BA Geography (L700/GEOU04) including
   BA Geography with Foundation Year (L701/GEOU99)
   BA Geography with Year Abroad (L702/GEOU15)
   BA Geography with Employment Experience (GEOU14)

BA Geography and Planning (LK74/TRPU107) including
   BA Geography and Planning with Foundation Year (L790/TRPU99)

BSc Geography (F800/GEOU202) including
   BSc Geography with Foundation Year (F803/GEOU97)
   BSc Geography with Year Abroad (F802/GEOU16)
   BSc Geography with Employment Experience (GEOU13)
   MGeogSci Geography (F804/GEOU19)

BSc Environmental Science (F900/GEOU211) including
   BSc Environmental Science with Foundation Year (F901/GEOU98)
   BSc Environmental Science with Year Abroad (F903/GEOU17)
   BSc Environmental Science with Employment Experience (GEOU212)
   MEnvSci Environmental Science (F902/GEOU210)
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GEO408 Research Design in Physical Geography and Environmental Science
GEO412 Current Issues in Geography and Environmental Science
GEO413 Research Project
GEO6806 Key Issues in Environment and Development
GEO6807 Understanding Environmental Change
GEO6809 Living with Climate Change
Degree Programme Regulations

Your Course
Your degree programme comprises a mixture of compulsory modules that you must take and optional modules from which you may choose, as set out in the Programme Regulations (see below). The core and optional modules for your course are listed in this handbook. These lists are for the current year only (as shown on the cover of this handbook) and are correct at the time of going to press. Module availability is subject to change from year-to-year and the availability of modules in subsequent years cannot be guaranteed.

Module Choice
Each year you will need to register for 120 credits of modules. It is ideal to achieve a balance of 60 credits per semester but the University will allow you to take up to 70 credits in one of your semesters and 50 in the other. Information on module choice and available modules is provided to all students towards the end of each year of study. This includes information on compulsory and optional field classes and how to apply for a place on the field classes. Your Personal Academic Tutor and the module teaching staff will be happy to discuss your choice with you.

Please note, timetabling constraints mean that certain combinations of optional/unrestricted modules may clash. Although every effort is made to ensure a wide range of choice, there can be no guarantee that clashes between certain modules will/will not occur.

You may wish to access the Directory of Modules 2017-18 which lists all modules which can be found at http://www-online.shef.ac.uk:3001/pls/live/web_cal/cal3_dept_form?p_year=17

Programme Regulations
The regulations for your programme detail, for each level of study, the modules that are core for your programme, any optional modules from which you must choose, and any unrestricted choice that you may have. The programme regulations for all BA/BSc Geography, MGeog/MGeogSci Geography and BA Geography and Planning are summarised on the following pages. However, it may be more convenient to consult the Programme Regulations Finder. This is an online tool that allows you to find the regulations for your degree and view additional information on the modules that you are required to take:

www.sheffield.ac.uk/programmeregulationsfinder/

Changing Modules
At the start of each semester, it is possible to change your optional modules during the 3-week 'Add/Drop' period. Changes cannot be made after this period.

- If you are undecided between two modules, it is best to attend both so that you do not fall behind in the one that you decide to take, or miss details of the module assessment.
- To change your module choice, you will need to access the online module add/drop system. The system can be accessed via MUSE. Log in as normal go to the My Services tab / View all services for the link to the online system (under M – Module Add/Drop). Follow the simple instruction on screen. Further guidance can be found at https://www.sheffield.ac.uk/ssid/forms/addrop
- Try to make changes as soon as possible and do not wait for the change to appear on your record to begin attending your new module as this can take some time. Start attending straight away.
- In order to be given immediate access to the MOLE page for your new module please email geography@sheffield.ac.uk remembering to include your name, student number and module code.
BA Geography with Foundation Year
GEOU99
BA Geography GEOU04
BA Geography with Year Abroad* GEOU15
BA Geography with Employment Experience* GEOU14

YEAR 1

Core modules: 100 credits
GEO114 Introduction to Human Geography (20 credits; Academic Year)
GEO115 Introduction to Environmental Geographies (20 credits; Spring)
GEO117 New Horizons in Geography (20 credits; Autumn)
GEO118 Introduction to Geographical Methods (40 credits; Academic Year)

Unrestricted module choice: 20 credits
Approved Geography modules or unrestricted modules from other disciplines.

Approved Geography modules:
GEO113 Introduction to Physical Geography (20 credits; Academic Year)

YEAR 2

Core modules: 40 credits
GEO248 Research Design for Geography and Environmental Science (10 credits; Spring)
GEO275 Geographical Data in the World (10 credits; Autumn)
EITHER GEO257 Qualitative Methods (10 credits; Autumn) OR GEO262 Geographic Information Systems and Remote Sensing (10 credits; Autumn)
ONE OF EITHER GEO271 Human Geography Fieldclass A (10 credits; Spring) OR GEO272 Human Geography Fieldclass B (10 credits; Spring) OR GEO273 Human Geography Fieldclass C (10 credits; Spring)

Optional modules: 40 credits
H – Human Geography modules; P – Physical Geography/Environmental Science modules
GEO243 Political Geographies (20 credits; Spring) H
GEO246 Environment, Society and Politics (20 credits; Spring) H
GEO258 Geographies of Development (20 credits; Autumn) H
GEO269 Social and Cultural Geographies (20 credits; Autumn) H

YEAR 3*

Core modules: 40 credits
GEO356 Dissertation for Geography and Environmental Science (40 credits; Academic Year)

Optional modules: 60 credits
H – Human Geography modules; P – Physical Geography/Environmental Science modules
GEO336 Development and Global Change (20 credits; Autumn) H
GEO368 Planetary Geoscience (20 credits; Spring) P
GEO380 New Zealand Fieldclass (20 credits; Spring) P
GEO381 Geographies of Politics and Society (20 credits; Spring) H
GEO383 Urban Transformations (20 credits; Spring) H
GEO384 Critical Ecologies (20 credits; Spring) H
GEO386 Global South Fieldclass (20 credits; Autumn) H
GEO387 Geographies of Consumption (20 credits; Autumn) H
GEO388 Glacial Environments (20 credits; Autumn) P
GEO390 Professional Skills for Environmental Science (20 credits; Autumn) P
GEO392 Death Valley Fieldclass (20 credits; Autumn) P
GEO393 Global City Fieldclass (20 credits; Autumn) H
GEO396 Coastal Processes (20 credits; Autumn) P
GEO397 Dangerous and Dynamic Earth (20 credits; Spring) P
GEO399 Independent Extended Essay (20 credits; Spring) H/P
GEO3000 Urban Exploration (20 credits; Autumn) H

Unrestricted module choice: 40 credits
Optional modules not taken above, approved modules from Geography, or unrestricted modules from other disciplines
GEO259 Atmospheres and Oceans (20 credits; Autumn) P
GEO261 Ice Age Earth (20 credits; Spring) P
GEO268 Glaciers and Ice Sheets (20 credits; Spring) P
GEO276 Water and Soil Processes in the Environment (20 credits; Academic Year) P
GEO277 Environmental Pollution and Quality (20 credits; Autumn) P
GEO3001 Philosophy, Aesthetics and the City (20 credits; Spring) H
GEO3002 Advanced Geospatial Analysis (20 credits; Autumn) P

Unrestricted module choice: 20 credits
Optional modules not taken above or
unrestricted modules from other disciplines.

*Students on the BA Geography with Year Abroad and BA Geography with Employment Experience will go abroad/into employment in Year 3 providing any necessary criteria has been met.
BA Geography and Planning with Foundation Year TRPU99
BA Geography and Planning TRPU107
Please note these programmes are owned by the Department of Urban Studies and Planning (USP).

YEAR 1

Core modules: 70 credits
GEO114 Introduction to Human Geography (20 credits; Academic Year)
TRP108 Information and Communication Skills (10 credits; Autumn)
TRP112 Employability Skills for Urban Studies and Planning (L1) (0 credits; Academic Year)
TRP131 The Making of Urban Places (20 credits; Autumn)
TRP133 Development, Planning and the State (20 credits; Spring)

Optional modules: 30 credits
GEO115 Introduction to Environmental Geographies (20 credits; Spring)
GEO117 New Horizons in Geography (20 credits; Autumn)
TRP105 The Environmental Challenge (10 credits; Spring)
TRP107 Economics for Spatial Planning (10 credits; Spring)
TRP109 Urban Analysis (10 credits; Spring)
TRP111 Cities (10 credits; Spring)
TRP130 Housing, Home and Neighbourhood (10 credits; Autumn)
TRP132 Planning Project (20 credits; Autumn)

Unrestricted module choice: 20 credits
Approved Geography or USP modules or unrestricted modules from other disciplines.

Year 2

Core modules: 0 credits
TRP222 Employability Skills for Urban Studies and Planning (L2) (0 credits; Academic Year)

Optional modules: 40 credits
GEO243 Political Geographies (20 credits; Spring)
GEO246 Environment, Society and Politics (20 credits; Spring)
GEO258 Geographies of Development (20 credits; Autumn)

Approved Geography modules
H – Human Geography modules; P – Physical Geography/Environmental Science modules
GEO336 Development and Global Change (20 credits; Autumn) H
GEO368 Planetary Geoscience (20 credits; Spring) P
GEO380 New Zealand Fieldclass (20 credits; Spring) P
GEO381 Geographies of Politics and Society (20 credits; Spring) H
GEO383 Urban Transformations (20 credits; Spring) H
GEO384 Critical Ecologies (20 credits; Spring) H
GEO386 Global South Fieldclass (20 credits, Autumn) H
GEO387 Geographies of Consumption (20 credits; Autumn) H
GEO388 Glacial Environments (20 credits; Autumn) P
GEO390 Professional Skills for Environmental Science (20 credits; Autumn) P
GEO392 Death Valley Fieldclass (20 credits; Autumn) P

Optional modules: 40 credits
TRP210 Urban Design and Place-Making (20 credits; Autumn)
TRP215 European Urban Field Class (20 credits; Autumn)
TRP216 Spatial Analysis (20 credits; Autumn)
TRP217 Profit, Planning and Context (20 credits; Spring)
TRP234 Urban Theory (20 credits; Autumn)
TRP235 Design and Development Project (20 credits; Spring)

Unrestricted module choice: 40 credits
Approved Geography or USP modules or unrestricted modules from other disciplines.

Year 3*

Core modules: 40 credits
TRP327 Professional Development (0 credits; Academic Year)
TRP337 Dissertation (40 credits; Academic Year)

Optional modules: 80 credits. Not less than 40 credits to be taken in GEO, not less than 20 credits to be taken in USP, and not less than 60 credits to be taken at F6 Level.

Approved Geography modules
H – Human Geography modules; P – Physical Geography/Environmental Science modules
GEO336 Development and Global Change (20 credits; Autumn) H
GEO368 Planetary Geoscience (20 credits; Spring) P
GEO380 New Zealand Fieldclass (20 credits; Spring) P
GEO381 Geographies of Politics and Society (20 credits; Spring) H
GEO383 Urban Transformations (20 credits; Spring) H
GEO384 Critical Ecologies (20 credits; Spring) H
GEO386 Global South Fieldclass (20 credits, Autumn) H
GEO387 Geographies of Consumption (20 credits; Autumn) H
GEO388 Glacial Environments (20 credits; Autumn) P
GEO390 Professional Skills for Environmental Science (20 credits; Autumn) P
GEO392 Death Valley Fieldclass (20 credits; Autumn) P
GEO393 Global City Fieldclass (20 credits; Autumn) H
GEO396 Coastal Processes (20 credits; Autumn) P
GEO397 Dangerous and Dynamic Earth (20 credits; Spring) P
GEO399 Independent Extended Essay (20 credits; Spring) H/P

GEO3000 Urban Exploration (20 credits; Autumn) H
GEO3001 Philosophy, Aesthetics and the City (20 credits; Spring) H
GEO3002 Advanced Geospatial Analysis (20 credits; Autumn) P
YEAR 1

Core modules: 100 credits
GEO113 Introduction to Physical Geography (20 credits; Academic Year)
GEO115 Introduction to Environmental Geographies (20 credits; Spring)
GEO117 New Horizons in Geography (20 credits; Autumn)
GEO118 Introduction to Geographical Methods (40 credits; Academic Year)

Unrestricted module choice: 20 credits
Approved Geography modules or unrestricted modules from other disciplines.

Approved Geography modules:
GEO114 Introduction to Human Geography (20 credits; Academic Year)

YEAR 2

Core modules: 40 credits
GEO248 Research Design for Geography and Environmental Science (10 credits; Spring)
GEO262 Geographic Information Systems and Remote Sensing (10 credits; Autumn)
GEO270 Physical Geography Fieldclass (10 credits; Spring)
GEO275 Geographical Data in the World (10 credits; Autumn)

Optional modules: 40 credits
H – Human Geography modules; P – Physical Geography/Environmental Science modules
GEO259 Atmospheres and Oceans (20 credits; Autumn) P
GEO261 Ice Age Earth (20 credits, Spring) P
GEO268 Glaciers and Ice Sheets (20 credits; Spring) P
GEO276 Water and Soil Processes in the Environment (20 credits; Academic Year) P
GEO277 Environmental Pollution and Quality (20 credits; Autumn) P

Unrestricted module choice: 40 credits
Optional modules not taken above, approved modules from Geography, or unrestricted modules from other disciplines

YEAR 3*

Core modules: 40 credits
GEO356 Dissertation for Geography and Environmental Science (40 credits; Academic Year)

Optional modules: 60 credits
H – Human Geography modules; P – Physical Geography/Environmental Science modules
GEO336 Development and Global Change (20 credits; Autumn) H
GEO368 Planetary Geoscience (20 credits; Spring) P
GEO380 New Zealand Fieldclass (20 credits; Spring) P
GEO381 Geographies of Politics and Society (20 credits; Spring) H
GEO383 Urban Transformations (20 credits; Spring) H
GEO384 Critical Ecologies (20 credits; Spring) H
GEO386 Global South Fieldclass (20 credits, Autumn) H
GEO387 Geographies of Consumption (20 credits; Autumn) H
GEO388 Glacial Environments (20 credits; Autumn) H
GEO390 Professional Skills for Environmental Science (20 credits; Autumn) P
GEO392 Death Valley Fieldclass (20 credits; Autumn) P
GEO393 Global City Fieldclass (20 credits; Autumn) H
GEO396 Coastal Processes (20 credits; Autumn) P
GEO397 Dangerous and Dynamic Earth (20 credits; Spring) P
GEO399 Independent Extended Essay (20 credits; Spring) H/P
GEO3000 Urban Exploration (20 credits; Autumn) H
GEO3001 Philosophy, Aesthetics and the City (20 credits; Spring) H
GEO3002 Advanced Geospatial Analysis (20 credits; Autumn) P

**Unrestricted module choice: 20 credits**
Optional modules not taken above or unrestricted modules from other disciplines.

* Students on the BA Geography with Year Abroad and BA Geography with Employment Experience will go abroad/into employment in Year 3 providing any necessary criteria has been met.

YEAR 4**

**Core modules: 90 credits**
GEO408 Research Design in Physical Geography and Environmental Science (15 credits; Autumn)
GEO412 Current Issues in Geography and Environmental Science (15 credits; Autumn)
GEO413 Research Project (60 credits; Academic Year)

**Optional modules: maximum of 30 credits**
GEO6806 Key Issues in Environment and Development (15 credits, Spring)
GEO6807 Understanding Environmental Change (15 credits, Autumn)
GEO6809 Living with Climate Change (15 credits, Spring)
TRP469 Sustainable Development: a Critical Investigation (15 credits, Spring)

**Unrestricted module choice: 15 credits**
Optional modules not taken above or unrestricted modules from other disciplines.

** For students on the MGeogSci Geography programme who meet the necessary criteria to progress at L2 and L3. Students on BSc Geography programmes may transfer to the MGeogSci programme providing they meet the necessary criteria at L2 and L3.
BSc Environmental Science with Foundation Year GEOU98
BSc Environmental Science GEOU211
BSc Environmental Science with Year Abroad* GEOU17
BSc Environmental Science with Employment Experience* GEOU212
MEnvSci Environmental Science** GEOU210

YEAR 1

Core modules: 90 credits
APS122 Biodiversity (10 credits, Autumn)
APS124 Ecosystems, climate and Environmental Change (10 credits; Spring)
APS131 Ecological Identification Skills (10 credits; Academic Year)
APS139 Skills for Environmental Sciences (20 credits; Academic Year)
GEO113 Introduction to Physical Geography (20 credits; Academic Year)
GEO119 Introduction to Environmental Science (20 credits; Academic Year)

Optional modules: 30 credits
APS119 Animal and Plant Physiology (10 credits; Spring)
APS121 Evolution (10 credits; Autumn)
APS123 Population and Community Ecology (10 credits; Spring)
GEO115 Introduction to Environmental Geographies (20 credits; Spring)
GEO117 New Horizons in Geography (20 credits; Autumn)
TRP105 The Environmental Challenge (10 credits; Spring)

Unrestricted module choice: 10 credits
Approved Geography or Animal and Plant Science modules or unrestricted modules from other disciplines

YEAR 2

Core modules: 90 credits
APS222 Animal and Plant Sciences Tutorials (10 credits, Academic Year)
APS240 Data Analysis (10 credits; Autumn)
APS255 Environmental Interpretation Field Course (10 credits; Spring)
GEO248 Research Design for Geography and Environmental Science (10 credits; Spring)
GEO262 Geographical Information Systems and Remote Sensing (10 credits; Autumn)
GEO276 Water and Soil Processes in the Environment (20 credits; Academic Year)

Optional modules: 50 credits
APS216 Plant, Cell and Environment (10 credits; Spring)
APS227 Biology Projects (10 credits; Spring)
APS228 Environmental Biology Practical (10 credits; Spring)
APS231 Ecosystems in a Changing Global Environment (10 credits; Autumn)
APS246 Plant Habitat and Distribution (10 credits; Autumn)
APS269 Palaeobiology (10 credits; Spring)
APS271 Conservation Principles (10 credits; Autumn)
APS273 Population and Community Ecology 2 (20 credits; Spring)
APS276 Symbiosis (10 credits; Spring)
GEO259 Atmospheres and Oceans (20 credits; Autumn)
GEO261 Ice Age Earth (20 credits; Spring)
GEO268 Glaciers and Ice Sheets (20 credits; Spring)

Unrestricted module choice: 10 credits
Approved Geography or Animal and Plant Science modules or unrestricted modules from other disciplines

YEAR 3*

Core modules: 70 credits
GEO390 Professional Skills in Environmental Sciences (20 credits; Autumn)
APS332 Issues in Environmental Sciences (10 credits; Spring)
EITHER GEO356 Dissertation for Geography and Environmental Science (40 credits; Academic Year) OR APS330 Animal and Plant Project (20 credits; Autumn) AND APS331 Animal and Plant Dissertation (20 credits; Spring)

Optional modules: 50 credits
APS313 Global Change (10 credits; Spring)
APS325 Life in Extreme Environments (10 credits; Spring)
APS326 Biology and Ethics (10 credits; Spring)
APS336 Animal Ecology and Behaviour Field Course (10 credits; Spring)
APS341 Evolution of Terrestrial Ecosystems (10 credits; Spring)
APS342 Evolutionary Ecology (10 credits; Autumn)
APS346 Sustainable Agro-Ecosystems (10 credits; Autumn)
APS348 The Ecology of Landscapes (10 credits; Autumn)
APS349 Conservation Issues and Management (20 credits; Autumn)
APS355 Future Plants: from laboratory to field (20 credits; Spring)
GEO368 Planetary Geoscience (20 credits; Spring)
GEO380 New Zealand Field Class (20 credits; Spring)
GEO388 Glacial Environments (20 credits; Autumn)
GEO396 Coastal Processes (20 credits; Spring)
GEO397 Dangerous and Dynamic Earth (20 credits; Spring)
GEO398 International Field Class (20 credits; Spring)
GEO399 Independent Extended Essay (20 credits; Spring)
GEO3002 Advanced Geospatial Analysis (20 credits; Autumn)
TRP334 Environmental Policy and Governance (20 credits; Autumn)

Unrestricted module choice: 10 credits
Approved Geography or Animal and Plant Science modules or unrestricted modules from other disciplines

* Students on the BA Geography with Year Abroad and BA Geography with Employment Experience will go abroad/into employment in Year 3 providing any necessary criteria has been met.

YEAR 4**
A student will take either Route 4A or 4B

Route A
Core modules: 90 credits
GEO408 Research Design in Physical Geography and Environmental Science (15 credits; Autumn)
GEO412 Current Issues in Geography and Environmental Science (15 credits; Autumn)
GEO413 Research Project (60 credits; Academic Year)

Optional modules: maximum of 30 credits
GEO6806 Key Issues in Environment and Development (15 credits, Spring)
GEO6807 Understanding Environmental Change (15 credits, Autumn)
GEO6809 Living with Climate Change (15 credits, Spring)
TRP469 Sustainable Development: a Critical Investigation (15 credits, Spring)

Unrestricted module choice: 15 credits
Optional modules not taken above or unrestricted modules from other disciplines.

Route B
Core module: 120 credits
APS402 Research Dissertation (20 credits; Autumn)
APS405 Advance Biological Analysis (10 credits; Autumn)
APS406 Research Project (70 credits; Academic Year)
APS408 Research and Communication Skills in Biology (20 credits; Autumn)

** For students on the MEnvSci Environmental Science programme who meet the necessary criteria to progress at L2 and L3. Students on BSc Environmental Science programmes may transfer to the MEnvSci programme providing they meet the necessary criteria at L2 and L3.
Field Class Information

Field Classes in Level 1 and 2 are compulsory and the cost of attendance is included in the tuition fee.

At Level 3, for all courses, field class attendance is optional, and the full cost of attendance is borne by the student. For these field classes, payment of a non-refundable deposit is required. This is normally payable during the semester preceding the one in which the field class is taken.

Costs for optional field classes vary depending on a number of factors, including but not limited to destination and number of students participating. Current estimated costs for 2018/19 vary between £1,500 - £2,500 per student. Some factors which may impact on the cost of field classes are beyond our control such as airline fare increases. The Department tries to keep the costs as low as possible, and to inform students as early as possible of the cost of any optional field classes that they have planned to take.

Students wishing to take a Level 3 field class may apply for funding support via the Department’s Undergraduate Scholarship Competition which is normally held in April each year.

Level 1
For Geography courses fieldwork is an integral element of various core Level 1 modules. The costs of all Level 1 fieldwork and field classes are included in the tuition fee. The principal field work and field class module at Level 1 is as follows:

<table>
<thead>
<tr>
<th>BA and BSc Geography</th>
<th>GEO118</th>
<th>(18/19 Destination: Yorkshire/Derbyshire)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSc Environmental Science</td>
<td>GEO119</td>
<td>(18/19 Destination: Yorkshire/Derbyshire)</td>
</tr>
</tbody>
</table>

Level 2
For Geography courses an overseas residential field class is a compulsory component of the course and the cost of attendance is included in the tuition fee. For BA Geography (not including BA Geography & Planning), there is a choice of three locations.

<table>
<thead>
<tr>
<th>BA Geography</th>
<th>Choice of</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO271, GEO272</td>
<td></td>
</tr>
<tr>
<td>or GEO273</td>
<td>(18/19 Destinations: Berlin, Morocco, Marseille)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BSc Geography</th>
<th>GEO270</th>
<th>(18/19 Destination: Spain)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSc Environmental Science</td>
<td>APS255</td>
<td>(18/19 Destination: Western Ireland)</td>
</tr>
</tbody>
</table>

Level 3
Level 3 field class modules on all courses are optional and it is necessary to apply for a place on each module in Semester 2 of Level 2. The application process will take place after Easter and will be announced to students via e-mail. Only students who are allocated a place on a field class will be allowed to register for these modules. Please note, for field trips to run we require a minimum number of students to sign up for these modules. This varies depending on the specifics of individual field trips. If this number is not reached the field trip will be cancelled.

<table>
<thead>
<tr>
<th>BA Geography</th>
<th>GEO386, GEO393</th>
<th>(18/19 Destinations: Uganda/Hong Kong/Liverpool)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO3000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BSc Geography</th>
<th>GEO380, GEO392</th>
<th>(18/19 Destinations: New Zealand/California)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSc Environmental Science</td>
<td>GEO398</td>
<td>(18/19 Destination: Galapagos)</td>
</tr>
</tbody>
</table>

Other optional modules at Levels 2, 3 and 4 contain elements of field work, these include: GEO257, GEO259, GEO276, GEO384, GEO390 and GEO3002.
Module Details

The following module details are intended to help you with module selection. To obtain further information about a particular module you should contact the module convenor (the convenor is indicated in bold in the list of module teaching staff).

Module availability for students studying for degrees with integrated employment experience or study abroad periods is the same for students studying for ordinary versions of those degrees. BA Geography and Planning students should consult the Department of Urban Studies and Planning for information on TRP coded modules (https://www.sheffield.ac.uk/usp/currentstudents). BSc Environmental Science should consult the Department of Animal and Plant Science for information on APS coded modules (https://www.sheffield.ac.uk/aps/currentug).

Module Costs

Where possible, costs likely to be incurred on a particular module are included in as much detail as possible. For most modules, electronic submission of coursework means additional costs are unlikely. A small additional costs is likely where a paper-only submission is required. Paper-only submission will only apply where an electronic submission is not possible (e.g. in the case of field notebooks).

Skills Icons

The purpose of these icons is to highlight the skills that you will develop within each level of study. Each icon represents a different skills category, which is comprised of several specific skills. Colour coding is used to highlight the skills category on each module description.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Skill Category</th>
<th>Specific Skills / Attributes Gained</th>
</tr>
</thead>
<tbody>
<tr>
<td>🌍</td>
<td>Global Awareness</td>
<td>Geographical awareness, and political and cultural awareness</td>
</tr>
<tr>
<td>🌋</td>
<td>Geographical</td>
<td>Spatial analysis, geographical information systems, quantitative and qualitative research methods</td>
</tr>
<tr>
<td>🗞</td>
<td>Organisational Skills</td>
<td>Prioritising and planning, decision making, time management, self-management</td>
</tr>
<tr>
<td>&quot; &quot;</td>
<td>Communication Skills</td>
<td>Written and oral communication, including production of non-essay type materials</td>
</tr>
<tr>
<td>📚</td>
<td>Numeracy &amp; Technology</td>
<td>Information retrieval, numeracy, statistical analysis, computer literacy, use of computer software</td>
</tr>
<tr>
<td>🧠</td>
<td>Intellectual &amp;</td>
<td>Analysing and problem solving, developing a reasoned argument, creative and critical thinking</td>
</tr>
<tr>
<td>&quot; &quot;</td>
<td>Independent Thinking</td>
<td></td>
</tr>
<tr>
<td>📘</td>
<td>Research</td>
<td>Research design and approaches, ethics and risk assessments, cross-disciplinary understandings</td>
</tr>
<tr>
<td>🎥</td>
<td>Employability</td>
<td>Commercial and business awareness, awareness of attitudes to work, political and cultural sensitivity, personal reflection and evaluation, networking and team working</td>
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<tr>
<td>Level 1</td>
<td>Thematic modules</td>
<td>Skills modules</td>
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<tr>
<td>Introduction year</td>
<td>• Develop global awareness of Geography as a discipline</td>
<td>• Developing independence in literature research and critical thinking</td>
</tr>
<tr>
<td></td>
<td>• Guided assessments – work to a brief</td>
<td>• Introduction to key geographical skills including statistics and fieldwork</td>
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<thead>
<tr>
<th>Level 2</th>
<th>Thematic modules</th>
<th>Skills modules</th>
<th>Other modules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key concepts and processes</td>
<td>• How we understand the world around us and thinking critically about the methods used</td>
<td>• Developing research ability and research independence, awareness of approaches</td>
<td>• Core overseas field classes</td>
</tr>
<tr>
<td></td>
<td>• Guided assessments – work to a brief</td>
<td>• Deepening skills in GIS and statistics that are fundamental for geographical research</td>
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<thead>
<tr>
<th>Level 3 and Level 4</th>
<th>Thematic modules</th>
<th>Skills modules</th>
<th>Other modules</th>
</tr>
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<tbody>
<tr>
<td>Research-led year</td>
<td>• Focus on applications of knowledge and research approaches</td>
<td>• Dissertation further develops and provides opportunity to demonstrate:</td>
<td>• Optional international field classes</td>
</tr>
<tr>
<td></td>
<td>• Guided and unguided assessments – some will require you to work to your own brief</td>
<td>• research independence</td>
<td>• Achieve More Level 3</td>
</tr>
<tr>
<td></td>
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<td>• project management skills</td>
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<td>• critical thinking skills</td>
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<td>• research technique skills</td>
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GEO113 Introduction to Physical Geography

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<th>Level</th>
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<tr>
<td>Credits</td>
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<tr>
<td>Availability</td>
<td>Core for BSc Geography/MGeogSci Geography; BSc/MEnvSci Environmental Science Approved for BA Geography; BA Geography and Planning:</td>
</tr>
<tr>
<td>Semester</td>
<td>Academic Year</td>
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Description
This module is intended to provide an introduction to the general principles of physical geography for students with diverse backgrounds. Part I will aim to give students an understanding of the origin and history of the Earth. Part II will use a systems-based approach to physical geography to examine several other key environmental systems, including the atmosphere, the hydrosphere, and the cryosphere. Part III of the course will introduce concepts of geomorphology as a means to investigate the landforms of the earth; mountains, valleys, slopes, river beds and dunes.

Aims
- To understand the origin and history of the Earth.
- To understand the legacy of past events on the landscape and the processes operating on the landscape.
- To illustrate and assess the value of a systems approach in physical geography at a range of scales.
- To investigate sediment transport processes, geomorphology and land form development.

Learning Outcomes
By the end of the module, a student will be able to demonstrate:
- Knowledge of the origin and history of the Earth, and an appreciation of crustal and lithological processes.
- An appreciation of the legacy of past events on present-day geology, landscape, and surface environments.
- An understanding of the key elements of the Earth’s physical system at the global scale and some of the interactions between them.
- An understanding of the concept of geomorphology and knowledge of how processes interact with landforms and contribute to landscape development at a range of spatial and temporal scales.

Outline Contents
- Earth structure, minerals and rocks; Continental dynamics & earthquakes; Cryosphere
- Atmospheric dynamics & composition; World climate & solar energy
- Climate change/global warming; Plate tectonics/volcanoes; Weathering & erosion
- Tectonic, Aeolian, Fluvial, Glacial geomorphology

Delivery Methods
Lectures (24hrs); Labs (8hrs)

Learning Hours
Scheduled: 32hrs; Independent: 165.75hrs

Assessment
Group Poster (25%, S1); 45-min Exam (25%, S1); 1.5hr Exam (50%, S2)

Feedback
Verbal feedback is given in labs. Written feedback is given on the group poster. Students can also receive feedback on performance in exams by arranging a meeting with their Personal Tutor at the start of the following Semester. Students are encouraged to seek feedback at every opportunity.

Staffing
Prof. Ed Rhodes, Dr Darrel Swift, Dr Manoj Menon, Dr Tom Pering
**GEO114 Introduction to Human Geography**

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<th><strong>Level</strong></th>
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<td><strong>Credits</strong></td>
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<tr>
<td><strong>Availability</strong></td>
<td>Core for BA Geography; BA Geography and Planning; Approved for BSc/MGeogSci Geography; BSc/MEnvSci Environmental Science</td>
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<tr>
<td><strong>Semester</strong></td>
<td>Academic Year</td>
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**Description**
The module provides an introduction to human geography including key principles and processes in economic, social and cultural geography. It describes the main elements and issues involved in the global economic system including the process of uneven development and how local economic activities are moulded by global forces. It also provides an introduction to social and cultural geography focusing on a range of concepts, current debates and contemporary issues. Drawing examples from around the world and at a variety of geographical scales, the module highlights the value of a geographical perspective on current economic, social and cultural issues.

**Aims**
- To provide an introduction to human geography including key aspects of economic, social and cultural geography.
- To outline global patterns of economic interdependence, uneven development and inequality, showing how patterns and processes change over time.
- To outline the key concepts, current debates and contemporary issues in social and cultural geography with illustrations from a range of scales and places.

**Learning Outcomes**
By the end of the module, a student will be able to demonstrate:
- A critical understanding of globalization and the geographical inequalities with which it is associated.
- An ability to illustrate the nature of uneven development and its geographical consequences.
- A critical understanding of key concepts and current debates in social and cultural geography.
- The value of a geographical perspective on a range of contemporary economic, social and cultural issues.

**Outline Contents**
- Global capitalism
- Local economic restructuring
- Global uneven development
- Social geographies
- Cultural geographies
- The urban experience

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<tr>
<th><strong>Delivery Methods</strong></th>
<th>Lectures (24hrs); Seminars (6hrs)</th>
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<tbody>
<tr>
<td><strong>Learning Hours</strong></td>
<td>Scheduled: 30hrs; Independent: 168.5hrs</td>
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<tr>
<td><strong>Assessment</strong></td>
<td>1.5hr Exam (50%); 2,000-word Essay (50%)</td>
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<tr>
<td><strong>Feedback</strong></td>
<td>Written feedback is given on the essay. Students can also receive feedback on performance in exams by arranging a meeting with their Personal Tutor at the start of the following Semester. Students are encouraged to seek feedback at every opportunity.</td>
</tr>
<tr>
<td><strong>Staffing</strong></td>
<td>Prof. Peter Jackson, Dr Eric Olund, Dr Jessica Dubow, Prof. Richard Phillips</td>
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**GEO115 Introduction to Environmental Geographies**

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<td>Availability</td>
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<tr>
<td>Semester</td>
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**Description**

This module will introduce students to a wide range of critical environmental issues facing the world today from physical science and social science perspectives. Using a range of environmental problems evident in the Global North and Global South (such as climate change, water resources, land-use change, agriculture), the physical and social processes implicated will be examined. Drawing on a range of examples, students will critically explore the causes, consequences, management and solutions to environmental issues and learn how to question assumptions about environmental processes.

**Aims**

- Investigate a range of global environmental issues, with reference to examples, as physical and social processes.
- To assess and critically evaluate the causes of environmental problems
- Apply scientific and social scientific principles to real world situations.

**Learning Outcomes**

By the end of the module, a student will be able to demonstrate:

- An understanding of the causes and consequences, both physical and human, of a range of environmental issues.
- A critical approach to understanding the environment and environmental problems.
- Detail a range of real world examples and case studies.

**Outline Contents**

- Climate change as a driver of environmental and social change.
- Water: resources, quality, impacts of urbanisation, management and sustainability.
- Agriculture: agriculture and the environment, food and agriculture in a globalising world, sustainable intensification.
- Deforestation: drivers of deforestation and reforestation, impacts, mitigation and sustainable development.

**Delivery Methods**

Lectures (30hrs)

**Learning Hours**

Scheduled: 30hrs; Independent: 167hrs

**Assessment**

3hr Exam (100%)

**Feedback**

Feedback will be given throughout the course when needed. Students can also receive feedback on performance in exams by arranging a meeting with their Personal Tutor at the start of the following Semester. Students are encouraged to seek feedback at every opportunity.

**Staffing**

Dr Ruth Little, Dr Gunnar Mallon, Dr Andrew Sole
### GE0117 New Horizons in Geography

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<td><strong>Availability</strong></td>
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<td>Semester</td>
<td>Autumn</td>
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**Description**

Academic Geography is a wide and vibrant field. Geographers contribute actively to new intellectual debates in the sciences, social sciences, and humanities, and their work addresses some of the most pressing issues facing the modern world, from climate change to food security, informing policy and practice. The module provides level 1 Geography students with a challenging but accessible insight into the cutting edge of contemporary geographical research and how it helps us understand our changing world. It therefore serves as bridge between the general introductory modules of the level 1 BA and BSc courses in Geography, and the more specialist modules taught at levels 2 and 3. Furthermore, it provides an opportunity to see the difference that a geographical perspective can make to our understanding of some of the largest challenges facing the world. Each year, a selection of topical issues in contemporary human and physical geography will be explored by academics actively engaged in cutting edge research on those subjects. The course will be taught via lectures and guided reading.

**Aims**

- To provide students with an insight into new developments in human and physical geography
- To demonstrate how geographers contribute to contemporary debates and issues affecting society and the environment
- To illustrate the ways in which geographers communicate their latest research to academic and other audiences.

**Learning Outcomes**

By the end of the module, a student will be able to demonstrate:

- An understanding of the new developments in human and physical geography discussed in the module
- An appreciation of the ways in which geographers contribute to contemporary debates and issues affecting society and the environment
- An ability to synthesise relevant material, as an adjunct to the lectures, from the set reading list, provided in the lectures

**Outline Contents**

- Global climate change and extreme UK weather
- Recent surface melt and increased mass loss of the Greenland ice sheet
- Volcanology and volcano monitoring
- Global food security
- Financialisation of housing, home, and everyday life
- Urban infrastructure
- A glimpse into paleoclimate: Ice Ages
- Ice-core science

**Delivery Methods**

| Lectures (30hrs) |

**Learning Hours**

| Scheduled: 30hrs; Independent: 168hrs |

**Assessment**

| 2hr Exam (100%) |

**Feedback**

Feedback will be given throughout the course when needed. Students can also receive feedback on performance in exams by arranging a meeting with their Personal Tutor at the start of the following Semester. Students are encouraged to seek feedback at every opportunity.

**Staffing**

Dr Andrew McGonigle, Dr Andrew Sole, Prof. Jenny Pickerill, Dr Luke Temple, Prof. Mark Bateman
**GEO118 Introduction to Geographical Methods**

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<tr>
<td>Credits</td>
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<tr>
<td>Availability</td>
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<tr>
<td>Semester</td>
<td>Academic Year</td>
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**Description**
This module exposes students to key research methods used across the discipline of geography. Tutorials will develop the students’ ability to find, analyse, summarise and critically evaluate information and produce written work in an academic style. Lectures will introduce the importance of in-depth interviewing, Geographical Information Systems (GIS), remote sensing, questionnaire design, and statistics. Practicals will provide hands-on, skills-based experience of these methods and in data collection, analysis and presentation. Fieldwork will teach observational skills and provide training in typical field methods.

**Aims**
- Introduce students to a range of core methods used within geographical research;
- Give basic training in finding, evaluating, analysing and presenting data and information;
- Develop students’ oral, written, numerical and visual skills;
- Provide opportunities for students to develop and reflect upon their employability skills;
- Develop students’ abilities in field-based investigations of geographical phenomena.

**Learning Outcomes**
By the end of the module, a student will be able to:
- Recognise and explain modern geographical research methods including field observation, GIS, remote sensing, statistics, interviews and questionnaires.
- Select and use appropriate methods for collecting, evaluating and analysing geographical data.
- Recognise what constitutes plagiarism and how to avoid unintentional plagiarism by attributing work honestly, ethically and correctly.
- The ability to find information on a given topic from a range of sources.
- The ability to analyse and critically interpret scholarly literature.
- Produce a piece of academic writing which draws on material from a range of sources and syntheseses, presents and assesses data.

**Delivery Methods**
Lectures (17hrs); Tutorials (12hrs); Seminars (2hrs); Laboratory sessions (14hrs); 3 day residential fieldclass (30 hours)

**Learning Hours**
Scheduled: 75hrs; Independent: 322hrs

**Assessment**
3 x 1hr Online Exam (45%); 2,000-word Research Article (55%)

**Feedback**
A skills audit on what skills need developing and how these link to skills wanted by employers; a 1000-word formative essay; formative group presentation; summative online quiz; tutorials will also provide the opportunity for feedback on work submitted.

**Staffing**
Dr Tom Pering and Dr Luke Temple, Dr Manoj Menon, Prof. Peter Jackson, Dr Robert Bryant
## GEO119 Introduction to Environmental Science

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<tr>
<td>Credits</td>
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<tr>
<td>Availability</td>
<td>Core for all Environmental Science programmes, and MEnvSci</td>
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<td>Semester</td>
<td>Academic Year</td>
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### Description
This module provides fundamentals of environmental sciences with an emphasis on problem solving. We face critical challenges in loss of biodiversity, accessible to clean water, climate change and provision of food for a quickly growing population. These challenges are best approached centred in sustainability (recycling reducing consumption) and citizen engagement in planning energy-efficient buildings and smart economics for achieving social equity. The module aims to cover the main environmental challenges using a systems approach. The contents include global environmental cycles, climate, air and water resources and pollution, biological communities, geology, energy, waste and environmental policy and sustainability. An introduction to field observation techniques is also included.

### Aims
- Provide an introduction to environmental systems using air, water, geo and bioenvironmental cycles of important elements.
- Introduce the students to key concepts in environmental science including sustainability using a problem solving approach
- Explain how and why data contributes to understand climate and ecosystem change and sustainable food production, processes that impact the environment.
- Understand how international efforts attempt to mitigate human demands on natural resources.
- Introduce the students to field work techniques in Environmental Sciences

### Learning Outcomes
By the end of the module, a student will be able to:
- Describe several important environmental problems facing the world
- List a variety of examples of problems and solutions in environmental quality
- Explain how and why elements such as carbon, nitrogen, phosphorus and sulphur cycle through ecosystems
- List effects of anthropogenic changes in climate, water, biodiversity, air and geology resources
- Explain environmental sustainability, what are the millennium development goals and describe international environmental policy
- Assess an environmental landscape, assess it in terms of what processes are taking place or issues acting within it

### Delivery Methods
Lectures (12hrs); Seminars (2hrs); Fieldwork (40hrs); Problem Solving Classes (10hrs)

### Learning Hours
Scheduled: 74hrs; Independent: 134.5hrs

### Assessment
1.5hr Exam (50%); 15-min Group Video Presentation (20%); 1,500-word Fieldwork Report (30%)

### Feedback
In class and online; student survey to monitor progress

### Staffing
Prof. Ed Rhodes, Dr Charis Enns, Dr Manoj Menon
GEO243 Political Geographies

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<tr>
<td>Credits</td>
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<tr>
<td>Availability</td>
<td>Approved for BA Geography; BSc Geography; BSc/MEnvSci Environmental Science; BA Geography &amp; Planning</td>
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<tr>
<td>Semester</td>
<td>Spring</td>
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**Description**
The module introduces students to contemporary debates within political geography. Political processes are discussed at a variety of spatial scales, from international politics, through national politics, local and community politics and individual political behaviour. Questions of power, efficacy and conflict are examined at all these scales. Particular emphasis is given to spatial and place-specific aspects of politics. Among the issues normally discussed in the module are: geopolitics and international relations; the state and territoriality; the politics of nationalism and citizenship; welfare regimes and the geography of public policy; civic activism; and individual political participation.

**Aims**
- Discuss geographical issues in geopolitics and international relations.
- Discuss geographical issues related to the politics of nationalism, citizenship and political participation.
- Examine debates around welfare regimes, the geography of public policy.

**Learning Outcomes**
By the end of the module, a student will be able to demonstrate:
- Understanding of the role of geography in geopolitics and international relations.
- Understanding of debates on the politics of nationalism, citizenship and political participation.
- Understanding of the geographical nature of welfare regimes and the geography of public policy.

**Outline Content**
- Geography and public policy: what are you talking about?
- The intimate yet ethereal geographies of employment support
- Contested citizenships: rights, obligations, (un)reasonable expectation
- The localisation of austerity
- Welfare systems after the financial crisis
- Crisis, austerity and the political geography of the third sector
- Political geographies of global development
- 'Ungoverned' spaces and populations
- The state and global governance

**Delivery Methods**
- Lectures (29hrs); Seminars (3hrs)

**Learning Hours**
- Scheduled: 32hrs; Independent: 166hrs

**Assessment**
- 2hr Exam (67%); 1,500-word Essay (33%)

**Feedback**
Verbal feedback is given in seminars and written feedback on the essay. Students can also receive feedback on performance in exams by arranging a meeting with their Personal Tutor at the start of the following Semester. Students are encouraged to seek feedback at every opportunity.

**Staffing**
Dr Dan Hammett, Dr Luke Temple
Environmental issues continue to be a key area of contemporary public concern and current political debate. They raise fundamental questions about the relationship between society and environment, and the politics of that relationship. This module provides a geographical introduction to these issues and debates with examples from a range of scales from the global to the local. After a review of key concepts, the module is developed through inter-related sections covering debates through different empirical themes.

Aims
- To familiarise students with key geographical theories and concepts for understanding society-environment relations including notions of risk, practice and sustainability.
- To illustrate how these theories and concepts can be applied to understand current issues in key sectors (such as energy, waste, water, housing and food).
- To enable understanding of the different ways in which society-environment issues are always political, including critical engagement with environmental policy formation in these sectors and the relationship between environmental regulation and everyday life.

Learning Outcomes
By the end of the module, a student will be able to demonstrate:
- An understanding of key geographical theoretical and conceptual approaches to society and environment relations.
- Knowledge of how these approaches can be applied to contemporary environmental issues.
- An appreciation of different ways in which environment-society relations are always political, including appreciation of the challenges posed for environmental policy-making in key sectors.

Outline Contents
- Introduction
- Approaching Environment and Society.
- Thematic blocks on topics such as:
  - Energy
  - Water
  - Waste
  - Food
  - Housing
- Review and revision workshop

Delivery Methods
Lectures (20hrs); Tutorials (6hrs)

Learning Hours
Scheduled: 26hrs; Independent: 171.5hrs

Assessment
2.5hr Exam (85%); 5-min Group Presentation and group participation in stakeholder debates (approx. 20-mins) (15%)

Feedback
Verbal feedback is given in tutorials. Students can also receive feedback on performance in exams by arranging a meeting with their Personal Tutor at the start of the following Semester. Students are encouraged to seek feedback at every opportunity.

Staffing
Prof. Jenny Pickerill, Dr Megan Blake
GEO248 Research Design for Geography and Environmental Science

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<td>Core for BA Geography; BSc/MGeogSci Geography; BSc/MEnvSci Environmental Science Approved for BA Geography and Planning</td>
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<td>Semester</td>
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**Description**
The ability to undertake independent research is a key skill in Geography and Environmental Science and in many areas of future employment. This module focuses on the philosophical background to undertaking research and on providing experience in designing research projects. It introduces the principles of research design and places methods of data collection in the overall processes of research, including the identification of a topic of study, undertaking a literature review, and formulating research questions and linking them to appropriate methods of data collection, analysis and testing, as well as research ethics and safety. Lectures will be complemented by workshops. Summative assessment will involve a proposal that will form the basis of the dissertation.

**Aims**
- To equip students with the knowledge and skills to undertake a piece of independent research.
- To introduce students to the key issues which must be considered when designing a research project and writing a research proposal.

**Learning Outcomes**
By the end of the module, a student will be able to demonstrate:
- The ability to research and write a review and evaluation of the existing literature within a particular research area of human or physical geography or environmental science.
- The ability to research and write a proposal that identifies a research problem in the context of existing understanding, specific questions to be addressed and/or hypotheses that can be tested, provides a methodology for conducting the research and evaluating the outcomes, and assesses the contribution that the proposed research may make.
- A practical awareness of methodological and ethical issues which may arise when conducting a research project in their particular discipline.

**Delivery Methods**
- Lectures (10hrs); Tutorials (4hrs); Workshops (6hrs)

**Learning Hours**
- Scheduled: 20hrs; Independent: 80hrs

**Assessment**
- 1,500-word Dissertation Research Proposal, Ethical Review and Risk Assessment (100%)

**Feedback**
- Verbal feedback is given in tutorials and workshops. Written feedback is given on all elements of assessment. Students are encouraged to seek feedback at every opportunity.

**Staffing**
- **Dr Ruth Little** (Human Geography), **Dr Darrel Swift** (Physical Geography)
**GEO257 Qualitative Methods**

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<tr>
<td>Credits</td>
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<td><strong>Availability</strong></td>
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<td><strong>Semester</strong></td>
<td>Autumn</td>
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**Description**

This module builds on previous methods learning to further develop skills and understanding of a range of qualitative research approaches used in contemporary human geography. The module focuses on a number of research methodologies to increases the awareness of the appropriateness of certain methods to research design. The module will focus on a number of methodological approaches (e.g., qualitative interview, visual, archival, participatory, ethnography, focus groups, life histories, case study) and consider the relative strengths of the resulting data and the analytical approaches used to make sense of these forms of data.

**Aims**

- To develop an understanding of the differences between various methodological approaches
- Knowing which methods to apply to a particular situation.
- How to analyse data resulting from these methodological approaches

**Learning Outcomes**

By the end of the module, a student will be able to demonstrate:

- An awareness of the diversity of qualitative methodological approaches used in contemporary human geography.
- An ability to competently analyse data resulting from one of these methods

**Outline Contents**

- Qualitative sampling
- Interview design and analysis
- Ethnography
- Participatory methods
- Archives, texts & visual

**Delivery Methods**

- Lectures (10hrs); Tutorials (7hrs); Fieldwork (3hrs)

**Learning Hours**

- Scheduled: 20hrs; Independent: 80hrs

**Assessment**

- Online Multiple Choice Quiz (10%); 2,000-word Essay (90%)

**Feedback**

Verbal feedback is given in workshops and seminars. Written feedback is given on all assessments. Students are encouraged to seek feedback at every opportunity.

**Staffing**

Dr Luke Temple, Dr Sammia Poveda
GEO258 Geographies of Development

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**Description**

Development in the Global South is a major issue of international concern in the 21st century. This module explores contemporary development issues and examines the contribution that geographers, and geographical thought, can make towards understanding inequality, poverty and socio-economic change. Definitions of ‘development’, ‘poverty’ and ‘the poor’ shift and change, and these terms are invested with political meaning which reflect specific geographies and ways of seeing the world. This module addresses diverse theories, paradigms and contemporary critiques of development, and explores some of the central issues affecting processes of development. Case examples are drawn from Latin America, Africa and South-East Asia.

**Aims**

- To illustrate how, why and with what outcomes, understandings of development – and related terminology such as ‘poverty’ and ‘the poor’ – evolve.
- To highlight and critically explore how power and politics are implicated in the construction of approaches to ‘development’ and the ways in which these produce specific geographies of development and ways of seeing the world.
- To gain a clear understanding of contemporary approaches towards ‘development’.
- To understand the interrelatedness and interconnectedness of countries in the Global North and Global South.

**Learning Outcomes**

By the end of the module, a student will be able to demonstrate:

- A critical understanding the origins of development paradigms.
- The ability to critically assess the factors influencing development planning at local and global levels.
- The ability to outline, and analyse key development processes at a range of scales, including linking local issues to regional initiatives and sub-regional and global policy discourses.

**Outline Contents**

- Theories of Development – defining development, development paradigms, globalisation and development.
- Development in Practice – economic development, poverty and inequality, the environment-development interface, institutions and civil society.
- New Spaces of Development – South-South development, sustainable development goals and Habitat III.

**Delivery Methods**

Lectures (20hrs); Seminars (10hrs)

**Learning Hours**

Scheduled: 30hrs; Independent: 168hrs

**Assessment**

2hr Exam (67%); 1,500-word Essay (33%)

**Feedback**

Feedback will be given throughout the module as needed. Written feedback is given on the essay. Students can also receive feedback on performance in exams by arranging a meeting with their Personal Tutor at the start of the following Semester. Students are encouraged to seek feedback at every opportunity.

**Staffing**

Dr Charis Enns, Dr Sammia Poveda, Dr Shaun Smith
Level: 2  
Credits: 20  
Availability: Approved for BA Geography; BSc/MGeogSci Geography; BSc/MEnvSci Environmental Science; BA Geography & Planning  
Semester: Autumn

**Description**
This module will give students an understanding of the global climate, focusing on the atmospheres, the oceans, and their interaction. The first part of the module will consider the main characteristics of, and processes behind, climate from the global to the local scale. The second part of the module will examine the physical characteristics of the oceans and their geographical variation, and the role of the oceans in the climate system.

**Aims**
- Further develop knowledge of the characteristics of the global climate system.
- Develop understanding of the processes behind climate at a global, regional and local scale.
- Identify the characteristics of, and processes underlying, the physical properties of the ocean.
- Develop an awareness of the role of the oceans in the earth system.
- Gain an appreciation of links between atmosphere, oceans and climate.

**Learning Outcomes**
By the end of the module, a student will be able to demonstrate:
- Knowledge of the main features of global climate.
- Identify the dominant processes shaping the mean climate and causing climate variability at a range of scales.
- A firm grasp of the characteristics and underlying processes of the physical geography of the oceans.
- Understand how the oceans interact with the rest of the climate system.

**Outline Contents**
- Global climates: the Earth’s radiation balance, forces in the atmosphere.
- The atmospheric general circulation, modes of interannual variability.
- Regional climates: mid-latitude and tropical.
- Atmospheric moisture and stability.
- Local-scale atmospheric circulations; microclimate.
- Basic introduction to physical oceanography.
- The ocean general circulation: properties and theories.
- The tropical ocean; El Nino.
- The polar ocean and sea ice; deep convection and the thermohaline circulation.
- The role of the oceans in climate.

**Delivery Methods**
Lectures (20hrs), Practicals (20hrs), Fieldwork (2hrs)

**Learning Hours**
Scheduled: 42hrs; Independent: 156hrs

**Assessment**
2hr Exam (60%); 1,500-word Practical Write-up (40%)

**Feedback**
Verbal feedback is given during practicals and field work. Written feedback is given on the practical write up. Students can also receive feedback on performance in exams by arranging a meeting with their Personal Tutor at the start of the following Semester. Students are encouraged to seek feedback at every opportunity.

**Staffing**
Dr Gunnar Mallon, Prof. Grant Bigg
GEO261 Ice Age Earth

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**Description**

The landscape we live in is a dynamic place and has been in the past as well. Huge changes at a global, regional and local scale have occurred in the last 2.6 million years of the earth's history (Quaternary period). These changes are ongoing with implications for both present and future environments. Methods and techniques to investigate past environmental changes from proxy data are outlined and illustrated. The module also looks at how palaeoenvironments have responded to past climate changes thereby putting a context for present day climate changes and predicting future changes.

**Aims**

- To demonstrate the variability of quaternary palaeoenvironments at different spatial and temporal scales
- To illustrate how quaternary palaeoenvironmental systems can be reconstructed
- To develop an awareness of how different environments have responded to past climatic changes

**Learning Outcomes**

By the end of the module, a student will be able to demonstrate:

- An understanding of the differences between proxy and instrumental data.
- An understanding of a variety of sources from which an understanding of quaternary palaeoenvironments can be reconstructed.
- A knowledge of the types, effects and periodicity of Ice age changes to Earth over the Quaternary period

**Outline Contents**

- Reconstruction of past environments.
- Forcing mechanisms of climate change.
- Long term environmental change.
- Human impact on environmental change and future environmental changes.

**Delivery Methods**

Lectures (20hrs); Problem solving classes (7hrs); Practical class (3hrs)

**Learning Hours**

Scheduled: 30hrs; Independent: 168hrs

**Assessment**

2hr Exam (50%); 1,500-word Essay (50%)

**Feedback**

Verbal feedback is given during practicals. Written feedback is given on the essay. Students can also receive feedback on performance in exams by arranging a meeting with their Personal Tutor at the start of the following Semester. Students are encouraged to seek feedback at every opportunity.

**Staffing**

Dr Felix Ng, Prof. Mark Bateman
GEO262 Geographical Information Systems and Remote Sensing

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<td>Semester</td>
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Description
This module introduces both Geographic Information Systems (GIS) and Remote Sensing (RS) – both important tools to aid in our understanding of the earth system. GIS are computer systems for the storage, display and manipulation of geographical data. Remote Sensing (RS) refers to the science of identification of earth surface features and estimation of their geo-biophysical properties through the detection of electromagnetic radiation. The module will cover the main concepts related to handling RS/GIS data on a computer and introduce a range of practical applications of RS/GIS in research, industry and commerce.

Aims
- To introduce Geographic Information Systems (GIS) and Remote Sensing (RS)
- To provide practical experience in using GIS software.
- To provide practical experience of RS data, software and method.
- To consider the real-world context in which GIS and RS are used

Learning Outcomes
By the end of the module, a student will be able to demonstrate:
- Knowledge of the core concepts relating to RS and GIS.
- Knowledge of RS/GIS spatial data types and methods.
- An understanding of key application of RS data for regional/global monitoring.

Outline Contents
- Introduction to GIS
- Data types in GIS.
- Spatial Data Analysis
- Introduction to RS and applications
- Image analysis and classification
- GIS applications in Social Sciences

Delivery Methods
Lectures (6hrs); Practical classes (14hrs)

Learning Hours
Scheduled: 20hrs; Independent: 80hrs

Assessment
2,000-word Practical Assessment (100%)

Feedback
Verbal feedback is given during practicals. Written feedback is given on all assessments. Students are encouraged to seek feedback at every opportunity.

Staffing
Dr Andrew Sole, Dr Adam Whitworth, Dr Stephen Livingstone
**GEO268 Glaciers and Ice Sheets**

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**Description**

This module examines glaciers and ice sheets of the World focussing on how they are believed to function and with some consideration of their historic and future changes.

We examine how glaciers and ice sheets come into existence through an understanding of climate and the concept of glacier mass balance. We then consider how glaciers work including on topics such as ice flow, hydrological drainage, ice streams, ice shelves, glacial lakes, and icebergs. Hazards to humankind are also explored. How glaciers modify the underlying landscape is dealt with via a section on glacial geomorphological processes and landforms, and we consider how landscapes evolve under the influence of ice.

**Aims**

- To introduce the components of the cryosphere, with a focus on glaciers and ice sheets.
- To understand how glaciers flow and attempt to maintain a balance with their climate drivers.
- To understand the processes that act to erode and shape glacial landforms and landscapes.
- To provide knowledge of historic and potential changes of glaciers and ice sheets.
- To understand the uncertainty associated with estimates of future change.

**Learning Outcomes**

By the end of the module, a student will be able to demonstrate:

- An understanding of glaciology, glacier hydrology, glacial geomorphology.
- Insight into how research approaches have produced such knowledge.
- An appreciation of levels of uncertainty in our current understanding.
- An appreciation of the main challenges for the future.

**Outline Contents**

- Ice flow
- Glacier hydrology
- Ice streams and ice shelves
- Glacier hazards
- Glacial geomorphology
- Glacier erosion, transport and depositin
- Landscape evolution

**Delivery Methods**

Lectures (31hrs); Practical classes (6hrs)

**Learning Hours**

Scheduled: 37hrs; Independent: 161hrs

**Assessment**

2hr Exam (67%); 500-word Practical Write-up (33%)

**Feedback**

Verbal feedback is given during practicals. Written feedback is given on the practical write-up. Students can also receive feedback on performance in exams by arranging a meeting with their Personal Tutor at the start of the following Semester. Students are encouraged to seek feedback at every opportunity.

**Staffing**

Dr Darrel Swift, Dr Andrew Sole, Dr Stephen Livingstone
GEO269 Social and Cultural Geography

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**Description**

This module builds on the Level 1 module, Introduction to Human Geography. It illustrates the diversity and vitality of contemporary social and cultural geography including some of the philosophical concepts and theoretical debates that have shaped the subject. As well as demonstrating the value of a geographical perspective on a range of social and cultural issues, the module will enhance the understanding, critical awareness and interdisciplinary capacities of students. The module aims to deepen and enrich the ways in which students are able to think about geographical issues, through a critical understanding of concepts and approaches that underpin the substance and methods of contemporary human geography.

**Aims**

- To develop students’ understanding of key thematic and conceptual issues in contemporary social and cultural geographies including their theoretical and philosophical underpinnings.
- To enhance student’s critical awareness of the geographical dimensions of a range of social and cultural issues.
- To encourage interdisciplinary thinking within the context of contemporary social and cultural geography.

**Learning Outcomes**

By the end of the module, a student will be able to demonstrate:

- A clear understanding of the thematic scope of contemporary social and cultural geography.
- An understanding of some key geographical concepts and knowledge of their theoretical and philosophical underpinning.
- An ability to engage critically with a range of contemporary ideas and debates in social and cultural geography, including the relevance of interdisciplinary thinking.

**Outline Contents**

- Place: space and place, local and global, race and place
- Intersections and Identities: gender and sexuality, religion and faith, cultural difference and multiculturalism
- Memory, Space and History: imaginative geography, built environment or ‘sites and scenes of struggle’, spaces of counter-memory and forgetting

**Delivery Methods**

Lectures (20hrs); Seminars (10 hrs)

**Learning Hours**

Scheduled: 30hrs; Independent: 168.5hrs

**Assessment**

1.5hr Exam (50%); 1,500-word Photographic Essay (50%)

**Feedback**

Verbal feedback is given during seminars. Written feedback is given on the essay. Students can also receive feedback on performance in exams by arranging a meeting with their Personal Tutor at the start of the following Semester. Students are encouraged to seek feedback at every opportunity.

**Staffing**

Prof. Richard Phillips, Dr Jessica Dubow
GEO270 Physical Geography Fieldclass

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**Description**

The ability to understand physical processes and to undertake research into these is a key skill in a Geography degree. Planning and reporting skills developed are of great importance in many areas of future employment. This module focuses on gaining hands-on experience of a range of earth surface processes and on providing practical experience in undertaking and designing small field-based research projects.

**Aims**

- To provide understanding for a range of physical processes
- To provide students with an opportunity to undertake a piece of field-based research.

**Learning Outcomes**

By the end of the module, a student will be able to demonstrate:

- The ability to undertake research planning that identifies a research based problem in physical geography in a field context, and carry out a field-based research project
- The ability to present the results of research undertaken in both oral and written form.

**Outline Contents**

- Taught and self-guided fieldwork in Southern Spain

**Delivery Methods**

<table>
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<th>Lectures (4hrs); Workshops (2hrs); Field Work (50hrs)</th>
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**Learning Hours**

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**Assessment**

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<th>1,000-word Report (50%); 15-min Group Presentation (50%) done during field class</th>
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**Feedback**

Students will receive feedback frequently during the field class and written feedback will be given on the report. Students are encouraged to seek feedback at every opportunity.

**Staffing**

Prof. Ed Rhodes, Dr Andrew McGonigle, Dr Robert Bryant
GEO271 Human Geography Fieldclass A (Berlin)

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**Description**

Fieldwork plays a fundamental role within the geographical tradition and is widely regarded as an essential part of degree-level Human Geography. In this module, sustained fieldwork, with classroom time before and after for preparation, analysis and reflection, is a vehicle both for bringing the subject alive, and also for developing academic and transferable skills and substantive knowledge, ranging from curiosity-driven and deep learning, to the enhancement of skills and competences through independent research that will enhance students’ employability. The thematic focus of this field module is on urban, historical, cultural and social geographies.

**Aims**

- To bring Human Geography alive to students and to stimulate their curiosity about the subject.
- More specifically, within Human Geography, to focus upon: urban, historical, cultural and social geographies.
- To provide students with practical experience of using a range of research tools to conduct geographical research.
- To develop substantive academic knowledge and skills through fieldwork.
- To enhance transferable skills through practical fieldwork.

**Learning Outcomes**

By the end of the module, a student will be able to demonstrate:

- Substantive geographical knowledge of a particular place acquired through conducting first-hand research.
- Ability to make connections between empirical research and theoretical debates, with particular relevance to urban, historical, cultural and social geographies.
- The ability to conduct fieldwork in a non-local setting/context.
- Awareness and understanding of the development and implementation of research design and methodological approach(es) to a real-world research situation.
- Skills in data analysis, data handling and critical thinking – both in relation to analysis of data and reflections on personal research experience and conduct.

**Outline Contents**

This module explores themes and questions through Berlin, rather than being a primarily regional geography. It is structured around four key themes:

- Urban transformations
- Cultural geographies of food
- Memory, memorialisation, urban landscape
- Ruins and wastelands

**Delivery Methods**

Lectures (6hrs); Field Work (60hrs)

**Learning Hours**

Scheduled: 66hrs; Independent: 34hrs

**Assessment**

600-word Research Proposal (34%); 1,400-word Field Report (66%)

**Feedback**

Students will receive feedback frequently during the field class and written feedback will be given on the report. Students are encouraged to seek feedback at every opportunity.

**Staffing**

Prof. Richard Phillips, Dr Luke Temple, Dr Ruth Little
GEO272 Human Geography Fieldclass B (Morocco)

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**Description**

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**Aims**

- To bring Human Geography alive to students and to stimulate their curiosity about the subject.
- More specifically, within Human Geography, to focus upon: urban, historical, cultural and social geographies.
- To provide students with practical experience of using a range of research tools to conduct geographical research
- To develop substantive academic knowledge and skills through fieldwork
- To enhance transferable skills through practical fieldwork.

**Learning Outcomes**

By the end of the module, a student will be able to demonstrate:

- Substantive geographical knowledge of a particular place acquired through conducting first-hand research,
- Ability to make connections between empirical research and theoretical debates, with particular relevance to urban, historical, cultural and social geographies.
- The ability to conduct fieldwork in a non-local setting/context,
- Awareness and understanding of the development and implementation of research design and methodological approach(es) to a real-world research situation,
- Skills in data analysis, data handling and critical thinking – both in relation to analysis of data and reflections on personal research experience and conduct.

**Outline Contents**

- Contextual knowledge: the rural and urban context
- Linking theory to fieldwork and research
- The logistics of fieldwork and research
- Designing research
- Research: methodologies, methods and challenges; ethics, risk and practice
- Doing research: working across boundaries; working with rural communities; working in urban contexts; development visual methods and triangulating data

**Delivery Methods**

Lectures (6hrs); Field Work (60hrs)

**Learning Hours**

Scheduled: 66hrs; Independent: 34hrs

**Assessment**

1,400-word Field Report (66%); 600-word Reflective Essay (34%)

**Feedback**

Students will receive feedback frequently during the field class and written feedback will be given on all assessments. Students are encouraged to seek feedback at every opportunity.

**Staffing**

Dr Charis Enns, Dr Anna Krzywoszynska, TBC
GEO273 Human Geography Fieldclass C (Marseille)

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**Description**

Fieldwork plays a fundamental role within the geographical tradition and is widely regarded as an essential part of degree-level Human Geography. In this module, sustained fieldwork, with classroom time before and after for preparation, analysis and reflection, is a vehicle both for bringing the subject alive, and also for developing academic and transferable skills and substantive knowledge, ranging from curiosity-driven and deep learning, to the enhancement of skills and competences through independent research that will enhance students’ employability. The thematic focus of this field module is on urban, historical, cultural and social geographies.

**Aims**

- To bring Human Geography alive to students and to stimulate their curiosity about the subject.
- More specifically, within Human Geography, to focus upon: urban, historical, cultural and social geographies.
- To provide students with practical experience of using a range of research tools to conduct geographical research
- To develop substantive academic knowledge and skills through fieldwork
- To enhance transferable skills through practical fieldwork.

**Learning Outcomes**

- By the end of the module, a student will be able to demonstrate:
- Substantive geographical knowledge of a particular place acquired through conducting first-hand research,
- Ability to make connections between empirical research and theoretical debates, with particular relevance to urban, historical, cultural and social geographies.
- The ability to conduct fieldwork in a non-local setting/context,
- Awareness and understanding of the development and implementation of research design and methodological approach(es) to a real-world research situation,
- Skills in data analysis, data handling and critical thinking – both in relation to analysis of data and reflections on personal research experience and conduct.

**Outline Contents**

- Contextual knowledge: the urban context
- Fieldwork methods: questionnaire surveys, interviews, participant observation
- Regional and local development
- Social and spatial inequalities
- Social and territorial cohesion
- Place identity and European identity

**Delivery Methods**

Lectures (6hrs); Field Work (60hrs)

**Learning Hours**

Scheduled: 66hrs; Independent: 34hrs

**Assessment**

600-word Research Proposal (34%); 1,400-word Field Report (66%)

**Feedback**

Students will receive feedback frequently during the field class and written feedback will be given on all assessments. Students are encouraged to seek feedback at every opportunity.

**Staffing**

Dr Jessica Dubow, Dr Eric Olund, Prof. Peter Jackson
**GEO275 Geographical Data in the World**

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**Description**

Understanding data collection, analysis and presentation is an integral part of being a well-rounded geographer. Indeed, many problems in physical and human geography, demand the interpretation and interrogation of large datasets, which often necessitates the use of statistical techniques.

The module is designed to provide students with a solid grounding in handling large datasets and the proper application of statistical methods in geographical analysis, and an appreciation of their role in the study of contemporary social and environmental processes. This is achieved through a combination of lectures, practicals and seminars which cover the underlying ideas, provide hands-on experience and give examples of the methods’ application in the literature. The module covers hypothesis testing, bivariate inferential methods, and multivariate inferential methods.

**Aims**

- To provide students with an overview of data processing and statistical analytical methods for geography.
- To introduce students to the range of data analysis techniques employed in geographical research.
- To provide students with a theoretical and practical grounding in the application of inferential statistical methods.
- To allow students to understand research literature employing statistical methods.

**Learning Outcomes**

By the end of the module, a student will be able to demonstrate:

- An ability to explain the range of quantitative statistical analytical techniques
- The ability to use statistical methods to address research questions
- The ability to interpret the results of statistical analyses
- The ability to critically apply statistical analytical techniques in geography

**Delivery Methods**

Lectures (10hrs); Problem solving classes (3hrs); Laboratory Sessions (16hrs)

**Learning Hours**

Scheduled: 29hrs; Independent: 68hrs

**Assessment**

3x Online Multiple Choice Quiz (45%); 1,500-word Research Paper (55%)

**Feedback**

Students will receive feedback frequently during field work. Written feedback will be given on the essay. Students can also receive feedback on performance in exams by arranging a meeting with their Personal Tutor at the start of the following Semester. Students are encouraged to seek feedback at every opportunity.

**Staffing**

Dr Tom Pering, Dr Luke Temple
Description
Both soil and water security have never been so important as we expect a 50% increase in global demand for food and 30-50% increase in demand for clean water by 2030. Soils and water are important part of terrestrial environment and understanding of processes and transformations in the environment will provide pragmatic solutions we desperately need. The main aim of this module is to provide students with a firm understanding on essential processes involving soil and water, and their relationships with humans and biosphere. The module consists of lectures which will help build the much-needed fundamental and theoretical understanding of processes, while providing transferable and practical skills through field trips and laboratory experiments.

Aims
- Build theoretical understanding of the environmental processes involving soil and water
- Provide practical exposure to field sampling and observations related to soil and water environments
- Enhance data collection, analysis and interpretation skills of environmental information

Learning Outcomes
By the end of the module, a student will be able to demonstrate:
- Provide an overview of global soil and water challenges
- Understand the fundamentals of soil and water processes and measurements involved in environmental interactions.
- Be able to perform field scale measurements and sampling of soil and water.
- Use of laboratory methods to measure soil properties.
- Present and interpret data obtained from field or laboratory settings.

Delivery Methods
Lectures (20hrs); Tutorials (2hrs); Problem Solving/Example Classes (3hrs); Laboratory Sessions (15hrs); Fieldwork (14hrs)

Learning Hours
Scheduled: 54hrs; Independent: 144hrs

Assessment
2hr Exam (75%); 1,000-word Field and Laboratory Report (25%)

Feedback
Verbal feedback is given in labs and problem solving sessions. Written feedback is given on the report. Students are encouraged to seek feedback at every opportunity.

Staffing
Dr Manoj Menon, Dr Gunnar Mallon
# GEO277 Environmental Pollution and Quality

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| Availability | Core for BSc/MEnvSci Environmental Science  
Approved for BA/MGeog Geography; BSc/MGeogSci Geography; BA Geography and Planning |
| Semester | Autumn |

## Description
This module aims to introduce the students to the origins, pathways and consequences of pollutants in the environment, their control and remediation. Pollutants are released into the environment through anthropogenic activities that include domestic, leisure and industrial practices. These pollutants are potentially harmful to the ecosystem and human health. Therefore, an understanding of the physical, chemical and biological processes involved during the contamination of air, water and soil is essential to protect the environment. This module provides introduction on how to assess and quantify pollutants by using laboratory techniques for the determination of contamination in water and soil.

## Aims
- Provide fundamental understanding of laboratory techniques for assessing the impact of pollution
- Introduce the student to the fundamental concepts of processes that pollutants undergo in the environment, pathways and consequences of pollution
- Enable the students to discuss environmental processes and problems and design mechanisms to assess environmental impact of pollution

## Learning Outcomes
By the end of the module, a student will be able to:
- Describe analytical methods to quantify pollution in the environment
- Demonstrate ability to record and organise data using a laboratory notebook and the use of good laboratory practice
- Select and apply specific methods to analyse water and soil pollution in the environment
- Evaluate the statistical and analytical quality of data obtained in the laboratory
- Apply this knowledge to evaluate an environmental problem using data collected in the laboratory and present this in a laboratory report format

## Outline Contents
- Introduction to Environmental Pollution and how to measure environmental quality. The global cycles; Principles of pH, conductivity, salinity, redox, temperature; Nutrients and other anions
- Alkalinity and acidity and buffering capacity of water reservoirs; Major cations and heavy metals
- Assessment of contamination in soil; Organic matter and organic contaminants
- Environmental Risk Assessment: source-pathway-receptor model
- Principles of Environmental Impact Assessment

## Delivery Methods
Lectures (6hrs); Problem solving sessions (24hrs);  

## Learning Hours
Scheduled: 30hrs; Independent: 170hrs

## Assessment
2,200-word Report (60%); Lab Notebook (30%); Online Quizzes (10%)

## Feedback
Verbal feedback is given in labs and problem solving sessions. Written feedback is given on the report. Students are encouraged to seek feedback at every opportunity.

## Staffing
Dr Manoj Menon, Dr Gunnar Mallon
GEO336 Development and Global Change

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<td>Semester</td>
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**Description**
The aim of this module is to critically examine the development process within a global context, drawing on examples from developed and developing nations. Attention is given to the different ways in which we in the West understand ‘development’, and how we can reflect more critically on our position, and the power relations within this process. Drawing on debates within development geography, and other disciplines, the course is structured around three themes: the development industry, the poverty agenda and the local-global nexus. Topics covered may include: neoliberalism and state governance, humanitarian intervention, gender and empowerment, protests and social movements, corporate social responsibility, participation and empowerment, local forms of resistance, environmental action and change.

**Aims**
- To examine the development process within a changing global context.
- To explore contemporary debates within geography and development.
- To develop students’ critical awareness of development processes.

**Learning Outcomes**
By the end of the module, a student will be able to demonstrate:
- A critical understanding of the development processes and the links between local and global issues.
- Recognition and understanding of the relationship between power and development.
- Analysis and evaluation of key development processes at a range of scales, including linking local issues to regional initiatives and sub-regional and global discourses.

**Outline Contents**
- Neoliberalism and state governance
- Humanitarian Intervention
- Gender and empowerment
- Local forms of resistance
- Protests and social movements
- Corporate social responsibility
- Participation and empowerment
- Environmental action and change

**Delivery Methods**
- Lectures (15hrs); Seminars (6hrs)

**Learning Hours**
- Scheduled: 21hrs; Independent: 177hrs

**Assessment**
- 2hr Exam (67%); 2,000-word Essay (33%)

**Feedback**
- Verbal feedback will be given in seminars. Written feedback will be given on the report. Students can also receive feedback on performance in exams by arranging a meeting with their Personal Tutor at the start of the following Semester. Students are encouraged to seek feedback at every opportunity.

**Staffing**
- Dr Sammia Poveda, Dr Charis Enns, Ms Margi Bryant
GEO356 Dissertation for Geography and Environmental Science

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**Availability**
Core for BSc/MGeogSci Geography; BA/MGeog Geography; Optional route for BSc/MEnvSci Environmental Science

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**Description**
This module requires the student to prepare, organise, research and report a piece of original work on a geographical topic under guidance by a staff mentor. The student will decide on the topic and will either be expected to collect original material in order to investigate it, or to perform secondary analysis on information drawn from existing sources. The finished product is presented in the style, and at the length, associated with academic journal articles.

**Aims**
- To give students the experience of carrying out an original research project under supervision.
- To enable students to put into practice the skills of information collection, analysis and presentation gained at levels 1 and 2 of their degree programme.

**Learning Outcomes**
By the end of the module, a student will be able to demonstrate:
- The ability to conceptualise a clear research question arising from key academic debates in the field under investigation.
- The ability to design and carry out a programme of research, involving the collation and analysis of either original or secondary data, appropriate to answering the research question under investigation.
- The ability to analyse research data competently and appropriately.
- The ability to write a substantial research report, summarising relevant literature, methodology, and results.

**Outline Contents**
Initial work for this module will have been carried out in the module GEO248, which is the pre-requisite for GEO356. At the end of level 2 students will have identified and done preliminary project design work on their research topic for GEO356.

Students are expected to spend a suitable proportion of the vacation between levels 2 and 3 collecting the information necessary for their research project. During their first semester at level 3 students will work on the analysis of their information and on the presentation of their results, with a limited amount of advice from an individual supervisor.

**Delivery Methods**
- Lectures (1hr); Tutorials (5hrs); Workshops (9hrs); Supervision (as required – a minimum of 5hrs is recommended); Poster Conference (2hrs)

**Learning Hours**
Scheduled: 22hrs; Independent: 378hrs

**Assessment**
- 10,000-word Dissertation (100%)

**Feedback**
Verbal feedback is given during tutorials, workshops, 1:1 supervision meetings and the poster conference. Written feedback is given on the dissertation. Students are encouraged to seek feedback at every opportunity.

**Staffing**
- Dr Felix Ng (Physical Geography)
- Prof. Peter Jackson (Human Geography)
GEO368 Planetary Geoscience

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Description
This module introduces the student to the fascinating discipline of planetary geoscience and exploration. By using the principles of Physical Geography to study unfamiliar environments, we will explore problems that touch upon themes from climate, tectonics, geomorphology, hydrology, and life. The module begins with the Solar System but soon focuses on planetary-scale matters, using the terrestrial planets (Mercury, Venus, Earth, and Mars) as main examples because of an explosion of knowledge gathered from their observation. We will consider the new perspectives which such knowledge offers on the Earth's dynamic systems.

Aims
- Introduce the fundamental elements of solar system science
- Show how a physical-systems approach has been applied to other planetary contexts beyond Earth
- Illustrate how comparative studies widen and enrich our perspective on geoscience.

Learning Outcomes
By the end of the module, a student will be able to demonstrate:
- an understanding of historical and current issues of planetary geoscience and exploration
- a core knowledge of planetary environments and of factors influencing their development
- an ability to use this knowledge to engage with research problems in this discipline
- an appreciation of the importance of multi-disciplinary investigations in pushing forward frontiers of knowledge.

Delivery Methods
Lectures (10hrs); Seminars (16hrs)

Learning Hours
Scheduled: 26hrs; Independent: 172hrs

Assessment
2hr Exam (60%); 2,500-word Essay (40%)

Feedback
Verbal feedback will be given in seminars and labs. Written feedback will be given on the media piece. Students can also receive feedback on performance in exams by arranging a meeting with their Personal Tutor at the start of the following Semester. Students are encouraged to seek feedback at every opportunity.

Staffing
Dr Felix Ng, Dr Andrew McGonigle, Dr Rob Bryant
GEO380 New Zealand Field Class

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<td>Size Limit</td>
<td>Typically, 30 students</td>
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Description
The ability to apply knowledge of physical processes and research approaches to understand a particular environment is a key geographical skill. This module will provide experience in process interpretation in an unfamiliar setting, focussing on the physical processes that have shaped the environment and will influence future change. The module will include an overseas residential Field Class and will cover a range of topics that complement and extend knowledge acquired on the BSc Physical Geography programme. Introductory lectures and practical sessions will provide relevant background and enable preparatory research. Follow-up sessions will be used to support analysis and written presentation of research findings.

Aims
- Exemplify and expand knowledge of physical processes and environments, through investigation of processes in an unfamiliar overseas context.
- Provide students with an understanding of how different processes interact over spatial and temporal scales to shape the landscape and affect a particular environment.
- Further develop student’s field and research abilities, including skill in research design, field data collection and interpretation, and science communication.

Learning Outcomes
By the end of the module, a student will be able to demonstrate:
- An understanding of how different physical processes interact to shape a specific landscape and environment.
- The ability to collect and analyse field data in group and individual contexts to characterise physical processes and environmental conditions.
- Oral and written presentational skills commensurate with the need to communicate detailed research findings.

Outline Contents
- New Zealand geology and quaternary environmental change.
- New Zealand climates and climate change.
- Glacier change in New Zealand.
- Earth surface processes in New Zealand.
- 14-day (including travel) residential Field Class in New Zealand’s South Island.

Delivery Methods
Lectures (6hrs); Seminars (6hrs); Labs (8hrs); Fieldwork (80hrs)

Learning Hours
Scheduled: 100hrs; Independent: 100hrs

Assessment
3,000-word Project Report (75%); Field Notebook (25%); Formative assessment of group project presentations (in the field)

Feedback
Students will receive feedback frequently during field work. Written feedback will be given on the reports and notebooks. Students are encouraged to seek feedback at every opportunity.

Staffing
Dr Stephen Livingstone, Dr Mel Froud, Dr T Pering

Additional Costs
All students on all courses will be required to pay the full cost of attending the field class. Provisional cost: £2,500 per person*.

Notes
Please note, for field trips to run we require a minimum number of students to sign up for these modules. This varies depending on the specifics of individual field trips. If this number is not reached the field trip will be cancelled.
GEO381 Geographies of Politics and Society

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**Description**

This module explores the grounding of political geography in our everyday lives, through actions such as the outcomes of social policy interventions, experiences of inequality and injustice, and claims-making through activism and for various forms of citizenship. The module explores key debates and theories to draw out the links between geography, policy and society, and the ways in which these are manifested geographically as well as responses to these by citizens, communities, civil society and political parties. Particular attention is paid to the ways in which these interactions are played out across multiple scales and in and through particular spaces and places.

**Aims**

- To appreciate and critically understand the inter-relations between socio-political decisions, inequalities and responses to these through activism and citizenship.
- To understand the complexities of everyday society and the geographical manifestations of political geography in daily life, and the multi-faceted responses to these.
- To critically interrogate the ways in which spaces and places are implicated in in/equalities, in/justices and activism, and the ways in which these are realised through various forms of (political) participation.
- To recognise and understand how social policy and political ideology inform differences in outcomes across a variety of spaces.

**Learning Outcomes**

By the end of the module, a student will be able to:

- Critically evaluate theoretical perspectives and their contributions to understanding citizenship, activism and political participation.
- Critically evaluate theoretical perspectives and their contributions to understanding the geographical manifestations of politics in everyday life, including topics such as socio-spatial inequalities, the outcomes of social policies.
- Critically engage with a range of examples of in/equality, in/justice and claims-making practices (to citizenship and/or activism) and the complexities inherent in these.
- Demonstrate the ability to synthesise multiple theoretical/conceptual approaches and link these to grounded examples and everyday experience.
- Relate contemporary debates and current affairs to theoretical approaches.
- Develop reasoned arguments and present these, both verbally and in written form, drawing upon appropriate theoretical materials and evidence.

**Outline Contents**

- Happiness as justice; Power, politics and policy; Theories and practice of citizenship
- Scales & encounters

**Delivery Methods**

| Lectures (28hrs); Seminars (2hrs); Labs (1hr) |

**Learning Hours**

| Scheduled: 31hrs; Independent: 167.5hrs |

**Assessment**

| 1.5hr Exam (50%); 6-min Audio/Visual Media Piece (50%) |

**Feedback**

Verbal feedback will be given in seminars and labs. Written feedback will be given on the media piece. Students can also receive feedback on performance in exams by arranging a meeting with their Personal Tutor at the start of the following Semester. Students are encouraged to seek feedback at every opportunity.

**Staffing**

Dr Luke Temple, Dr Dan Hammett
GEO383 Urban Transformations

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**Description**

From the industrial-era modern cities of the Global North such as Manchester and Chicago to the fragmented, sprawling mega-cities of the contemporary Global South such as Lagos and Delhi, urban theorists have sought to understand the interplay of power, everyday practice, and social, political, economic, and cultural processes that both transform and are transformed by urban space. Pulling together critical social science and humanities-informed perspectives, the module draws from interdisciplinary theory and research to engage with urban transformations in both the Global North and the Global South. Topics may include transformations in urban theory, urban uprisings, urban infrastructure, and the role of film and literature in documenting and anticipating urban change.

**Aims**

- To use interdisciplinary theoretical perspectives to critically examine urbanisation and urban change in the Global North and Global South.
- To explore the social, political, economic, and cultural context of urban transformations, and how such transformations reshape this context.
- To develop students ability to undertake critical and qualitative geographic analysis.

**Learning Outcomes**

By the end of the module, a student will be able to demonstrate:

- The ability to evaluate theoretical perspectives on urbanisation, urbanism, and urban change and discuss their relevance to the Global North and Global South.
- The ability to participate in debates about the dynamic, co-consultative relationship of urban space and its social, political, economic, and cultural milieu.
- The ability to understand and critically discuss key moments of urban transformation in varied temporal and geographic contexts.
- Skills in critical and qualitative geographic analysis through writing and presentation.

**Outline Contents**

- Representing the urban: cities in films and literature
- Urban commodification and uprisings: global gentrifications and urban insurgencies
- Difference and power in the city: sexuality and segregation
- The material city: urban infrastructure and the smart city

**Delivery Methods**

Lectures (10hrs); Seminars (8hrs)

**Learning Hours**

Scheduled: 18hrs; Independent: 182hrs

**Assessment**

Essay Proposal (formative); 3,300-word Essay (86%); Group PechaKucha Presentation (15%)

**Feedback**

Verbal feedback will be given throughout the module. Written feedback will be given on all assessments. Students are encouraged to seek feedback at every opportunity.

**Staffing**

Dr Eric Olund, Dr Miguel Kanai, Prof David Robinson
GEO384 Critical Ecologies

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**Description**

This module explores the critical, contested and controversial debates about environmental and ecological issues. Using a range of examples of research undertaken by staff in the department from the Global North and Global South this module develops a critical geographical approach to understanding environmental controversies. Examples will be drawn from a range of issues including agriculture, water, energy, food, climate change and housing.

**Aims**

- To familiarise students with key critical geographical approaches to interrogating environmental and ecological issues.
- To illustrate how these approaches can be applied to a variety of case studies and examples.
- To enable understanding of the different ways in which society-environment issues are always complex, geographical, political and social.

**Learning Outcomes**

By the end of the module, a student will be able to demonstrate:

- The ability to articulate why environmental and ecological issues are complex social processes.
- The knowledge and skill to interrogate and unpack how environmental and ecological issues are constructed.
- The ability to apply these approaches in identifying potential solutions and ways forward to contemporary environmental challenges.

**Outline Contents**

- The lectures will explore the following as themes through which to understand human-environment relations.
  - political ecology
  - value
  - social practices
  - emotions
  - activism
  - comfort

**Delivery Methods**

Lectures (28hrs); Seminars (2hrs); Field Work (8hrs)

**Learning Hours**

Scheduled: 38hrs; Independent: 160hrs

**Assessment**

2hr Exam (66%); 1,500-word Fieldwork Report (34%)

**Feedback**

Verbal feedback will be given during field work. Written feedback will be given on the report. Students can also receive feedback on performance in exams by arranging a meeting with their Personal Tutor at the start of the following Semester. Students are encouraged to seek feedback at every opportunity.

**Staffing**

Prof. Jenny Pickerill, Dr Megan Blake
GEO386 Global South Field Class (Uganda)

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Description
This module provides students with the opportunity to undertake a research-led module allowing them to develop and apply critical thinking and research skills in relation to understanding the geographies of the global south. The module develops research skills, understandings of theories of development and context-specific knowledge through lectures and practical experience during fieldwork projects. Fieldwork experience ensures student develop enhanced understandings of grass-roots development issues, and the interactions between local development challenges and international discourses and practices of development. Students will develop transferable skills in teamwork, research design and implementation, critical thinking and communication.

Aims
- To provide students with substantive knowledge and understanding of geographies of development (with emphasis placed on grass-roots perspectives).
- Enhance their transferable skills through in-depth, high quality field research in a developing country.

Learning Outcomes
By the end of the module, a student will be able to demonstrate:
- A clear knowledge and understanding of contemporary issues and debates in development geographies.
- An understanding of the importance of bottom-up, grassroots understandings of contemporary development issues.
- Both generic and more specific development-research focused fieldwork skills.
- Transferable skills including teamwork, communication, critical thinking and organisational attributes.

Outline Contents
- Critical development theories and approaches.
- Linking development theory to development research and practice.
- Understanding the local development context:
- Doing development research: working in impoverished communities; urban history and development;
- markets, economics and livelihoods; partnering with CSOs and the WASH sector.

Delivery Methods
Lectures (12hrs); Fieldwork (72hrs)

Learning Hours
Scheduled: 84hrs; Independent: 116hrs

Assessment
3,000-word Report (75%); 1,000-word Essay (25%)

Feedback
Students will receive feedback frequently during field work. Written feedback will be given on all assessment. Students are encouraged to seek feedback at every opportunity.

Staffing
Dr Dan Hammett, Dr Matt Watson

Additional Costs
All students on all courses will be required to pay the full cost of attending the field class. Provisional cost: £1250 per person*

Notes
Please note, for field trips to run we require a minimum number of students to sign up for these modules. This varies depending on the specifics of individual field trips. If this number is not reached the field trip will be cancelled.
GEO387 Geographies of Consumption

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**Description**
The ways in which we buy and use stuff and services are inextricable from the shaping of both our everyday lives and of contemporary societies. From constructions of identity and models of human well-being to issues of social equality and environmental sustainability, debates around consumption illuminate critical perspectives on contemporary societies and cultures. This module explores key contemporary geographical perspectives on consumption, linking critical insights and theoretical perspectives to our own practices and experiences.

**Aims**
- Introduce students to some of the key geographical debates in consumption.
- To encourage students to engage with this research in a critical manner.
- To enable students to apply geographical understandings of consumption to real world debate and issues.

**Learning Outcomes**
By the end of the module, a student will be able to demonstrate:
- A sound critical awareness of the different traditions of research in geographies of consumption.
- Abilities in applying geographical understandings of consumption to real world debates and issues.

**Outline Contents**
- Introducing Geographies of Consumption
- Locating Consumption
- Culture and Economy
- Commodity Chains and related approaches
- What Does Stuff Do?
  - Consumption and Identity
  - Material Culture and related approaches
  - Ordinary Consumption and Theories of Practice
- So What?
  - Consumer Ethics
  - Consumption, citizenship and the city.

**Delivery Methods**
- Lectures (20hrs); Seminars (8hrs);

**Learning Hours**
- Scheduled: 28hrs; Independent: 172hrs

**Assessment**
- 4,000-word Essay (100%)

**Feedback**
- Verbal feedback is given during seminars and surgeries. Written feedback is given on the essay. Students are encouraged to seek feedback at every opportunity.

**Staffing**
- Dr Matt Watson, Prof Peter Jackson
GEO388 Glacial Environments

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**Description**
This research-led module will examine glacial environments in their broadest sense including both their contemporary and former states. Typically, the module will contain four sections including: Glaciology (processes and phenomena of current glaciers); Palaeoglaciology (reconstructions of former glaciers); Periglacial environments (cold region processes often close to glacierised regions); Specialist guest research contributions (lectures/seminars on topical cryospheric research).

**Aims**
- To gain an understanding of cold-region environments with a focus on glaciology and geomorphology.
- To recognise the role of research in advancing understanding of the topic and to appreciate how consideration of both past and present environments and processes assists in this.
- To experience selected aspects of the research frontier in cryospheric science.

**Learning Outcomes**
- By the end of the module, a student will be able to demonstrate:
  - Knowledge of typical processes, phenomena and landforms in cold-region environments.
  - Research-level understanding of selected controversies and competing theories.

**Outline Contents**
- Lectures designed to address the above aims.
- A practical at the end of each of the three sections to consolidate knowledge

**Delivery Methods**
Lectures (25hrs), Practicals (6hrs)

**Learning Hours**
Scheduled: 31hrs; Independent: 166hrs

**Assessment**
3hr Exam (100%)

**Feedback**
Feedback will be given throughout the course when needed. Students can also receive feedback on performance in exams by arranging a meeting with their Personal Tutor at the start of the following Semester. Students are encouraged to seek feedback at every opportunity.

**Staffing**
Dr Stephen Livingstone, Prof Mark Bateman, Prof Chris Clark
GEO390 Professional Skills for Environmental Science

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**Description**

Environmental science graduates require an appreciation of the needs of professional statutory and regulatory bodies (PSRBs). Employers appreciate the study and research skills developed at university, but want graduates that understand the tools in use by environmental science practitioners. This module describes those tools and guides students through the production of their own environmental consultancy report. The module uses lectures, seminars, problem solving sessions, and independent learning to provide professional skills/knowledge. These skills are applied to field visits and laboratory analyses with particular emphasis given to risk assessment, environmental impact assessment, environmental management and field skills.

**Aims**

- Provide students with an awareness of the skills required for environmental practise within the UK and EU.
- Provide experience in project design and execution relevant to competitive tendering for consultancy work in the environmental sector.
- Enable students to produce a high quality, competitive, consultancy style report.

**Learning Outcomes**

By the end of the module, a student will be able to:

- Identify the key practitioner skills for careers in environmental science, including project design, environmental management and risk assessment.
- Develop skills for responding to competitive tenders.
- Demonstrate competence in designing and executing a consultancy style project within a short time frame.
- Develop skills in the application of field and laboratory analysis techniques for collecting data and apply this knowledge in the production of environmental consultancy type reports.

**Outline Contents**

- Comparison between consultancy and academia
- Preparation of consultancy reports – guidelines and style
- Case studies: Field and desk studies of Impact of mine water pollution & assessing the level of remediation of river water.
- Opportunities for employment – what is it like to work in ... a regulatory agency, consultancy, industry. Invited guest lecturers from a diversity of areas.
- How do I get there: identifying skills and preparing a CV for targeted jobs

**Delivery Methods**

| Lectures (5hrs); Seminars (4hrs); Problem Solving (12hrs); Labs (9hrs); Field Work (8hrs) |

**Learning Hours**

Scheduled: 35hrs; Independent: 165hrs

**Assessment**

2,000-word Essay (80%); 15-min Group Presentation (20%)

**Feedback**

Feedback is given throughout the module. Written feedback is given on all assessment. Students are encouraged to seek feedback at every opportunity.

**Staffing**

Dr Gunnar Mallon, Dr Andrew McGonigle
Level | 3
Credits | 20
Availability | Approved for BSc/MGeogSci Geography; BA Geography; BSc/MEnvSci Environmental Science; BA Geography & Planning
Semester | Autumn

### Description
This module is designed to allow students to put into practise knowledge gained in L1 and L2 Geography and Environmental Science modules. The module will allow students to work within a unique range of dryland environments and undertake work culminating in the design/implementation/production of a research report based primarily on student-led fieldwork. Introductory lecture sessions (involving research project design) will take place in Sheffield prior to fieldwork. The establishment of knowledge on the field-class itself will be approached through enquiry based learning, followed by group/individual field data collection and analysis, and student-centred research presentations. Follow-up work will include laboratory/data analysis, individual student project write-ups, and a final module overview.

### Aims
- Provide an introduction to the nature of dryland environments and the processes that shape them, including human interactions.
- Provide direct experience of working in and on dryland environments.
- Provide advanced instruction in project design, implementation and presentation at both a group and individual level.

### Learning Outcomes
By the end of the module, a student will be able to demonstrate:
- Knowledge of the physical characteristics, processes, geomorphology and human environment links in a dryland region.
- The ability to plan and undertake a project to investigate environmental processes in a dryland environment.
- An in-depth understanding of the operation of at least one major environmental process in drylands through fieldwork, date analysis and interpretation through group and individual learning.
- Presentation skills commensurate with the need to communicate detailed research findings.
- Group working skills, involving necessary levels of co-operation, problem-solving and allied team-work approaches.

### Delivery Methods
- Lectures (3hrs); Seminars (14hrs); Lab sessions (3hrs); Fieldwork (90hrs)

### Learning Hours
- Scheduled: 110hrs; Independent: 90hrs

### Assessment
- 3000-word Report (75%); 15-min Group Fieldwork Presentation (25%)

### Feedback
- Feedback is given throughout the module. Written feedback is given on all assessment. Students are encouraged to seek feedback at every opportunity.

### Staffing

### Additional Costs
- All students on all courses will be required to pay the full cost of attending the field class. Provisional cost: £1,500 per person*

### Notes
Please note, for field trips to run we require a minimum number of students to sign up for these modules. This varies depending on the specifics of individual field trips. If this number is not reached the field trip will be cancelled.
Level 3
Credits 20
Availability Approved for BSc/MGeogSci Geography; BA Geography; BSc/MEnvSci Environmental Science; BA Geography & Planning
Semester Autumn

Description
This course examines the historical, social, cultural and political development of a global city, and the wide-ranging implications this has had for our understanding of twentieth century-urbanism. Major contextual themes for approaching the city will be presented before travel, such as the city practice and material culture; identity and difference, political activism. The course will involve a field class in a global city, which will require students to undertake designated field excursions reflecting the presented themes and orienting students to the city. The fieldwork will involve the use of a range of qualitative research techniques and interpretive methods and will build on the students’ own areas of interest. Upon return, contact hours will focus on the assessments.

Aims
- Critically examine the historical, social, cultural and political development of a global city and gain an understanding of several contemporary themes in that context.
- Develop qualitative techniques and interpretative methods through the completion of a variety of fieldwork activities.

Learning Outcomes
By the end of the module, a student will be able to demonstrate:
- A critical awareness of the of a global city and its relationship to contemporary themes;
- An ability to conduct field research on contemporary and/or historical urban themes in a global city;
- A range of qualitative fieldwork techniques and interpretative methods.

Delivery Methods
Lectures (14hrs); Tutorials (2hrs); Fieldwork (60hrs)

Learning Hours
Scheduled: 76hrs; Independent: 124hrs

Assessment
3500-word Research Project (85%); 10-min Individual Research Proposal Presentation (15%)

Feedback
Feedback is given throughout the module. Written feedback is given on all assessment. Students are encouraged to seek feedback at every opportunity.

Staffing

Additional Costs
All students on all courses will be required to pay the full cost of attending the field class. Provisional cost: £1,050 plus self-booking of flights per person.

Notes
Please note, for field trips to run we require a minimum number of students to sign up for these modules. This varies depending on the specifics of individual field trips. If this number is not reached the field trip will be cancelled.
GEO396 Coastal Processes

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<tr>
<td>Credits</td>
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<td>Availability</td>
<td>Approved for BSc/MGeogSci Geography; BA/MGeog Geography; BSc/MEnvSci Environmental Science; BA Geography &amp; Planning</td>
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<td>Semester</td>
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**Description**
This module will explore the processes occurring within coastal environments, covering a range of oceanographic, meteorological, geological, geomorphological, biogeochemical and biological topics, including aspects of societal interaction with these environments. The topics covered will vary depending on the teaching team; the environments studied may include estuaries, dunes, cliffs, near-shore environments and fjords, among others. The aim of the module is to give students an appreciation of the variety and multi-disciplinarity of the physical geography of the coastal margins. An integral element of this module will be a weekend field component.

**Aims**
- To give students an appreciation of the physical geography of coastal margins;
- To give the student the ability to combine disciplines to understand processes, and their implications, within coastal environments;
- To explore the variety of different coastal environments found in different regions of the globe.

**Learning Outcomes**
By the end of the module, a student will be able to:
- Understand how the coastal environment requires multi-disciplinary interpretation;
- Competently handle, statistically manipulate and interpret data in the real world;
- Interpret and measure a coastal environment using field and laboratory work;
- Contrast coastal environments from different parts of the world;
- Consider human interactions with the coastal environment.

**Outline Contents**
- Tides, waves and coastal circulation
- Estuaries
- Field day on Lincolnshire coast
- Coastal landforms
- Offshore renewable energy
- Fjords

**Delivery Methods**
Lectures (18hrs); Seminars (4hrs); Problem Solving (4hrs); Lab Sessions (4hrs); Fieldwork (8hrs)

**Learning Hours**
Scheduled: 38hrs; Independent Study:160 hrs

**Assessment**
2hr Exam (67%); 1,500-word Report (33%)

**Feedback**
Feedback is given throughout the module. Written feedback is given on the report. Students can also receive feedback on performance in exams by arranging a meeting with their Personal Tutor at the start of the following Semester. Students are encouraged to seek feedback at every opportunity. Students are encouraged to seek feedback at every opportunity.

**Staffing**
Prof. Mark Bateman, Dr Andrew Sole, Prof Grant Bigg
GEO397 Dangerous and Dynamic Earth

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<td>Credits</td>
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<td>Availability</td>
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<td>Semester</td>
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**Description**
Planet Earth is both a dangerous and dynamic place to be. This module will explore the dynamism of the planet as driven by Plate Tectonics, which provides the most fundamental explanation for the development of topographic landforms. This in turn leads to a variety of volcanic and meteorological processes, in addition to earthquakes, which pose significant dangers to human beings. The module will therefore provide an overview of these dynamical processes in physical geography and the resulting implications in terms of geomorphology, in addition to covering a range of the resulting hazards, with reference to specific case studies.

**Aims**
- To provide an understanding of how plate tectonics acts as a driver for the development of landforms across the globe.
- To provide insights into how the above processes give rise to a range of hazards, covering the physical processes involved in the hazard genesis.
- To provide an overview, using case studies, of a number of such hazards, to document their impacts upon human beings and the environment.

**Learning Outcomes**
By the end of the module, a student will be able to:
- Articulate the means whereby plate tectonics exerts process control in driving landform development across the globe.
- Describe and discuss the specific means by which the above processes result in the generation of phenomena which could be potentially harmful to human beings.
- Detail case study examples where such hazards have had impacts on human beings and the environment.

**Delivery Methods**
Lectures (24hrs); Seminars (6hrs)

**Learning Hours**
Scheduled: 30hrs; Independent Study: 168 hrs

**Assessment**
2hr Exam (75%); 20-min Group Presentation (25%)

**Feedback**
Feedback is given throughout the module. Written feedback is given on all assessment. Students are encouraged to seek feedback at every opportunity.

**Staffing**
Dr Andrew McGonigle, Prof Ed Rhodes
GEO398 International Field Class (Galapagos)

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<td>Availability</td>
<td>Approved for BSc/MEnvSci Environmental Science</td>
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**Description**
The International Field Class provides students with practical experience of undertaking field research in the global south. The module covers training in field investigations focusing on environmental techniques to provide solutions to anthropogenic problems, including provision of drinking and wastewater, effects of eco-tourism in the environment and conservation.

**Aims**
- Provide students with experience of undertaking research and implementing research methods in a 'developing country' field context.
- Develop students' ability to analyse and synthesise environmental information using a range of physical research methods.
- Develop students' professional skills by working with other practitioners, engaging with communities and local authorities in a developing country context.

**Learning Outcomes**
By the end of the module, a student will be able to:
- Apply research design for developing field investigations in an international location.
- Use sophisticated methods to integrate information in a developing context: positionality/reflexivity; local vs. expert knowledge; role of language and translation.
- Summarise in a critical manner the role of research methods in informing development practice.
- Select a range of methodologies for field work in a developing country; and critically evaluate and appraise research methodologies.
- Present and deliver oral presentations and written material to wider audiences, focused on non-technical audience.

**Delivery Methods**
- Lectures (12hrs); Tutorials (2hrs); Laboratory Sessions (9hrs); Fieldwork (60hrs)

**Learning Hours**
- Scheduled: 83hrs; Independent Study: 117hrs

**Assessment**
- 3,000-word Essay (90%); 15-min Group Presentation (10%)

**Feedback**
- Feedback is given throughout the module. Written feedback is given on all assessment. Students are encouraged to seek feedback at every opportunity.

**Staffing**
- Dr Gunnar Mallon

**Additional Costs**
- All students on all courses will be required to pay the full cost of attending the field class. Provisional cost: £2,500 per person.

**Notes**
- Please note, for field trips to run we require a minimum number of students to sign up for these modules. This varies depending on the specifics of individual field trips. If this number is not reached the field trip will be cancelled.
GEO399 Independent Extended Essay

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Description
This module requires the student to prepare, research and write up a piece of work based on previous studies on a geographical topic. The student will choose a topic and will be required to produce an extended essay on that topic, synthesising and developing a critique on the existing literature available in the Sheffield libraries.

Aims
- To give students experience in carrying out the research involved in literature-based survey projects.
- To enable students to develop and demonstrate the skills of bibliographic search and of argument structuring gained at Levels 1 and 2 of their degree programme.

Learning Outcomes
By the end of the module, a student will be able to demonstrate:
- The ability to conceptualise a clear research question arising from a key geographic debate.
- The ability to design and carry out a programme of literature-based research, involving the collation and analysis of academic literature, appropriate to answering the question under investigation.
- The ability to critically analyse and review literature competently and appropriately.
- The ability to write a substantial essay, which summarises and evaluates relevant literature, arguments and debates.

Outline Contents
- The majority of the work on this module will be independent study by the student, identifying, researching and writing up their chosen topic. Help and advice will be provided as follows:
  - Introductory lecture.
  - Group tutorials on what makes a good research topic and essay.
  - Students will be encouraged to seek further supervision and feedback on their progress.

Delivery Methods
Lecture (1hr); Seminar (1hr); Tutorial (1hr)

Learning Hours
Scheduled: 3hrs; Independent: 197hrs

Assessment
500-word Proposal (10%); 4,000-word Essay (90%)

Feedback
Verbal feedback is given in staff consultations. Written feedback is given on all assessments. Students are encouraged to seek feedback at every opportunity.

Staffing
Dr Luke Temple
**GEO3000 Urban Exploration (Liverpool)**

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**Description**

This module offers students a chance to explore urban geographies from new angles, which emphasise creative, experimental and subversive ways of seeing and doing geography. Through readings and seminars, students will be exposed to experimental fieldwork such as: Bradley Garrett’s Explore Everything (Verso, 2012); Georges Perec’s Attempt to Exhaust a Place in Paris (1975, English translation 2012); place and psycho-geographical writing by authors such as Iain Sinclair, Karl Whitney and Joanna Walsh; playful fieldwork associated with the Geography Collective and Keri Smith (e.g. Mission:Explore, 2010); and curiosity-led fieldwork (by Richard Phillips and others). This module will include a 5 fieldclass in Liverpool, during which time students will conduct individual fieldwork projects, whilst also engaging with fieldwork collectively.

**Aims**

- To develop breadth of awareness and depth of appreciation of creative, experimental and subversive ways of seeing and conducting research in human and specifically urban geography.
- To develop an individual research project, while participating in a collective fieldwork experience.

**Learning Outcomes**

By the end of the module, a student will be able to demonstrate:

- A deep comprehension of creative, experimental and subversive ways of seeing and doing geography.
- Initiative and independence in devising and conducting research and in conceiving and developing a project.
- Ability to work with others during seminars and fieldwork.

**Outline Contents**

- Four seminars, conducted in tutorial-sized group, will revolve around discussions of reading and attempts to put experimental methods into practice, while reflecting critically upon them. Students will be expected to conduct reading in advance of seminars.
- Follow-on seminar: student presentations of interim findings.

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<tr>
<th>Delivery Methods</th>
<th>Seminars (12hrs): Field Trip (50hrs)</th>
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<tbody>
<tr>
<td>Learning Hours</td>
<td>Scheduled: 62hrs; Independent: 138hrs</td>
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<tr>
<td>Assessment</td>
<td>3,000-word Essay (75%); 10-min Individual Presentation (25%)</td>
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**Feedback**

Verbal feedback will be given during field work and seminars. Written feedback will be given on the essay. Students are encouraged to seek feedback at every opportunity.

**Staffing**

Prof. Richard Phillips, Dr Miguel Kanai

**Additional Costs**

All students on all courses will be required to pay the full cost of attending the field class. Provisional cost: £200 per person plus subsistence and travel.

**Notes**

Please note, for field trips to run we require a minimum number of students to sign up for these modules. This varies depending on the specifics of individual field trips. If this number is not reached the field trip will be cancelled.
GEO3001 Philosophy, Aesthetics and the City

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**Description**
Place, in all its forms, has long inspired radically new thought and perception. This module will explore the work of several historical and contemporary philosophers and artists in situ—why did their work arise where it did? What difference does that place (or places) make to their thought and expression? This module will guide students through the intricate relationship between philosophy, art (across various media) and geography with emphasis on specific types of place as sites of intellectual thought and creative practice. These may range from the large scale such as nation and heimat, to the urban scale, to the intimate such as the village and even the body. Core themes will include identity, place and displacement, historical imaginary and the built environment, and creativity and social/spatial transformation.

**Aims**
- To explore the relationship between philosophy, art and geography within the city as a site of intellectual thought and creative practice.

**Learning Outcomes**
By the end of the module, a student will be able to:
- Interpret and analyse a range of textual and non-textual material (film, theatre, art, architecture) in order to deepen their understanding of the city as a site of the critical and creative imagination.
- Critically assess the relationship of philosophical and artistic productions to the places in which they were produced and/or influenced their creators.

**Outline Contents**
- Five major thinkers and/or sites will be addressed over the course of the module in five pairs of lectures and seminars. Lectures will focus on the thinker/artist and his/her context, and seminars will consider one or two of their works in depth.
- Thinkers/writers/artists/filmmakers may include, but are not limited to: Walter Benjamin (Paris, Marseille, Berlin), Michael Haneke (Paris), James Baldwin (New York), Lorraine Hansberry (Chicago and New York), W.E.B DuBois (Chicago), Agnes Varda (Paris), Franz Fanon (Algiers, Paris, Tunis), Diego Rivera (Mexico City, Moscow, Paris), Maryse Conde (Guadeloupe, New York, Paris), Orhan Pamuk (Istanbul).

**Delivery Methods**
- Lectures (10hrs); Seminars (10hrs)

**Learning Hours**
- Scheduled: 20hrs; Independent: 180hrs

**Assessment**
- 4,000-word Essay (100%)

**Feedback**
Verbal feedback will be given in seminars. Written feedback will be given on the essay. Students are encouraged to seek feedback at every opportunity.

**Staffing**
- Dr Eric Olund, Dr Jessica Dubow
GEO3002 Advanced Geospatial Analysis

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<td>Availability</td>
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<td>Semester</td>
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**Description**

This module will give students the opportunity to extend their knowledge of geospatial systems and software through detailed instruction and targeted case studies. The course will be taught in three parts, and will involve a mixture of lab-work, lectures and fieldwork. The three key themes are: (a) Digital Terrain Models (DTM) from Unmanned Aerial Vehicles (UAV) and Structure from Motion (SfM) Photogrammetry, (b) Ice velocity from cross-correlation of optical satellite images in the MATLAB software environment (c) Mapping of glacial bedforms. Lab sessions will enhance software, coding and quantitative skills. Where possible, lab-work sessions will include student-led components and formative peer-peer assessment elements which will provide the opportunity to develop a range of generic analytical skills.

**Aims**

- To enhance training in key geospatial skills and geospatial analysis approaches through use of targeted case studies and use of new technologies.
- To develop interpretation and analytical skills through defined periods of project work and fieldwork.
- To allow students to develop appreciation of the potential applications of available geospatial technology to key geographical concepts and issues.

**Learning Outcomes**

By the end of the module, a student will be able to:

- Identify and use geospatial software and systems.
- Recognise and carry out the key stages in the effective use and implementation of geospatial technologies and software.
- Discuss and analyse geospatial methods and techniques within a geographical context.

**Outline Contents**

- The course will be underpinned by instruction in three key case studies:
- UAV/UAS systems and SfM, used to derive DTM products and associated landscape monitoring scenarios. This will involve fieldwork at Bradfield and instruction/Lab-work in Sheffield.
- Lidar systems, and InSAR processing, DSM/DTM production, and use in mapping and geomorphological monitoring. This will involve instruction and lab-work in Sheffield
- Field and laboratory spectroradiometry. We will use our ASD spectrometers to explore the basic theory of surface reflectance/absorption/transmission for natural surfaces and concept of Calibration/Validation of Geospatial Models. This will involve instruction and lab-work in Sheffield

**Delivery Methods**

Lectures (6hrs); Labs (12hrs); Fieldwork (8hrs)

**Learning Hours**

Scheduled: 26hrs; Independent: 174hrs

**Assessment**

4,000-word Report (100%)

**Feedback**

Verbal feedback will be given during field work and labs. Written feedback will be given on the [tbc]. Students are encouraged to seek feedback at every opportunity.

**Staffing**

Dr Robert Bryant, Dr Andrew Sole, Dr Stephen Livingstone

GEO3857 / GEO4117 MATLAB coding for Geoscience

GEO3002 Advanced Geospatial Analysis
GEO408 Research Design in Physical Geography and Environmental Science

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<tr>
<td>Credits</td>
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<tr>
<td>Availability</td>
<td>Core for MGeogSci Geography; MEnvSci Environmental Science (Geography route). Please note this module is co-taught with GEO6602.</td>
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Description
This module aims to provide an introduction to conducting research in physical geography and environmental science. The objectives are: (a) to provide an understanding of the sources of research problems and how specific student research topics fit into broader agendas; (b) to provide an understanding of "scientific method" and its different components, including the roles of fieldwork, laboratory experiments and modelling; (c) to provide an introduction to planning a research project, including literature search, fieldwork, laboratory work, data analysis, error analysis and written and graphical presentation; (d) to prepare students for writing a research proposal. These objectives will be met through a mix of lectures, student investigation and presentation of academic staff research, and preparation of a draft proposal.

Aims
This unit aims to introduce and develop skills in the development of research topics, the scientific method, the nature of research in the environmental sciences, the planning of projects and the writing of research proposals.

Learning Outcomes
By the end of the module, a student will be able to:
- develop research topics in environmental analysis, include an understanding of how the scientific method is employed to develop a targeted research proposal;
- review and report on research methodology of an academic member of staff;
- plan a research project;
- prepare a written research proposal.

Outline Contents
- Scientific method
- Research skills
- Example researcher profiling
- Presentation preparation
- Proposal preparation

Deliver Methods
- Lectures (10hrs), Seminars (4hrs), Tutorials (10hrs)

Learning Hours
- Scheduled: 24hrs; Independent: 126hrs

Assessment
- 1,500-word Researcher Profile Report (50%), 2,200-word Research Proposal (50%)

Feedback
- Verbal feedback is given during seminars and tutorials. Written feedback is given on all assessments. Students are encouraged to seek feedback at every opportunity.

Staffing
- Prof. Grant Bigg
Level | 4  
Credits | 15  
Availability | Core for MGeogSci Geography; MEnvSci Environmental Science (Geography route. Please note this module is co-taught with GEO6612).  
Semester | Autumn  

Description
This module provides students with an insight into current issues in either Geography or Environmental Science. This is achieved through the medium of attendance at research presentations by experts in appropriate fields and discussion of cutting edge research topics and papers.

Aims
- To provide students with an insight into current issues in Geography or Environmental Science through the medium of research presentations and discussion.
- To foster and develop skills in the acquisition, processing and presentation of information.
- To develop students’ ability to synthesise oral information.
- To develop skills in written and oral communication.

Learning Outcomes
By the end of the module, a student will be able to demonstrate:
- A critical understanding of a range of current problems in Geography or Environmental Science.
- An ability to synthesise the main points and wider implications of an oral presentation and discussion that they have attended.
- An ability to research and distil the principal components of a geographical or scientific argument.
- An ability to present a geographical or scientific problem to his/her peers.

Outline Contents
- The content of this module will vary from week to week, depending on the topics the Departmental Physical Geography seminars and themes arising in weekly media outlets related to environmental issues.

Delivery Methods
Seminars (13hrs), Problem Solving/Example Classes (26hrs)

Learning Hours
Scheduled: 39hrs; Independent: 111hrs

Assessment
1,500-word Essay (67%), 15-min Individual Presentation (33%)

Feedback
Feedback will be given throughout the module. Written feedback will be given on all assessment. Students are encouraged to seek feedback at every opportunity.

Staffing
Dr Felix Ng, Prof Mark Bateman
GEO413 Research Project

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<tr>
<td>Credits</td>
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<tr>
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<td>Semester</td>
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Description
Students will undertake an original piece of research on a topic of their choice.

Aims
- To provide students with the opportunity to carry out an independent investigation in one of the Department’s research clusters.
- To develop skills in generating and testing research questions or hypotheses and in the design of appropriate methodologies and/or experiments.
- To provide training in a range of methodological, laboratory, statistical, computing or field techniques appropriate to the project.
- To develop skills in both scientific writing and oral presentation.

Learning Outcomes
By the end of the module, a student will be able to demonstrate:
- Experience of working in a research environment
- The ability to plan and execute research projects
- Proficiency in a range of methodological and technical skills
- The ability to communicate their findings in the form of a written report
- The ability to deliver an oral presentation of their research findings

Delivery Methods
- Tutorials (49 hrs)

Learning Hours
- Scheduled: 49 hrs; Independent: 551 hrs

Assessment
- 10,000-word Research Report (70%), 30-min Individual Presentation (30%)

Feedback
- Verbal feedback will be given in tutorials. Written feedback will be given on all assessment. Students are encouraged to seek feedback at every opportunity.

Staffing
- Prof Ed Rhodes, Dr Manoj Menon
GEO6806 Key Issues in Environment and Development

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**Description**
This module engages critically with the key theoretical debates that shape the environment, society and international development. By looking at current questions in development theory and their relationship to development practice in the context of environmental change, it encourages students to think critically about the ways in which interdisciplinary approaches define issues and problems, and the theoretical viewpoints that inform their actions. The unit is taught primarily through seminars: these structure students’ learning, and provide an environment in which they can develop their skills in researching, presenting and debating arguments drawn from the academic literature on international development.

**Aims**
- To develop students’ understanding of core debates in international development theory and the environment and how these are placed within social and natural sciences more broadly.
- To develop students’ understanding of the role of these debates in informing, and critically engaging with, development practice relating to interactions with the environment.
- To develop students’ ability to analyse and synthesise knowledge.
- To foster students’ responsibility for planning and monitoring their own learning.

**Learning Outcomes**
By the end of the module, a student will be able to demonstrate:
- The ability to analyse and synthesise core debates in international development theory and the environment and how these are placed within social and natural sciences more broadly.
- A sophisticated knowledge and critical understanding of the range of theoretical frameworks which inform understanding of environmental and development problems.
- A sophisticated knowledge and critical understanding of key environment-development issues that operate at different scales (global-grass-roots).

**Outline Contents**
- Environmental Ethics; Environmental History; Received Wisdoms; Political Ecology
- Protected Areas; Institutions and the Commons; Markets and the Environments; Risk
- Celebrity, Environment and Development

**Delivery Methods**
Lectures (10hrs); Seminars (10hrs)

**Learning Hours**
Scheduled: 20hrs; Independent: 130hrs

**Assessment**
1,000-word Policy Brief (30%); 2,500-word Essay (70%)

**Feedback**
Verbal feedback will be given in tutorials. Written feedback will be given on all assessment. Students are encouraged to seek feedback at every opportunity.

**Staffing**
Dr Miguel Kanai, Dr Charis Enns, Dr Shaun Smith
## GEO6807 Understanding Environmental Change

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<th>Level</th>
<th>M</th>
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<tr>
<td>Credits</td>
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<tr>
<td>Availability</td>
<td>Core for MGeogSci Geography; MEnvSci Environmental Science (Geography route)</td>
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<td>Semester</td>
<td>Autumn</td>
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### Description
This module gives students a critical understanding of the science behind historical and recent environmental change in the Global South. The course covers the core debates in environmental change, the science behind these changes, methods for detecting environmental change, and the impacts of these changes. The module is taught through a combination of lectures and seminars. The seminars will structure students' learning, and provide an environment in which they can develop their skills in researching, presenting and debating arguments drawn from the academic literature on environmental change.

### Aims
- To develop students' understanding of core debates in environmental change and how these are placed within social and physical sciences more broadly.
- To develop students' understanding of the role of these debates in informing, and critically engaging with, development practice.
- To develop students' ability to analyse and synthesise knowledge.
- To foster students' responsibility for planning and monitoring their own learning.

### Learning Outcomes
By the end of the module, a student will be able to demonstrate:
- The ability to analyse and synthesise core debates in environmental change and how these are placed within social and natural sciences more broadly.
- A sophisticated knowledge and critical understanding of the range of theoretical frameworks which inform understandings of development problems as they relate to environmental change.

### Outline Contents
- Global soils and threats; Hydrological and ecological change in the Global South
- Climate system and climate change; Developmental Geography

### Delivery Methods
Lectures (10hrs); Seminars (10hrs)

### Learning Hours
Scheduled: 20hrs; Independent: 130hrs

### Assessment
750-word Critical Review (20%); 2,500-word Essay (80%)

### Feedback
Verbal feedback will be given in tutorials. Written feedback will be given on all assessment. Students are encouraged to seek feedback at every opportunity.

### Staffing:
Dr Manoj Menon, Dr Gunnar Mallon
GEO6809 Living with Climate Change

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<tr>
<td>Semester</td>
<td>Spring</td>
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Description
This module aims to engender a detailed understanding of the development of ideas and theories of climate change, integrating the core science behind our understandings of climate change with a critical analysis of how this is interpreted and communicated. This understanding is then applied to consider the challenge of living with climate change in the Global South. The unit is taught through seminars, student-led sessions, and lectures. Lectures introduce and impart factual knowledge while seminars allow discussion and an emphasis on applying key concepts to practical situations. Together these structure students’ learning, and provide an environment in which they can develop their skills in researching, presenting and debating arguments drawn from the wide ranging literature on climatic change.

Aims
- To develop students’ understanding of core debates in climate change and how these are placed within social and physical sciences more broadly
- To develop students’ understanding of the role of these debates in informing, and critically engaging with, development practice
- To develop students’ ability to analyse and synthesise knowledge
- To foster students’ responsibility for planning and monitoring their own learning.

Learning Outcomes
By the end of the module, a student will be able to demonstrate:
- An ability to analyse and synthesise core debates in climate change and how these are placed within social and physical sciences more broadly
- A sophisticated knowledge and critical understanding of the range of theoretical frameworks which inform understandings of development problems as they related to climate change

Outline Contents
- The science behind climate change
- Communication and climate change
- Governance and climate change

Delivery Methods
Lectures (12hrs); Seminars (12hrs)

Learning Hours
Scheduled: 24hrs; Independent: 126hrs

Assessment
2,500-word Essay (80%); 500-word Policy Brief (20%)

Feedback
Verbal feedback will be given in tutorials. Written feedback will be given on all assessment. Students are encouraged to seek feedback at every opportunity.

Staffing
Dr Gunnar Mallon, Dr Anna Krzywoszynska