), where they are taught about Chinese language and culture in addition to studying environmental science related modules at Liverpool’s sister university, XJTLU. Environmental science is an inherently international discipline, and studying abroad potentially has huge benefits, personally, academically, and for employability. For more information, visit liverpool.ac.uk/goabroad

Year in China

Applying for the Environmental Science with a Year in China programme provides an exciting opportunity for our students to spend one year at our sister university Xi’an Jiaotong-Liverpool University (XJTLU). During their year at XJTLU our students learn about Chinese language and culture, gaining valuable experience of working in and the issues affecting one of the world’s largest economies. See also liverpool.ac.uk/yearinchina for more information.

Languages at Liverpool

Studying a programme within Environmental Science allows you to study a language as an extracurricular course, on top of your degree. See liverpool.ac.uk/languages for more information.

I picked Environmental Science because I love nature and I enjoy studying the relationship between the environment and humans. The Environmental Science degree gave me an interesting way to look at the world we are living in and helped me realise my dream to build a more beautiful world.

Frank Tong
Environmental Science BSc (Hons)
## Timetable

### Semester One

#### Typical week

<table>
<thead>
<tr>
<th>Day</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
<th>Sunday</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>9:00:00 - 10:00:00 Lecture</td>
<td>10:00 - 11:00 Lecture</td>
<td>11:00 - 12:00 Library – preparation for tutorial</td>
<td>12:00 - 13:00 Library – working on coursework</td>
<td>13:00 - 14:00 Library – preparation for coursework</td>
<td>14:00 - 15:00 Final preparation of coursework</td>
<td>15:00 - 16:00 Online submission of coursework</td>
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<tr>
<td></td>
<td>10:00 - 11:00 Computer practical</td>
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</tr>
<tr>
<td></td>
<td>11:00 - 12:00 Reading for laboratory practical</td>
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<tr>
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<td></td>
<td></td>
<td>11:00 - 12:00 Reading for laboratory practical</td>
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<tr>
<td></td>
<td></td>
<td>12:00 - 13:00 Reading for laboratory practical</td>
<td></td>
<td>12:00 - 13:00 Library – preparation for coursework</td>
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<td></td>
<td></td>
<td>13:00 - 14:00 Library – preparation for coursework</td>
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<td></td>
<td></td>
<td></td>
<td>14:00 - 15:00 Final preparation of coursework</td>
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<td></td>
<td>15:00 - 16:00 Online submission of coursework</td>
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<td>15:00 - 16:00 Online submission of coursework</td>
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<td></td>
<td>16:00 - 17:00 Meeting to work on group task</td>
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<td></td>
<td>17:00 - 18:00 Meeting to work on group task</td>
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<td></td>
<td></td>
<td></td>
<td>18:00 - 19:00 Meeting to work on group task</td>
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<td></td>
<td></td>
<td></td>
<td>19:00 - 20:00 Meeting to work on group task</td>
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<td></td>
<td></td>
<td>20:00 - 21:00 Meeting to work on group task</td>
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<td></td>
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<td>21:00 - 22:00 Meeting to work on group task</td>
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<td></td>
<td>22:00 - 00:00 Meeting to work on group task</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>00:00 - 01:00 Meeting to work on group task</td>
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</tr>
</tbody>
</table>

### Independent study time

- **Monday**: Reading for following week’s lectures
- **Tuesday**: Reading for following week’s lectures
- **Wednesday**: Reading for following week’s lectures
- **Thursday**: Reading for following week’s lectures
- **Friday**: Reading for following week’s lectures
- **Saturday**: Reading for following week’s lectures
- **Sunday**: Reading for following week’s lectures

### Timetabled academic session

- **Monday**: Lecture
- **Tuesday**: Lecture
- **Wednesday**: Reading for laboratory practical
- **Thursday**: Reading for laboratory practical
- **Friday**: Library – preparation for tutorial
- **Saturday**: Library – working on coursework
- **Sunday**: Library – working on coursework

### Social

- **Monday**: Guild comedy club
- **Tuesday**: Guild comedy club
- **Wednesday**: Guild comedy club
- **Thursday**: Guild comedy club
- **Friday**: Guild comedy club
- **Saturday**: Guild comedy club
- **Sunday**: Guild comedy club
As part of an IES accredited programme, you will also have the chance to attend additional careers and skills training courses, have access to environmental sector linked job opportunities, and make progress towards Chartered Scientist/Chartered Environmentalist status.

Environmental Science at Liverpool is focused on providing you with the key knowledge and practical skills to be successful within the environmental sector. Our graduates are experienced in report writing, field and laboratory practical skills, oral presentations, project planning, and increasingly coding and modelling skills that are highly sought after by employers.

Our graduates are employed in a variety of areas both within and outside the environmental sector, including:

- Conservation management
- Geotechnical surveying
- Environmental consultancy
- Accountancy
- Education
- Environmental research.

Work experience opportunities
Our students have the opportunity to conduct a work-based dissertation in their final year, where they work with a local business on a project applied to the environmental sciences. In addition to study abroad opportunities, we also advertise work placement opportunities to our students, while the University frequently offers similar placements within the School of Environmental Sciences.

Postgraduate opportunities
Many of our students choose to go on to further study at master’s or PhD level after graduation. BSc Environmental Science provides an excellent springboard for this.

See liverpool.ac.uk/study/postgraduate-taught for the current programme list.

Invest in your future
Throughout your time at Liverpool, you will receive training in key career skills such as mock interviews, and CV/cover letter writing, while we also run specialised careers fairs to allow you to make the most of your degree after you graduate.
I have found that I am learning and understanding ideas in a more in-depth way and linking the theory we are taught about within our modules to everyday situations such as environmental crises on the news.

Matthew Shore
Environmental Science BSc (Hons).
Programmes at-a-glance

Environmental Science BSc (Hons)  
UCAS code: F750  
Programme length: 3 years

Our Environmental Science degree provides an exceptional range of study opportunities delivered by world leading researchers from across the School of Environmental Sciences.

Programme in detail

Our students are encouraged to choose optional modules from different pathways, and include laboratory and field base practical work, environmental management, geospatial analysis and introductions to coding and environmental modelling. Together, these provide key knowledge and skills for a career in environmental science.

From your first week to your final year, field classes and laboratory practicals are an integral part of your learning, and provide a firm grounding in the latest techniques and technologies in environmental science. You will learn through a combination of individual and group work, including practicals using research-grade equipment in our purpose built (£23 million) Central Teaching Laboratories.

In addition to making the most of Liverpool’s coastal location, you will have the opportunity to undertake fieldwork in locations such as Snowdonia, Pembrokeshire, the Peak District, Portugal, Iceland and California.

Key modules

**Year One**

Your first year here will include four core modules to provide key skills and knowledge across the environmental sciences, and two optional modules to allow you to begin to explore what interests you most. Year Two of the degree programme consists of three core modules (including a week long environmental science field course), two core modules linked to your chosen pathway, and three optional modules that you can choose from any pathway. Your final year includes a dissertation project, two more core pathway modules, and up to four optional modules.

We also encourage our students to consider taking one module per year outside of our programme structure. This gives our students the opportunity to study a new foreign language, and freedom to pursue academic interests outside of their degree subject.

**Core modules**

- Experiments in physical geography I (ENVS120)
- Introduction to geoscience and Earth history (ENVS123)
- Laboratory and field techniques for marine and terrestrial ecologists (ENVS171)
- Study skills and GIS (ENVS100)
- Theory and laboratory experiments in Earth surface processes (ENVS165)
Optional modules
Students select two of the following optional modules:

- Climate, atmosphere and oceans (ENVS111)
- Earth structure and plate tectonics (ENVS112)
- Ecology and conservation (ENVS157)
- Ecology and the global environment (LIFE120)
- Environmental chemistry (ENVS153)
- Introduction to marine biogeochemistry (ENVS158)
- Introduction to sedimentary rocks and fossils (ENVS118)
- Living with environmental change (ENVS119)
- Marine biology: life in the seas and oceans (ENVS121)
- Mathematics and physics for environmental scientists (ENVS117).

Year Two
Students will undertake the following core modules and a selection of optional modules detailed below.

Core modules
- Environmental science field class (ENVS285)
- Research skills (Geography and Environmental Science) (ENVS203)
- Statistics for environmental scientists (ENVS222).

Two of your modules will be from your chosen module pathway. You also choose three modules from any listed in the programme (including modules from other pathways).

- Digital environments pathway
  Focus on developing coding and data analysis skills for those with no previous experience.

Year Two core
- Key skills for environmental data analysis (ENVS202)
- Understanding spatial ecology using GIS (ENVS255).

- Ecology pathway
  Focus on ecology, conservation and the environment (LIFE120 recommended).

Year Two core
- Biodiversity practical skills (ENVS261)
- Ecology practical skills (LIFE261)
- Population and community ecology (LIFE214).

- Oceans pathway
  Focus on life and physical processes in the seas and oceans (Maths A level or ENVS117 required).

Year Two core
- Key skills for environmental data analysis (ENVS202)
- Oceanography of estuaries and shelf seas (ENVS266).

- Society, sustainability and the environment pathway
  Focus on human impacts and management of the environment.

Year Two core
- Environmental sustainability (ENVS218)
- Geographic information systems for human geography (ENVS257).

- Earth and surface processes pathway
  Focus on human impacts and management of the environment.

Year Two core (choose two from):
- Catchment hydrology (ENVS217)
- Geomorphology: ice, sea and air (ENVS252)
- Minerals, magmas and volcanoes (ENVS233).

In addition to the modules outside of your chosen pathway, students can also choose from:
- An introduction to environmental history (ENVS223)
- Changing environments (ENVS214)
- Climatology (ENVS231)
- Marine ecology and resource exploitation (ENVS251)
- Marine pollution (ENVS232)
- Soils, slopes and the environment (ENVS238).
Year Three

Your final year dissertation is the only compulsory module, where you conduct a piece of original research within the area of your chosen pathway. Two of your modules will be from the module pathway you chose in second year (overleaf). You have the option to take one of our overseas field courses, currently in California, Iceland and the Algarve.

You’ll also choose four optional modules.

Core modules
- Geography dissertation (ENVS321)
- Geography work-based dissertation (ENVS323).

– Digital environments pathway
Year Three core
- Geographic data science (ENVS363).

– Ecology pathway
Year Three core
- Advanced topics in ecology (LIFE337)
- Conservation biology (LIFE326).

– Oceans pathway
Year Three core
- Coastal processes (ENVS376)
- Special topics in marine sciences (ENVS366).

– Society, sustainability and the environment pathway
Year Three core (choose two from):
- Climate change – a critical review (ENVS389)
- Human-environmental interactions (ENVS315)
- Natural hazards and society (ENVS319).

– Earth and surface processes pathway
Year Three core (choose two from):
- Coastal environments (ENVS376)
- Evolution, oceans and climate (ENVS461)
- Fluvial environments (ENVS372).

Other Year Three optional modules
In addition to the modules outside of your chosen pathway, you can also choose from:
- Geoarchaeology (ENVS293)
- Issues in geography (ENVS385)
- Marine ecology: theory and applications (ENVS383)
- Politics of the environment (ENVS325)
- Science communication (ENVS393)
- Surviving the marine environment (ENVS310).

See pages 11-16 for module descriptions.
## Further information on selected modules: Year One

<table>
<thead>
<tr>
<th>Module title</th>
<th>Semester</th>
<th>Credit</th>
<th>Module description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Climate, atmosphere and oceans <strong>ENVS111</strong></td>
<td>1</td>
<td>15</td>
<td>Introduces the climate system, the atmosphere and ocean.</td>
</tr>
<tr>
<td>Ecology and conservation <strong>ENVS157</strong></td>
<td>2</td>
<td>15</td>
<td>Introduces you to the complex and multifaceted nature of environmental issues and ecological science, particularly stressing the interrelationships between biophysical and human dimensions.</td>
</tr>
<tr>
<td>Ecology and the global environment <strong>LIFE120</strong></td>
<td>2</td>
<td>15</td>
<td>Explores the physical and chemical global contexts of the biosphere, the cycling of important elements at different scales, the distribution of biomes and the ecosystem concept.</td>
</tr>
<tr>
<td>Environmental chemistry <strong>ENVS153</strong></td>
<td>2</td>
<td>15</td>
<td>Provides a basic understanding of chemistry relevant for environmental sciences.</td>
</tr>
<tr>
<td>Evolution <strong>LIFE103</strong></td>
<td>1</td>
<td>15</td>
<td>Describes the fundamental genetic mechanisms that are essential for the function and evolution of life.</td>
</tr>
<tr>
<td>Experiments in physical geography I <strong>ENVS120</strong></td>
<td>1</td>
<td>15</td>
<td>You will gain first-hand experience of some fundamental physical, biological and chemical processes underlying physical geography, aimed primarily at interactions between people and their physical environment.</td>
</tr>
<tr>
<td>Introduction to geoscience and Earth history <strong>ENVS123</strong></td>
<td>1</td>
<td>15</td>
<td>Provides a broad, holistic introduction to the geosciences, emphasising the interdisciplinary nature of the subject, and being accessible for non-geoscience disciplines.</td>
</tr>
<tr>
<td>Introduction to marine biogeochemistry <strong>ENVS158</strong></td>
<td>2</td>
<td>15</td>
<td>Introduces you to marine chemistry of the major and trace elements and demonstrates the dynamic relationship between the chemical ocean environment and biological processes.</td>
</tr>
<tr>
<td>Introduction to sedimentary rocks and fossils <strong>ENVS118</strong></td>
<td>1</td>
<td>15</td>
<td>Introduces the study of sediments and sedimentary rocks and to introduce the main groups of common fossil.</td>
</tr>
<tr>
<td>Laboratory and field techniques for ecologists <strong>ENVS171</strong></td>
<td>2</td>
<td>15</td>
<td>This practical module provides training in a range of ecological skills in field work.</td>
</tr>
<tr>
<td>Living with environmental change <strong>ENVS119</strong></td>
<td>1</td>
<td>15</td>
<td>Introduces you to the ‘Grand Challenges’ facing society and what is being done to address them. <strong>Living with environmental change</strong> is a key interdisciplinary research theme currently being addressed worldwide — from tackling climate change and carbon emissions to promoting sustainable resource use and energy efficiency.</td>
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Please note: modules are illustrative only and subject to change.

Continued over...
Further information on selected modules **Year One** (continued)

<table>
<thead>
<tr>
<th>Module title</th>
<th>Semester</th>
<th>Credit</th>
<th>Module description</th>
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</thead>
<tbody>
<tr>
<td>Marine biology: life in the seas and oceans ENVS121</td>
<td>1</td>
<td>15</td>
<td>An introduction to the diversity of life in the marine environment. It considers the range of living organisms in the oceans from microscopic plants and bacteria to whales, and explores some of the diverse mechanisms living organisms have adopted in order to meet the challenge of survival in the marine environment.</td>
</tr>
<tr>
<td>Marine ecosystems: diversity, processes and threats ENVS122</td>
<td>2</td>
<td>15</td>
<td>Introduces you the diversity of ecosystem types in the marine environment and the various threats that they face.</td>
</tr>
<tr>
<td>Maths and physics for environmental scientists ENVS117</td>
<td>1</td>
<td>15</td>
<td>Provides an understanding of the basic maths and physics relevant to processes in the atmosphere, ocean and solid earth. It is particularly aimed at students without A level maths or equivalent.</td>
</tr>
<tr>
<td>Minerals, magmas and volcanoes ENVS115</td>
<td>1</td>
<td>15</td>
<td>Examines the physical processes of the main types of volcanic activity and the associated hazards. It also introduces the main rock forming minerals and examines volcanic hazards awareness and principles of risk mitigation.</td>
</tr>
<tr>
<td>Study skills and GIS ENVS100</td>
<td>1 and 2</td>
<td>15</td>
<td>This module will help you develop your core study skills, including essay writing at degree level, presentation skills, and bibliographic searching and referencing in academia. You will also be introduced to, and develop basic competency in, geographical information systems.</td>
</tr>
<tr>
<td>Theory and laboratory experiments in earth surface processes ENVS165</td>
<td>2</td>
<td>15</td>
<td>Lecture and laboratory-based problem-solving approach to explore some of the fundamental physical and chemical processes underlying physical geography. It provides a foundation for environmental and physical geography modules in Years Two and Three.</td>
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Please note: modules are illustrative only and subject to change.
### Further information on selected modules **Year Two**

<table>
<thead>
<tr>
<th>Module title</th>
<th>Semester</th>
<th>Credit</th>
<th>Module description</th>
</tr>
</thead>
<tbody>
<tr>
<td>An introduction to environmental history <strong>ENVS223</strong></td>
<td>1</td>
<td>15</td>
<td>Introduces you to the rapidly developing field of environmental history, and forms a basis for more advanced environmental courses in Year Three.</td>
</tr>
<tr>
<td>Biodiversity practical skills <strong>ENVS261</strong></td>
<td>2</td>
<td>7.5</td>
<td>This practical module provides you with an opportunity to experience and gain familiarity with a range of scientific, practical techniques that are used to study the terrestrial environment and its biota.</td>
</tr>
<tr>
<td>Catchment hydrology <strong>ENVS217</strong></td>
<td>1</td>
<td>15</td>
<td>Investigates the main hydrological processes operating in drainage catchments in terms of their measurement, operation and controlling factors.</td>
</tr>
<tr>
<td>Changing environments <strong>ENVS214</strong></td>
<td>1</td>
<td>15</td>
<td>Provides a critical insight into the global changes currently impacting the Earth over decades to millennial timescales.</td>
</tr>
<tr>
<td>Climatology <strong>ENVS231</strong></td>
<td>2</td>
<td>15</td>
<td>Provides knowledge and understanding across a number of areas of meteorology and weather, covering physical processes.</td>
</tr>
<tr>
<td>Ecology practical skills <strong>LIFE261</strong></td>
<td>1</td>
<td>7.5</td>
<td>Develops your ability to acquire, critically evaluate and interpret qualitative and quantitative data related to biological specimens.</td>
</tr>
<tr>
<td>Environmental science field class <strong>ENVS285</strong></td>
<td>2</td>
<td>15</td>
<td>Provides experience in designing, executing, analysing and presenting (orally and in a report) a research project in the environmental sciences.</td>
</tr>
<tr>
<td>Environmental sustainability <strong>ENVS218</strong></td>
<td>1</td>
<td>15</td>
<td>This module introduces current thinking in relation to sustainable development and locates environmental sustainability within this broader framework of ideas.</td>
</tr>
<tr>
<td>Geographic information systems for human geography <strong>ENVS257</strong></td>
<td>2</td>
<td>15</td>
<td>Develops your understanding and practical ability to apply GIS in the handling and analysis of spatial data in a human geography context.</td>
</tr>
<tr>
<td>Geomorphology: ice, sea and air <strong>ENVS252</strong></td>
<td>2</td>
<td>15</td>
<td>You will develop an understanding of major geomorphic systems and how they create terrestrial landforms.</td>
</tr>
<tr>
<td>Key skills for environmental data analysis <strong>ENVS202</strong></td>
<td>1</td>
<td>15</td>
<td>Develops knowledge, training and skills in manipulating, plotting and interpreting environmental data sets using the industry-standard Matlab software.</td>
</tr>
<tr>
<td>Marine ecophysiology, ecology and exploitation <strong>ENVS251</strong></td>
<td>2</td>
<td>15</td>
<td>Provides you with essential background in marine ecology, ecophysiology and resource exploitation required for study at higher levels.</td>
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Please note: modules are illustrative only and subject to change.

*Continued over...*
## Further information on selected modules **Year Two** (continued)

<table>
<thead>
<tr>
<th>Module title</th>
<th>Semester</th>
<th>Credit</th>
<th>Module description</th>
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</thead>
<tbody>
<tr>
<td>Marine pollution <strong>ENVS232</strong></td>
<td>1</td>
<td>15</td>
<td>Marine systems are currently changing under a variety of stressors. Global increase of temperatures and increase of carbon dioxide in the atmosphere are affecting the chemistry, physics and biology of the marine systems at unprecedented rates. These changes are expected to accentuate in the coming decades. More localised anthropogenic stressors such as excess nutrients, plastic debris, metals, radionuclides and other emerging contaminants are also affecting our coastal waters and beyond. This module will focus on the current state of our seas in relation to the various stressors, what are the causes and how do they affect the marine system.</td>
</tr>
<tr>
<td>Minerals, magmas and volcanoes <strong>ENVS233</strong></td>
<td>1</td>
<td>15</td>
<td>Examines the physical processes of the main types of volcanic activity and the main rock forming minerals as well as the associated hazards.</td>
</tr>
<tr>
<td>Ocean environments <strong>ENVS266</strong></td>
<td>2</td>
<td>15</td>
<td>Explores the oceanographic concepts needed to understand how different ocean environments work, reaching from within estuaries, out across the shelf sea and to the shelf edge, and out into the open ocean.</td>
</tr>
<tr>
<td>Population and community ecology <strong>LIFE214</strong></td>
<td>2</td>
<td>15</td>
<td>Introduces the concepts and principles underlying the dynamic interactions between species within communities and populations; describes examples, taken from across the globe, that illustrate the importance of population ecology, pressures on fish stocks, and use of natural predators for biological control processes; describes how mutualistic interactions benefit communities, such as coral reefs and leguminous plants; explores how knowledge and understanding of species and community interactions can help to develop plans for ecological restoration.</td>
</tr>
<tr>
<td>Research skills <strong>ENVS203</strong></td>
<td>1 and 2</td>
<td>15</td>
<td>Provides you with training in research methods and analysis techniques.</td>
</tr>
<tr>
<td>Soils, slopes and the environment <strong>ENVS238</strong></td>
<td>2</td>
<td>15</td>
<td>You will gain an understanding of the fundamental properties and characteristics of slopes and soils.</td>
</tr>
<tr>
<td>Statistics for environmental scientists <strong>ENVS222</strong></td>
<td>2</td>
<td>15</td>
<td>Provides training in statistics for environmental scientists.</td>
</tr>
<tr>
<td>Understanding spatial ecology using GIS <strong>ENVS255</strong></td>
<td>2</td>
<td>15</td>
<td>Explores the concepts and applications of Geographical Information Systems (GIS) to solve contemporary questions in spatial ecology.</td>
</tr>
</tbody>
</table>

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Further information on selected modules **Year Three**

<table>
<thead>
<tr>
<th>Module title</th>
<th>Semester</th>
<th>Credit</th>
<th>Module description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced topics in ecology <strong>LIFE337</strong></td>
<td>2</td>
<td>15</td>
<td>Examines a range of topics in contemporary ecology including population, macro, disease and community ecology.</td>
</tr>
<tr>
<td><strong>Climate change: a critical review ENVS389</strong></td>
<td>2</td>
<td>15</td>
<td>Provides the knowledge to evaluate the likely outcomes of climate change and climate variability over the next 100 years, to understand policy decisions at different levels, to obtain a critical understanding of climate predictions, and to understand the importance of reference to past and present climates.</td>
</tr>
<tr>
<td><strong>Coastal environments: spatial and temporal change ENVS376</strong></td>
<td>1</td>
<td>15</td>
<td>Examines the response of physical processes and coastal environments to changes in sea level and climate.</td>
</tr>
<tr>
<td><strong>Dissertation or work-based dissertation ENVS321 / ENVS323</strong></td>
<td>1 and 2</td>
<td>30</td>
<td>Provides you with the opportunity to undertake an independent research project in a topic of your choosing. For those choosing a work-based dissertation, you will work collaboratively with an external organisation on a mutually agreed research topic.</td>
</tr>
<tr>
<td><strong>Environmental assessment of policies, plans, programmes and projects ENVS329</strong></td>
<td>1</td>
<td>15</td>
<td>Provides a comprehensive overview of the theory and practice of strategic environmental assessment of policies, plans and programmes and of environmental impact assessment of projects.</td>
</tr>
<tr>
<td><strong>Evolution, oceans and climate ENVS461</strong></td>
<td>2</td>
<td>15</td>
<td>Develops knowledge and understanding of the major controls on the behaviour of the earth’s oceans and climates and the interaction of climate and the evolution of life on earth.</td>
</tr>
<tr>
<td><strong>Field class (Santa Cruz, Iceland or Algarve) ENVS352 / 330 / 380</strong></td>
<td>2</td>
<td>30</td>
<td>Provides a unique opportunity to undertake two weeks high quality field-based research.</td>
</tr>
<tr>
<td><strong>Fluvial environments ENVS372</strong></td>
<td>2</td>
<td>15</td>
<td>Develops your understanding of functioning and stability/instability characteristics of fluvial geomorphic systems, in both humid and arid regions over timescales from the Pleistocene to the present day.</td>
</tr>
<tr>
<td><strong>Geoarchaeology ENVS392</strong></td>
<td>2</td>
<td>15</td>
<td>Provides an understanding of the principles and methods of the application of the earth sciences in archaeological investigations.</td>
</tr>
<tr>
<td><strong>Geographic data science ENVS363</strong></td>
<td>2</td>
<td>15</td>
<td>Advances knowledge and core competences in Geographic Data Science (GDS) focusing on real world applications in a geographical and applied context.</td>
</tr>
<tr>
<td><strong>Human-environmental interactions ENVS315</strong></td>
<td>1</td>
<td>15</td>
<td>Demonstrates and reviews how successful management of modern and future landscapes often requires a long time perspective.</td>
</tr>
<tr>
<td><strong>Issues in geography ENVS385</strong></td>
<td>2</td>
<td>15</td>
<td>Gives you the chance to examine a topic or an approach which is new.</td>
</tr>
<tr>
<td><strong>Marine ecology: theory and applications ENVS383</strong></td>
<td>2</td>
<td>15</td>
<td>Develops the connections between ecological theory and the management of marine communities and ecosystems.</td>
</tr>
</tbody>
</table>

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Further information on selected modules **Year Three** (continued)

<table>
<thead>
<tr>
<th>Module title</th>
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<th>Credit</th>
<th>Module description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural hazards and society [ENVS319]</td>
<td>1</td>
<td>15</td>
<td>Provides an integrated perspective on a variety of natural hazards. It explores the different levels of impact on human societies and the mitigation/adaptation strategies adopted before, during and after extreme natural events.</td>
</tr>
<tr>
<td>Ocean dynamics [ENVS332]</td>
<td>1</td>
<td>15</td>
<td>Enables you to gain a high level understanding of ocean and atmospheric dynamics and background state of the atmosphere and ocean.</td>
</tr>
<tr>
<td>Politics of the environment [ENVS325]</td>
<td>1</td>
<td>15</td>
<td>Critically evaluates the political responses to the growing impact that environmental issues and the concept of sustainability are having on decision making at all levels of governance (international, national and local).</td>
</tr>
<tr>
<td>Science communication [ENVS393]</td>
<td>1 and 2</td>
<td>15</td>
<td>Provides key transferable skills to undergraduates including communication, presentation, practical classroom skills and team working.</td>
</tr>
<tr>
<td>Special topics in marine sciences [ENVS366]</td>
<td>2</td>
<td>15</td>
<td>Discussions and engagement with current hot research topic areas within marine sciences.</td>
</tr>
<tr>
<td>Surviving the marine environment: adaptation, behaviour and conservation [ENVS310]</td>
<td>1</td>
<td>15</td>
<td>Develops a broad understanding of contemporary theory in behavioural ecology, evolutionary biology and ecophysiology, with special reference to the marine environment.</td>
</tr>
</tbody>
</table>

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Student Welfare Advice and Guidance: liverpool.ac.uk/studentsupport
Undergraduate enquiries and applications: T: +44 (0)151 794 5927

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Information provided is correct at time of going to press and is subject to change.