School of Natural Sciences

Geography

Undergraduate Course Handbook

2020-21
**Academic Year Structure 2020/21**

Please refer to the college calendar at [tcd.ie/calendar/academic-year-structure/](http://tcd.ie/calendar/academic-year-structure/) for up to date information. The below will be updated on release of calendar for 2020/21

**Key Dates: TBC**

- Freshers’/Orientation Week:
- Semester 1 Teaching begins:
- Study/Reading Week:
- Semester 1 Teaching ends:
- Semester 1 Revision Week:
- Semester 1 Assessment Week:
- Scholarship Examinations:
- Semester 2 Teaching begins:
- Study/Reading Week:
- Semester 2 Teaching ends:
- Semester 2 Revision Week:
- Semester 2 Assessment Week:
- Trinity week:

**Formal Assessment weeks 2:**

- Semester 1 examinations
- Semester 2 examinations

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1 It may be necessary to hold some Foundation Scholarship examinations in the preceding week.

2 Please note that the dates of formal assessment weeks may extend to begin earlier or run later – examination schedules may not be finalised at this time.

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**IMPORTANT NOTE:** The details contained in this booklet are subject to change. In the event of any conflict or inconsistency between the General Regulations published in the University Calendar and information contained in this course handbook, the provisions of the General Regulations will prevail.
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1. Welcome from the Head of Geography

‘Geography matters!’ was the start of the Head of Geography’s welcome note in this handbook in 2019. Given the increasing urgency to resolve pressing issues arising from climate change, our globalised society, and often conflicted human-environment relationships, this statement remains a valid and concise summary of what is contained in this handbook. Geography at Trinity College Dublin delivers insights that help us know and understand a dynamic and rapidly changing world. It is a place of intensive and extensive geographical scholarship in Ireland. We teach and research across the discipline from development theory to coastal modelling, and from climate change to the workings of the social economy and we aim to challenge students intellectually, to foster and maintain world-class research and teaching in a supportive and collegial atmosphere. Geography is unique in offering a way of thinking about complex human-environment systems at different scales, from the global to the local, from milliseconds to millennia. It is an integrative subject with an international outlook and openness to interdisciplinary collaboration. It teaches skills and knowledge required by those who make it their ambition to address critical societal challenges.

Our dedicated team of Geography staff, and the programmes we deliver, provide high quality education through research-led teaching. Many Geography staff members are national and world leaders in their respective fields. Our research takes us far beyond the lecture theatre to international conferences, global editorial committees and policymaking think tanks, and our work is published in many formats including journals, books and through internet portals. Much of our research addresses major challenges for contemporary society including international development, environmental change and globalisation, but practically all issues we face have a geographical dimension, whether it is global climate change, regional sea level rise, or local flooding in a river catchment.

This handbook summarises the Geography undergraduate teaching programme in the School of Natural Sciences, and the regulations that are intended to ensure its effective implementation. Also included is a brief introduction to the staff in Geography and an indication of where a Geography degree might lead. Please check the Geography website and associated websites (including that of the School of Natural Sciences) for any updates on the content provided below. I hope that you find the information useful, and that you enjoy your time in Geography.

Prof Iris Moeller, Head of Geography

Geography and the School of Natural Sciences

Geography is part of the School of Natural Sciences (other disciplines in the School are Botany, Geology and Zoology). The School also houses two research centres: The Centre for the Environment and the Centre for Biodiversity and Sustainable Development which was launched by Sir David Attenborough in 2009. Natural Sciences is one of the largest schools in the Faculty of Engineering, Mathematics and Science and conducts research, and delivers teaching, on all aspects of the natural world, from the formation of the earth, the behaviour of the environment, the evolution and ecology of its organisms and its interactions with human society. We are engaged with solving some of the major challenges facing human society through our teaching, research and partnership with industry and policy development both nationally and globally. We currently accommodate ca. 43 academic staff, 30 support staff, 30 postdoctoral research fellows and over 100 graduate research students. We have an annual research income in excess of €4 million and produce an average of 150 publications per year.
The School delivers eight undergraduate and three taught master’s degree programmes in Development Practice, Biodiversity and Conservation and Environmental Science.

### Learning Outcomes

On successful completion of your Geography degree, you will be able to:

- Discuss Geographical theories, concepts, methods and processes.
- Demonstrate a detailed knowledge of one or more specialised areas in Geography by, for example, being able to identify, analyse and resolve problems. Some of this geographical knowledge will be at the current boundaries of research.
- Apply this knowledge and comprehension in a manner that indicates a thorough and informed approach to your work, and have competences typically demonstrated through devising and sustaining arguments and formulating and solving problems.
- Use a number of specialised skills and tools, such as spatial data analysis and statistical techniques, which you can use selectively to address complex problems, or to conduct closely guided research.
- Devise data gathering experiments, and to gather and interpret relevant data to inform independent judgements which include reflection on relevant social, scientific or ethical issues.
- Communicate information, ideas, problems and solutions to both specialist and non-specialist audiences.
- Undertake further study with a high degree of autonomy.

### Graduate Attributes

The Trinity Graduate Attributes represent the qualities, skills and behaviours that you will have the opportunity to develop as a Trinity student over your entire university experience, in other words, not only in the classroom, but also through engagement in co- and extra-curricular activities (such as summer work placements, internships, or volunteering).

The four Trinity Graduate Attributes are:

- To Think Independently
- To Act Responsibly
- To Develop Continuously
- To Communicate Effectively

### Why are the Graduate Attributes important?

The Trinity Graduate Attributes will enhance your personal, professional and intellectual development. They will also help to prepare you for lifelong learning and for the challenges of living and working in an increasingly complex and changing world.

The Graduate Attributes will enhance your employability. Whilst your degree remains fundamental, also being able to demonstrate these Graduate Attributes will help you to differentiate yourself as they encapsulate the kinds of transversal skills and abilities, which employers are looking for.

### How will I develop these Graduate Attributes?

Many of the Graduate Attributes are ‘slow learned’, in other words, you will develop them over the four or five years of your programme of study.

They are embedded in the curriculum and in assessments, for example, through undertaking independent research for your final year project, giving presentations and engaging in group work.
You will also develop them through the co-curricular and extra-curricular activities. If you help to run a club or society you will be improving your leadership skills, or if you play a sport you are building your communication and team-work skills.

2. The Undergraduate Degree Programmes

Geography at Trinity may be studied via one of five routes:


2. A special combined degree (TR029) is also run in Political Science & Geography. During the first three years students take both subjects on an equal basis and then choose at the end of their Junior Sophister year whether to continue studying both (joint honours) or to concentrate on either Political Science or Geography (single honours) in their final Senior Sophister year. Please note that joint honours PSG students cannot undertake a Geography dissertation.

   Additional details on this programme are available in the Political Science and Geography handbook. Further information can be found at [tcd.ie/Political_Science/undergraduate/political-science-geography/handbook/](https://tcd.ie/Political_Science/undergraduate/political-science-geography/handbook/).

3. Geography and Geoscience (TR062). During the first two years students study a common programme but can choose to specialise in Geography in the final two years. (Please see the TR062 handbook for details of this programme). Further information can also be found at [tcd.ie/Science/TR062/](https://tcd.ie/Science/TR062/)

4. The Single Honours Moderatorship in Natural Science (NS TR071), concentrating solely on Geography in the final two years. This programme is no longer admitting new students.

5. The Two Subject Moderatorship (TSM) in which Geography is studied with a second subject for three or four years. This programme is no longer admitting new students.
   a) TSM Pattern A: you take Geography and your second subject in fourth year.
   b) TSM Pattern B: you specialise in either Geography or your second subject in fourth year.

   Pattern B students will undertake an undergraduate dissertation.

   In certain circumstances, a special TSM pathway (Pattern C) is available to students who spend their third year abroad on ERASMUS exchange to study Geography before returning for their fourth year of Geography in Trinity. Further details of these exchange possibilities are available from the Study Abroad Co-ordinator for Geography (see ERASMUS/Study abroad section below).

   The choice of TSM pathway is made towards the end of the third year of study (Junior Sophister).

Joint Honours, TSM and Political Science & Geography students may apply to transfer to the Single Honours Geography Moderatorship in Natural Science (NS) before starting their third year. To be eligible for transfer, the student must pass their Senior Fresh examination in June and obtain at least a second class (second division) (II.2) grade in Geography. Transfer applications must be made to the Admissions Office via the student’s Tutor.

Foundation Scholarship Examination in Geography

Foundation Scholarship for TSM/JH* and Geography and Political Science:

The Scholarship exam for Geography in TSM* and Geography and Political Science consists of two examination papers. For Paper 1, candidates are examined in their course work up to the end of the Hilary Term of their Junior Freshman year together with such additional reading as may be required by the Head of Geography. Paper 2 is a general essay paper. Paper 1 will be a 3 hour exam accounting for 66.66 per cent of the subject mark. Paper 2 will be a 1.5 hour exam, accounting for 33.33 per cent of
the subject’s mark. The Foundation Scholarship examination papers in Geography are constructed in such a way as to test the depth and breadth of the candidates’ overall understanding of the discipline. The first two-hour paper is specifically designed to allow candidates to demonstrate a superior appreciation of the course-based material of their Junior Freshman programme with an additional list of advanced readings being provided to candidates by the lecturers involved.

In the second two-hour paper candidates will have an opportunity to demonstrate their ability to synthesise knowledge and appraise, critically, the broader issues, thus allowing them to integrate disparate elements in the intellectual discourses within the discipline of Geography. In this regard, candidates are required to write two essays selected from an unseen list of broadly-themed topics within Geography which will change from year to year.

For further information, regulations and guidelines see:

2.  College Calendar Part 1 (Foundation and Non-Foundation Scholarships)

or contact Geography's Foundation Scholarship Coordinator, Dr Philip Lawton lawtonp@tcd.ie

*From 2021 onwards, this will be applied to Joint Honours program.

Foundation Scholarship for Geography and Geoscience:

Candidates are examined in three 3-hour papers on subject matter covered in the core geography and geoscience modules up until the end of Michaelmas term of the Senior Freshman year, with additional material covering general topics drawn from the broader fields of geography and geoscience. All papers carry equal marks. Further details of the papers are given in the TR062 foundation scholarship information leaflet.

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**Erasmus/Study Abroad**

Students may study abroad in their Junior Sophister year.

All students wishing to study abroad must agree a Teaching Contract with Geography’s Study Abroad Co-ordinator, Dr Mark Hennessy – mhnnessy@tcd.ie

Students to be nominated for an Erasmus exchange and mobility grant will be selected on the basis of their overall Junior Fresh grade and a 600-word statement relating to their suitability for an exchange, to be submitted to the Study Abroad Coordinator by the last day of Michaelmas term in their Senior Fresh year.

For details of the Department’s exchange partnerships see the Geography website – Erasmus, or at https://www.tcd.ie/study/study-abroad/outbound/index.php

**Modules and ECTS for Erasmus/Study Abroad students**

Ensure you have completed your module choice form correctly. Students who are away for one semester only, must ensure that their module information and ECTS are correct for Trinity modules at the usual time.

1. For a full year abroad, email the Geography Office to ensure you are exempted from any compulsory modules.
2. For a student away for either Semester 1 or Semester 2 only, check your my.tcd.ie student account. Contact the Geography Office if your module codes or ECTS for your home semester are incorrect.

This information generates your end of year Coursework and Examination requirements.
Regulations for dissertation proposal - Erasmus/Study Abroad students

As part of their Geography degree, Natural Science students or Two Subject Moderatorship Pattern B and Pattern C students continuing to take Geography in their Senior Sophister Year are required to undertake an undergraduate dissertation (GGU44930).

The preparation and dissertation proposal are usually undertaken in GGU33928 (Advanced Research Methods 1), but it is not possible for TCD students on an Erasmus programme abroad in their Junior Sophister Year to undertake this module. However, the dissertation is still a requirement for their Senior Sophister mark so they are still required to prepare a dissertation proposal and to have that approved by their potential supervisor in consultation with the coordinator for the Advanced Research Methods module Professor Pádraig Carmody – carmodyp@tcd.ie

Prior to departure on their Erasmus year the students should contact the GGU33928 coordinator to arrange for submission of the dissertation proposal while they are away. The dissertation proposal is prepared in portions and submitted during the course of GGU33928. TCD Erasmus students should submit these portions for feedback at the same time as others taking the Advanced Research Methods. Once the final proposal has been prepared and accepted the student will then proceed to prepare the dissertation.
3. Course Structure and Module Outlines

The Geography programmes at Trinity have a modular structure that combines compulsory and optional core elements, thereby giving you more module choice as you progress with your studies.

Within specified limits, you may also opt to take elective modules during your Senior Fresh and Junior Sophister years for student entering in 2020/21, and Sophister years for student in other streams.

Every element of the teaching programme at Trinity is associated with a credit value.

The credits used in this book are equivalent to the European Credit Transfer and Accumulation System (ECTS). This is a student-centred system that is based upon the workload required to achieve the programme objectives. One year of study comprises work totalling 60 credits (equivalent to 60 ECTS).

++ One ECTS credit is equivalent to approximately 25 hours of student input ++

Note: Student input does not correlate with the number of contact hours (i.e. how long you will spend in lectures, seminars and practical sessions). Instead it measures YOUR input and includes not only your attendance at lectures etc. but also the time taken for completing assessment tasks and individual study including assigned reading, revision and examinations. Working outside of class is a vital element of your studies at Trinity and to meet the credit requirements it will sometimes be necessary to work outside of term time or the regular (5-day) working week. Module descriptions include illustrative breakdowns of input time to assist you in planning your work. These breakdowns are guides and precise input hours will inevitably vary between individuals.

Semesters and Module Teaching Blocks

Teaching is delivered in two semesters with week seven of each semester a “Study Week”. Taught modules valued at 10 ECTS normally run for the entire length of a semester while this may vary for 5 ECTS modules, which may be half a semester in length.

Check the module descriptions for timetable information and guidance on required student input.

Students who register after the beginning of a Geography module (e.g. by transferring in after the start of the module) may miss examinations and course work. If this happens the student will be expected to take missed parts of the module at the Supplemental Session.

Please note that the “Study Week” is not a holiday! You are expected to undertake academic work during this period in each semester.

Most modules will have online material including notes, reading lists and assessment details. You should check the Geography Website and Blackboard regularly for updates and information relating to your modules.

General enquiries not covered within this booklet or on the website should be directed to the relevant course coordinator.

For Joint Honours (JH) and TSM, Dr Federico Cugurullo – cugurulf@tcd.ie
For Geography and Geoscience, Dr Robin Edwards – robin.edwards@tcd.ie
For Political Science and Geography (PSG), Dr Rory Rowan - rowanro@tcd.ie
For Erasmus/Exchange, Dr Mark Hennessy - mhnnessy@tcd.ie
# Programme Overview Academic Year 2020-21

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<th>Year</th>
<th>Module</th>
<th>ECTS Credits</th>
<th>Course</th>
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<tbody>
<tr>
<td><strong>Compulsory Modules</strong></td>
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<tr>
<td><strong>Year 1 (JF)</strong></td>
<td>GSU11004 Spaceship Earth: An Introduction to Earth System Science (S1)</td>
<td>10</td>
<td>JH &amp; PSG (NS)</td>
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<tr>
<td></td>
<td>GSU11003 The Anthropocene (S2)</td>
<td>10</td>
<td>JH &amp; PSG &amp; TR062</td>
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<td></td>
<td>GGU11926 Human Geography: Society &amp; Space (S1&amp;2)</td>
<td>10</td>
<td>JH &amp; PSG (TR062)</td>
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<tr>
<td><strong>Compulsory Modules</strong></td>
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<tr>
<td><strong>Year 2 (SF)</strong></td>
<td>GGU22925 Human Geography: Changing Worlds (S1)</td>
<td>10</td>
<td>JH &amp; PSG (TR062)</td>
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<td>GGU22006 Physical Geography: Dynamic Earth (S2)</td>
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<td>JH &amp; PSG</td>
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<td></td>
<td>GGU22923 Geography Student Seminars (S1&amp;2) (Geography Major)</td>
<td>10</td>
<td>JH &amp; PSG</td>
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<tr>
<td><strong>Optional Modules</strong></td>
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<td></td>
<td>GGU22008 History and Philosophy of Geography (S1)</td>
<td>5</td>
<td>JH &amp; PSG</td>
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<tr>
<td></td>
<td>GGU22009 Spatial Data and GIS (S2)</td>
<td>5</td>
<td>JH &amp; PSG</td>
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<td><strong>Compulsory Modules</strong></td>
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<tr>
<td><strong>Year 3 (JS)</strong></td>
<td>GGU33939 Geographical Information, Data and Tools (S1)*</td>
<td>5</td>
<td>TSM &amp; PSG &amp; NS Geog</td>
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<tr>
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<td>GGU33928 Advanced Research Methods in Geography (S2)*</td>
<td>5</td>
<td>TSM &amp; PSG (capst) &amp; NS Geog</td>
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<td></td>
<td>GGU33001 Residential Field Course (S1 &amp; 2)*</td>
<td>10</td>
<td>TSM &amp; PSG &amp; NS Geog</td>
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<tr>
<td><strong>Optional Modules</strong></td>
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<td>GGU33939 Exploring the Sustainable City (S1)</td>
<td>5</td>
<td>TSM &amp; PSG &amp; NS</td>
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<td>GGU33937 Urban Economic Structure and Regeneration (S1)</td>
<td>5</td>
<td>TSM &amp; PSG &amp; NS</td>
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<tr>
<td></td>
<td>GGU33953 Red Planet: Deserts of our Solar System(S1)</td>
<td>5</td>
<td>TSM &amp; PSG &amp; NS</td>
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<td>GSU33002 Blue Earth: Understanding the Function of Marine Ecosystems (S1)</td>
<td>5</td>
<td>TR062, TR060</td>
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<td>GGU33915 Globalisation and Geopolitics (S2)</td>
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<td>GGU33930 Environmental Governance 1 (S2)</td>
<td>5</td>
<td>TSM &amp; PSG &amp; NS</td>
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<td>GGU33010 Living on the Edge: Estuaries and Coasts (S2)</td>
<td>5</td>
<td>TSM &amp; PSG &amp; NS</td>
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<tr>
<td><strong>Compulsory Modules</strong></td>
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<tr>
<td><strong>Year 4 (SS)</strong></td>
<td>GGU44930 Geography Dissertation (S1 &amp; 2)*</td>
<td>20</td>
<td>NS, TSM B &amp; C, PSG*</td>
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<tr>
<td><strong>Optional Modules</strong></td>
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<td></td>
<td>GGU44961 Understanding Environmental Change (S1)</td>
<td>10</td>
<td>TR077, TSM &amp; PSG</td>
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<td>GGU44969 Urban Geography: Cities, space and culture (S1)</td>
<td>10</td>
<td>TSM &amp; PSG &amp; NS Geog</td>
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<tr>
<td></td>
<td>GGU44971 Stormy Geomorphology (S1)</td>
<td>5 or 10</td>
<td>TSM &amp; PSG &amp; NS</td>
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<td>GGU44968 GIS and Remote Sensing Applications in Geography (S2)</td>
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<td>TSM &amp; PSG &amp; NS</td>
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<td>GGU44936 Globalisation &amp; African Development (S2)</td>
<td>5</td>
<td>TSM &amp; PSG &amp; NS</td>
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<td>GGU44926 Environmental Governance 2 (S2)</td>
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<td>TSM &amp; PSG &amp; NS</td>
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<td>BOU4111 Restoration Ecology and Rewilding (S1)</td>
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<td>GGU44965 Historical Geography (S2)</td>
<td>10</td>
<td>TSM &amp; PSG &amp; NS Geog</td>
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</tbody>
</table>

*Compulsory for students taking Geography as a single subject in Senior Sophister Year 4.

**NB:** This programme may be subject to change.

S1 and S2 indicates the Semester a module is provisionally timetabled for.
JUNIOR FRESHMAN

JH & PSG Students must take all three introductory modules in Geography:

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<tr>
<th>Semester 1</th>
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<tr>
<td>GSU11004: Spaceship Earth: Introduction to Earth System Science</td>
<td>GSU11003: The Anthropocene: Constructing the Human Planet</td>
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<tr>
<td>(10 Credits)</td>
<td>(10 Credits)</td>
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<tr>
<td>GGU11926: Human Geography: Society and Space</td>
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<td>(10 Credits)</td>
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**GSU11004 Spaceship Earth: An Introduction to Earth System Science 10 ECTS**

Module Co-Ordinator: Dr Robin Edwards (robin.edwards@tcd.ie)

**Type:** Compulsory (JH, PSG)

**Outline:** More than 7 billion people now inhabit the Earth and no corner of the planet is unaffected by human activity. The rise of our species has been fuelled by our ability to access planetary storehouses of energy and employ this to manipulate the environments around us. The global-scale of human impacts has led some to suggest we are entering a new era of Earth history - the Anthropocene. Dealing with the effects of environmental and climate change is one of the most significant challenges that our species faces in the 21st century.

This module provides a foundation for understanding global environmental issues by considering the Earth as an interconnected system in which matter and energy are exchanged between the Geosphere, Biosphere, Atmosphere, Hydrosphere and the Anthroposphere. It considers the life-support systems of ‘spaceship Earth’ and aims to provide a theoretical basis for evaluating the role of humans as agents of climate and environmental change.

**Learning Outcomes:** On successful completion of this module students will be able to:
- Outline the fundamental concepts of Earth Systems Science with reference to its major subsystems: Geosphere, Biosphere, Atmosphere, Hydrosphere and Anthrosphere
- Illustrate how material and energy are cycled through the Earth system
- Describe the links between biotic and abiotic systems and their role in maintaining a habitable planet
- Apply an Earth Systems approach to describe the phenomena of environmental and climate change
- Discriminate between ‘weather’ and ‘climate’ and situate concerns about current climate change in a longer-term (geological) context
- Identify how human activities modify Earth System function
- Make links between Earth Systems Science and topics covered in their chosen field of study

**Assessment:** 100% continuous assessment via in-course tests and assignments.
The Anthropocene

Module Co-ordinator: Dr Rory Rowan (rowanro@tcd.ie)

Type: Compulsory (TSM, PSG)

Outline: The “Anthropocene” is a term that has become widely used since Nobel Prize Laureate Paul Crutzen and Eugene Stoermer began popularising it in 2000. They argued that humans had so dramatically transformed the planet that it was time to pronounce a new geological epoch: the Anthropocene—or, “the human age.”

Whether the Anthropocene is officially accepted as the designation of a new geological epoch or not, the term has sparked debates and discussions across the natural sciences, social sciences, arts and humanities. The multi-disciplinary interest in the Anthropocene demonstrates that the term is more than simply a geological or physical phenomenon; it has complex social, cultural, political, and economic dimensions.

From plastic-filled oceans to species extinction, there is little doubt that human activities are making their mark on the planet. The challenge is to develop more critical, trans-disciplinary understandings of how this situation has arisen and how we might learn to live better on a damaged planet. This module sets out to meet this challenge by engaging ideas and perspectives from the natural sciences, social sciences, arts and humanities, students will learn to describe and understand environmental change from multiple perspectives.

Learning Outcomes: At the end of this module students are expected to be able to:

• Understand and explain the scientific and cultural significance of the Anthropocene;
• Critically engage with key debates over the Anthropocene that span the natural sciences, social sciences, arts and humanities;
• Identify the major ethical and political questions facing humanity in a time of ecological uncertainty and environmental degradation;
• Connect the Anthropocene with current events and everyday life, particularly as relates to urban sustainability.

In terms of transferable skills, students will be expected to have:

• Developed their reading skills and capacity to synthesise and build arguments through involvement in small-class seminars;
• Developed their writing skills through formal and creative writing assignments.

Assessment: This module will be assessed through 100% coursework assessment. Participation and attendance in all lectures and seminars is required.

Module Breakdown: Contact Hours (Lectures = 20 hours; Seminars = 16 hours); Additional Input (Lecture/Seminar Preparation = 80hrs; Coursework preparation = 85hrs) TOTAL = 201hrs.

Key texts:


Module Breakdown: Contact hours (22 hours).
GGU11926 Human Geography: Society & Space 10 ECTS

Module Co-ordinator: Dr Cian O’Callaghan (ocallac8@tcd.ie)

Type: Compulsory (TSM, PSG)

Outline: This module aims to provide you with an insight into what it means to “think geographically”. Through contemporary and historical examples, it will provide you with an understanding of the development of the discipline of Geography, its philosophical bases and methodological practices. It will introduce you to a number of the key elements of human geography with which you will deal in greater depth in later years.

The module spans both Semester 1 (Michaelmas) and Semester 2 (Hilary). It is divided into four sections. The first half of the module will cover sections 1 and 2, while the second half of the module will cover sections 3 and 4.

The overarching aim of sections 1 and 2 is to understand a geographical view of the world and to critically consider the relationships between the historic evolution of the discipline of Geography and the multiplicity of modern approaches. While the overarching aim of sections 3 and 4 is to introduce urbanisation and globalisation as key components of human geography which connects together many different global concerns.

Section 1: The geographical tradition

The first section of the module will introduce you to the discipline of Geography. It will do so in two ways:

I. Through the critical exploration of the evolution of the discipline of geography within the development of rational scientific modes of enquiry and beyond.
II. Through introducing and examining a series of core concepts in Geography.

Section 2: An introduction to “thinking geographically”

The second section of the module takes this further by examining the approach of “thinking geographically. In particular, the section uses a reflection and analysis of the geographical dimensions of three contemporary events currently shaping the world: Brexit, (anti)globalisation, and the migrant crisis. Through the module we will be asking: how are these events geographical and how can geographical methods be used to understand them?

Section 3: Global urbanisation and its problems

The section of the module will explore global urbanism and its problems and use cities and urbanisation as a lens to further explore what it means to “think geographically”. It will again do so in two ways:

I. Through the analysis of the evolution towards an urban condition, we will explore how urbanisation occurs, why urbanisation is a global phenomenon and recognise the forces underlying the growth of urban settlements.
II. Through a reflection and analysis of a series of thematic urban problems or challenges, we will seek to address how the spatial form of the urban influences and organises human life in profound ways.

Section 4: A critical exploration of the issues of governance, economy and space in the context of globalisation
This is to equip you with theoretical insights that help you to understand the underlying reasons for spatial inequalities resulting from economic globalisation. This is supplemented with a range of case studies that illustrate the impact of global forces on local areas.

There are three core aims of this section:

III. Understanding of the relationship between consumption and production – spatially, including the inter-relationship between politics, space and the production process

IV. To examine the forms of socio-spatial relations that are produced through the contemporary global economy, with a particular focus on inequality

V. To examine the relationship between culture, economy and images within the contemporary economy

The central aim of this part of the course is to introduce students to the intertwined nature of the contemporary economy at different scales.

Learning Outcomes: On successful completion of this module students will be able to:

- Describe the evolution of the discipline with respect to the philosophical bases which have contributed to its development, the range and changing character of methodological approaches and the foci of geographical enquiry;
- Demonstrate a knowledge of contemporary approaches to the study of human geography;
- Display an ability to use an approach to “thinking geographically” to analyse current events;
- To develop an ability to identify and engage critically with relevant debates within human geography through an in-depth analysis of relevant literature.
- Identify how urbanisation occurs, why urbanisation is a global phenomenon and recognise the forces underlying the growth of urban settlements;
Describe the impact of urbanisation on different parts of the world;

Apply approaches in urban geography to analyse key urban problems and challenges.

**Assessment:** Continuous assessment (100%).

**Module Breakdown:** The 10-credit module comprises 250 hours of student workload, of which only a minority comprises direct contact with staff (lectures and tutorials).

Lectures 40 hours; tutorials 4 hours; tutorial preparation 40 hours; essays and projects 86 hours; other reading 80 hours.

**Key texts:** In addition to material presented during lectures or in tutorials, the following texts are considered to be key reading:

**Section 1**

**Section 2**

**Section 3**
SENIOR FRESHMAN

TSM & PSG Geography Major Students take 40 credits of core modules

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GGU22925 Human Geography: Changing Worlds 10 ECTS

Module Co-ordinator: Dr Philip Lawton (lawtonp@tcd.ie)

Type: Compulsory (TSM & PSG)

Outline: This module introduces students to a number of key issues within contemporary human geography and exposes them to a range of methodological approaches and research techniques. The overarching theme of the module is the way in which historical, cultural, environmental, political and economic geographies are changing under the force of globalisation.

Specific areas covered include an examination of globalisation from a historical perspective; approaches, methods and sources in historical geography; emergence of global environmentalism in a changing world; the creation of ‘third world’ and the impact of globalisation on the developing world; and political and economic aspects of globalisation.

The module will cover:

Section 1 - Approaches and methods in historical geography: This section of the module introduces the diversity of approaches and methods employed in historical geography. Historical geography has traditionally been concerned with the evolution of landscapes and patterns of areal differentiation over time. Historical geography is concerned with how regions and places have come to acquire identity and character over time. It is therefore central to the wider study of geography. Since the 1980s historical geography has been open to theoretical and methodological innovation. This section of the module will give an introduction to the more traditional and modern approaches to the use of historical methods in geographical studies.

Section 2 - Emerging Environmental Movements: Interactions between humans and the environment are of central concern for geographers. These interactions may create positive or negative outcomes (or in some cases both) across time and space and are often geopolitically motivated. This section of the Changing Worlds module will address how human geography approaches the uneven and
contested relationships that exist between humans and their environments in an increasingly globalised world. Attention will focus on the way environmental problems (climate change, overfishing, pollution) are experienced and understood by different actors.

Section 3 - Geographies of development: Most of humanity lives in the so-called “developing world”. This section of the module explores how the Third World was created historically and the mechanism through which it is reproduced. Attention will also be paid to the impact of “free” market policies in the developing world.

Section 4 - Economic geographies of globalisation: This section of the module will cover issues related to contemporary economic globalisation; governance of globalisation; multi-national corporations; global finance; global financial and economic crisis; geographies of transition economies; and policy challenges in the age of globalisation.

Section 5 - Collection & analysis of geographical data: Building on the above sections, this part of the module will specifically focus on methods in geographical research and a range of techniques used in acquisition and analysis of geographical data. In doing so, it will enable students to select appropriate methods to study diverse geographical issues and to develop students’ geographical skills of numeracy, data management, manipulation, analysis, display, interpretation and explanation.

Learning Outcomes: On successful completion of this module students will be able to:

- Identify important topics and themes in contemporary human geography;
- Appraise some of the major current debates in human geography;
- Outline and contrast a range of research methods in human geography.

Assessment: Examination (60%); course work (40%)

Module Breakdown: Contact hours (Lectures and seminars = 33 hrs); Additional Input (Lecture-related reading and individual study = 130hrs; Course work preparation = 47hrs; Revision/Examination = 40 hrs). TOTAL = 250hrs.

Key texts:

Section 1

Section 2

Section 3

Section 4

Section 5
GGU22006 Physical Geography: Dynamic Earth 10 ECTS

Module Co-ordinator: Dr Mary Bourke (bourkem4@tcd.ie)

Type: Compulsory (TSM, PSG)

Outline: Physical geography is an exciting scientific discipline that examines the Earth and how it functions. Geographers have already contributed substantially to scientific efforts to understand the emergence of truly globally significant human–environmental linkages. Physical Geography has thus been fundamental to investigating and modelling long-term changes to Earth surface process and dynamics. This type of knowledge is critical in allowing humans to live sustainably on planet Earth. In this module you study a wide variety of environmental systems, ranging from climate and weather to soils, beaches and rivers, to name just a few. The focus is to understand the location and character of landscape features such as mountain ranges and river valleys, and to explain why they came to be and how and why they vary depending on their geographic context. An underlying theme is to examine how aspects of physical geography affect human lives and, in turn, how people impact the dynamics of the physical landscape. This module will give students an understanding of key physical geography concepts. You will build on keys areas of Geography from the JF Spaceship Earth and Anthropocene modules. Elements of the module are designed to prepare students for Sophister geography modules. A field session will introduce students to key field skills that will be used throughout the degree and allow students to work in groups using our field equipment. The practical sessions will develop student’s laboratory skills.

Learning Outcomes: On successful completion of this module, students should be able to:

- Critically evaluate the influence of climate, topography and humans on the variability of landforms.
- Explain the theories underlying how and why specific landforms vary over space and time.
- Draw on specific example of landforms and landscapes to demonstrate the influence of climate, topography, and humans.
- Evaluate the complex and reciprocal relationships between physical and human aspects of environments and landscapes.
• Assess the relative importance of infrequent/extreme versus frequent/moderate events in driving landform change.
• Discuss the potential application of geographical concepts, techniques and expertise as a means of addressing a range of issues facing the Earth and its people at a global and local scale.
• Explain the importance and relevance of physical systems and landforms to the future of human society.

Assessment: 100% continuous assessment

Module Breakdown: The module is taught through lectures (36 hours), practical classes (3 x 2 hours), reading and work on assignments (200 hours)

Key Texts:

GGU22008 History and Philosophy of Geography 5 ECTS

Module Co-ordinator: Dr Mark Hennessy (mhnnessy@tcd.ie)
Type: Major Award Compulsory (TSM & PSG)

Module Outline:
A. The classical world. 1. Hecataeus, Eratosthenes and the early Greek geographers. 2. Ptolemy, Strabo, Pliny the Elder and other geographers from the period of the Roman empire.
B. Geography in the age of Enlightenment. Focus on Alexander von Humboldt.
C. Geography in the age of Victorian exploration. The relationship between empire and geography is a key theme in this section.
D. French Geography in the late nineteenth and early twentieth century. The contrasting ideological context of the Vidalian school and the work of Élisée Reclus is considered. The influence of German geographers such as Von Humboldt, Ritter and Ratzel on this tradition is also considered.
E. The “Quantitative Revolution”. Developments in geography in the late 1950s, ‘60s and ‘70s are examined and are contrasted with Hartshorne’s earlier outline of the scope and methods of geography.
F. Radical and Marxist Geography. The development of critical approaches in geography is traced with a particular focus on the works of William Bunge and David Harvey.
G. Feminism and Geography. The influence of Feminist perspectives on research and writing in geography is traced and set within the wider context of the introduction of radical and anti-systemic ideologies to the practice of geography.
H. Postmodernism and Geography. This section explores how the philosophical, methodological and ideological innovations associated with Postmodernism have influenced the practice of geography.

Learning Outcomes:
On successful completion of this module you will be able to:
• Demonstrate a knowledge of how the discipline of Geography has changed from Classical times to the present
• Have a critical awareness of how intellectual and disciplinary change is related to broader patterns of historical change
• Evaluate debates regarding the scope and purpose of the discipline of Geography
• Compare different approaches to the study of the Geography

**Key Texts:**


**Method of assessment:** 50% Exam; 50% continuous assessment

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**GGU22009 Spatial Data and GIS**  
**5 ECTS**

**Module Co-ordinator:** TBC (contact moelleri@tcd.ie in interim)

**Type:** Major Award Compulsory (TSM & PSG)

**Outline:** Digital environmental sensing technologies alongside ever-increasing computing power and satellite technological developments have led to what some call a ‘remote sensing revolution’. While the acquisition of images and remotely acquired environmental data used to be a specialist skill, we are now able to acquire much of such type of data freely via the web-based or mobile applications. Commercial companies as well as governments are investing heavily in this type of technology and academic researchers are using the data within wide-ranging fields of research. Geospatial science, always a key component of the Geographers’ toolkit, has thus taken a monumental leap forward – but this comes with enormous challenges and responsibilities that can only be met by graduates that have the appropriate skills to evaluate and understand the basic principles of this technology and its uses. This module provides students with the basic level of understanding required for an appreciation of the *principles* that underpin remote sensing, image processing and GIS, rather than teach specific software in-depth. For a more in-depth introduction and use of image processing, students can move onto sophister modules in Geography from here.

**Learning Outcomes:** On successful completion of this module, students should be able to:

- Appreciate different ways of representing geo-spatial/mapping information
- Understand the meaning and importance of spatial resolution and different types of spatial data (raster/vector, digital/manual)
- Assess the appropriateness of different geospatial data representations for different purposes
- Understand the concept of ‘remote sensing’ and the various ways in which it can be achieved in general terms
- Explain basic principles of satellite remote sensing and have familiarity with some of the most commonly used free and commercial satellite platforms
- Critically reflect on, and assess, the use of remote sensing and GIS applications for a variety of purposes (in the human and physical environment)
- Confidently and critically deploy a number of basic, but key, geospatial data presentation methods

**Assessment:** 100% continuous assessment

**Module Breakdown:** The module is taught through lectures, practical classes, reading and work on assignments

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**GGU22923 Geography Student Seminars**  
**10 ECTS**

**Module Co-ordinator:** TBC (contact moelleri@tcd.ie in interim)

**Type:** Major Award Compulsory (TSM & PSG)

**Outline:** This module aims to develop skills in information gathering, critical thinking, writing and oral presentation. Students will learn how to address a research topic in a group setting, carry out research,
including bibliographic searches, and make written and oral presentations regarding that topic. Students will learn how to improve their work through taking advantage of group and one-to-one feedback on work-in-progress. Seminar groups will be led by members of the academic staff, research staff and research postgraduate students.

The module is divided into four, linked components:

1. Skills preparation;
2. Presentations and discussions;
3. Essay writing;
4. Essay feedback and revision.

**Learning Outcomes:** On successful completion of this module students will be able to:

- Demonstrate awareness of the standards, expectations and praxis of Geography at a university level;
- Knowledgably and critically discuss selected key concepts and ideas in Geography;
- Identify appropriate data sources and resources for Geography, including books, journals and websites, and show an appreciation of the issues involved in their use;
- Produce written work of an acceptable style and standard;
- Undertake appropriate independent preparatory work for classes, including reading and research;
- Work productively as part of a group and present their work orally to a small group of their peers.

**Assessment:** Course work (100%)

**Module Breakdown:** Contact Hours (Seminars, workshops and individual feedback = 25hrs); Additional Input (Reading, preparation and course work = 225hrs). TOTAL = 250 hrs.

**Key texts:**

# JUNIOR SOPHISTER

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<td>GGU33933: Geographical Information, Data and</td>
<td>GGU33928: Advanced Research Methods in</td>
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<td>Tools (RS/GIS) (5 Credits)</td>
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<td>GGU33915: Globalisation and Geopolitics</td>
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<td>GGU33953: Red Planet (5 Credits)</td>
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*Modules are compulsory for students intending to Major in Geography in Senior Sophister

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**GGU33933 Geographical Information Data and Tools**

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<th>Module Co-ordinator: TBC</th>
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<td><strong>Type:</strong> Core (TSM &amp; PSG)</td>
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<td><strong>Pre-requisites:</strong> None</td>
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<td><strong>Note:</strong> Places on this module are limited to 30, with priority given to Geography Majors.</td>
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<td><strong>Outline:</strong> This module explores how to identify, create and use geographic data and tools. The object is to teach students about how data is constructed, used, found, and manipulated by geographic researchers. The module will enable students to: interpret maps; find and evaluate data; organise, manipulate and analyse data in statistical packages and GIS; create projects and maps using GIS; identify how geographic data construction and analysis differs from typical quantitative approaches.</td>
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<td><strong>Learning Outcomes:</strong> On successful completion of this module students will be able to:</td>
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<td>• Explain the concepts and theories that underpin GIS and outline their application to the real world;</td>
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<td>• Demonstrate technical proficiency in the use of an industry standard GIS software package;</td>
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<td>• Apply GIS technologies in problem-solving;</td>
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<td>• Design, implement and present the results from a project that makes use of GIS technologies.</td>
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<td><strong>Assessment:</strong> Course work (100%)</td>
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Module Breakdown: Contact Hours (Lectures & Practical’s = 20hrs); Additional Input (Reading and course assignments = 105hrs). TOTAL = 125hrs.

Key Texts:

GGU33928 Advanced Research Methods in Geography 5 ECTS

Module Co-ordinator: Professor Pádraig Carmody (carmodyp@tcd.ie)

Type: Compulsory (NS & TSM, also PSG students taking Geography as a single subject in Year 4)

Pre-requisites: None

Outline: The objective of this module is to develop further the research skills of students, in order that they will be well-equipped to plan and carry out their dissertation investigation, which will start towards the end of the JS year. The module focuses on approaches to solving geographic problems, although topics such as ethics, integrity, professionalism, philosophy, research project design, and presentation skills are also covered. In addition to classes, students on this module are also expected to attend research seminars in the School, and more broadly in College, in particular (although not exclusively) those of relevance to Geography.

The assessment for this module comprises several components, including student presentations in class, short critical reviews of key research articles relating to Geography, and dissertation proposal. For dissertation preparation regulations specific to Erasmus students, see page 5.

Learning Outcomes: On successful completion of this module students will be able to:
- Develop a research plan for a Geography dissertation;
- Communicate geographic ideas and results effectively in written and oral form;
- Evaluate the strengths and weaknesses of complementary and competing methodological approaches and research techniques commonly used by geographers;
- Develop a basis for informed opinions about the important intellectual and methodological debates in Geography.

Assessment: Course work (100%)

Module Breakdown: Contact Hours (Lectures = 12hrs); Additional Input (Reading, including weekly assignments = 62hrs; Proposal Reading and Writing = 48 hrs; Presentations = 3 hrs). TOTAL = 125 hrs

Key Texts:

GGU33001 Residential Field Course 10 ECTS

Module Co-ordinator: TBC

Type: Compulsory (NS & TSM, also PSG students taking Geography as a single subject in Year 4)

Pre-requisites: None

Outline: This residential field trip will introduce students to specific examples that illustrate the interplay between human society and the environment in a particular geographical setting. This may be a setting within Ireland or overseas (to be confirmed at the start of the academic year). During the trip, key themes will be
explored on set days, with student introduced to specific geographical research skills that will allow them to gain confidence in carrying out their own independent geographical research project. These skills include a range of transferrable skills (team working, project framing, planning, execution, and data analysis) alongside specific human and physical geography data acquisition methods and techniques, such as may be required for capstone projects. Prior to departure, students will be issued with background materials to familiarise themselves with the geographical setting and its human and physical environmental past and present. Detailed information on travel and accommodation will be issued prior to the trip. Students are expected to attend briefing session at the end of the first semester and early in the second semester in which the general field setting and a number of themes will be introduced that will be explored in depth during the trip. These sessions will also take students through the logistics, ethical, and health and safety considerations of taking part.

Learning Outcomes: On successful completion of this module students will be able to:

- Critically and responsibly engage with a number of geographical (societal and environmental) challenges explored during the trip
- Confidently deploy a number of key human geography research methods
- Confidently deploy a number of key physical geography research methods
- Draw on specific examples at the field site to explore the interconnectedness between the physical and human environment
- Critically reflect on, and assess, ethical and health and safety risks involved in conducting geographical research projects
- Clearly and concisely communicate the findings of field based geographical research

Assessment: Course work: field project plan and write up (100%)

Module Breakdown: Contact Hours: 4 days in the field, 2 x travel days; Independent Study (preparation for course and review of materials): 42 hours (2 briefing sessions of 1 hour each; 10 hours reading time prior to fieldtrip; 3 full days in the field); Independent Study (preparation for assessment, incl. completion of assessment): 28 hours (1 day (8 hours) in the field; 20 hours preparation). TOTAL = 70 hrs

GGU33939 Exploring the Sustainable City  5 ECTS

Module Co-ordinator: Dr Federico Cugurullo (cugurulf@tcd.ie)

Type: Optional (NS, TSM & PSG)

Pre-requisites: None

Outline: What will the city of the future look like? To what extent are our models of city-making sustainable? Is the road that we are taking leading us towards an environmental utopia in which societies will grow in balance with nature, or are we paving the way for the collapse of our civilization? These are the key questions that will drive our exploration of the different ways through which, today, sustainable urban development is understood and practiced across the world.

In this highly interdisciplinary module, we are going to use the tools of geography to examine the most critical socio-environmental issues faced by cities (climate change, consumption, happiness, environmental degradation, etc.), and discuss both the theory and practice of urban sustainability.
Using case studies from different continents, we will explore projects for eco-cities and smart cities, and evaluate their sustainability performance. We will also draw upon urban history and political philosophy to learn how the ideal city was imagined in past, and use this knowledge to foresee what urban futures alleged smart-eco cities are shaping.

Each session will be designed to stimulate interaction and will require curiosity and imagination. This module is more than a review of how urban sustainability is understood and practiced, and you will be asked to design, present and discuss practical plans of action to sustain urban living in the 21st century and beyond.

**Learning Outcomes:** By the end of the course the student will be able to:

- Demonstrate knowledge of key debates relating to theories and practices of sustainable urban development
- Show understanding of the different meanings of urban sustainability across geographical spaces
- Undertake analysis of complex, incomplete or contradictory areas of knowledge in relation to contemporary urban challenges
- Critically evaluate urban agendas from a sustainability perspective
- Design and evaluate strategies for sustainable urban development.

**Assessment:** 100% continuous assessment.

**Module Breakdown:** Contact hours (Lectures + seminars 22 hours); Additional inputs (Lectures + seminars preparation, coursework, revision and examination). TOTAL: 125 hours.

**Key Texts:**


**GGU33937 Urban Economic Structure & Regeneration** 5 ECTS

**Module Co-ordinator:** Dr Cian O’Callaghan ([ocallac8@tcd.ie](mailto:ocallac8@tcd.ie))

**Type:** Optional (NS, TSM & PSG)

**Pre-requisites:** None

**Outline:** This module introduces you to some key themes, concepts, and debates in urban geography. In particular it will focus on the concept of urban regeneration. The module first considers the historic development of urbanisation, the transition to urban-based economies, and the development of urban studies. It then focusses specifically on the urban impacts of globalisation, in particular how cities in the developed world have managed the shift from industrialism to post-industrialism. Finally, the module examines regeneration from a number of perspectives. Particular attention will be given to the circular nature of processes of urban growth and decline and how regeneration efforts include and exclude particular social groups and identities.
Learning Outcomes: On successful completion of this module students will be able to:

- Demonstrate a thorough understanding of the processes underlying changing urban economic form and the concurrent shift in the cultural life of cities
- Have a detailed knowledge of the varied character of urban regeneration policies, their function and effectiveness.
- Demonstrate a knowledge of key concepts in urban geography and be able to apply them to real world situations

Assessment: Blog post + additional component (50%) & 2-hour examination (50%) answering 2 questions from 4.

Module Breakdown: Lectures (20 hrs), Fieldtrip (2 hrs), Additional inputs (Reading, exam revision, blog post preparation – 103hrs). Total 125 hrs.

Key Texts:


GGU33953 Red Planet: Deserts of our Solar System 5 ECTS

Module Co-ordinator: Dr Mary Bourke (bourkem4@tcd.ie)

Type: Optional TSM & PSG (places given on preference to Geography Majors)

Pre-requisites: none

Outline: Almost all major planets and moons in our Solar System have been visited by spacecraft and the data they have returned has revealed the incredible diversity of planetary surfaces. This module travels from the formation of our solar system and evolution of the planets and moons to contemporary surface processes. Lectures discuss how information gathered from spacecraft is used to unravel the complexities of our Solar System. The focus will be on our current understandings of planetary systems. Planetary image and remote sensing
data are used to highlight the differences and similarities of the surfaces. Planetary geomorphology is the frontier field of Physical Geography. This module delves into the desert landforms of our solar system. We will explore how landforms and geomorphic processes vary under different atmospheric, gravity and temperature regimes. You will be introduced to geomorphic features that are not found on Earth. We will investigate how geomorphologists use landforms on Earth to understand those on other solar system bodies. There will be opportunities for students to interact with NASA and ESA scientists and explore the prospect of human exploration of our solar system.

**Learning outcomes:** On successful completion of this module students will:

- Have gained a basic knowledge of the desert geomorphology on Earth and Mars
- Understand how and why landforms vary across our solar system
- Know how field and experimental studies are used in Planetary Geomorphology
- Be familiar with the latest findings from Lander and Orbiter missions

**Assessment:** Continuous Assessment [100%].

**Module Breakdown:** Lectures (24 hrs); Reading (50 hours); assessed work (26 hrs). Exam revision (25 hours). Total = 125 hrs.

**Key Texts:**

Learning outcomes: On successful completion of this module students will:

- Demonstrate a working understanding of the processes that determine the nutrient structure of the ocean and the nutrient makeup of coastal seas
- Identify the main benthic biogeochemical processes and extract information on mass fluxes from the analysis of nutrient distributions in marine sediments
- Describe the workings of the marine carbonate system and establish its current state at specific locations by evaluating local CO₂ system data
- Map and interpret oceanographic data using Ocean Data View
- Provide basic interpretations of the current and future whole-system metabolic status of small coastal ecosystems based on nutrient and oxygen data series
- Explain how the understanding of modern marine biogeochemistry is fundamental to our ability to describe the co-evolution of life and chemistry on Earth, past, present and future
- Appraise and advance some of the major current debates around climate and environmental change, from an understanding of marine ecosystem services

Assessment: Continuous Assessment: Online test, practical problems solving, presentation (100%).

Module Breakdown: Lectures and presentations (24 hrs); Reading (48 hours); assessed work preparation and completion (52 hrs). Exam revision (25 hours).
Total = 124 hrs.

Key Texts:
• Comprehend and critique the influence of organisations such as the International Monetary Fund, World Bank and International Non-Governmental Organisations;
• Apprehend the construction and interaction between ethnicity, conflict and terrorism; regionalisation and globalisation;
• Discuss critically the relationship between different types of globalisation “from above” and “below”;
• Critically evaluate alternatives to globalisation.

Assessment: 2-hour examination (50%) Answer 2Q/6; Essay (50%)

Module Breakdown: Contact Hours (Lectures = 18hrs; Tutorials = 3hrs); Additional Input (Tutorial preparation = 15hrs; Essay = 32hrs; Other reading = 24 hrs; Revision and Examination = 33hrs). TOTAL = 125hrs.

Key Texts:

GGU33930 Environmental Governance 1 5 ECTS

Module Co-ordinator: Dr Rory Rowan (rowanro@tcd.ie)

Type: Optional (NS, TSM & PSG)

Pre-requisites: None

Outline: The “environment” emerged as a new object of concern in the 1960s. Since then, and largely through the work of citizens, scientists, environmental justice movements, and NGOs, many different environmental problems have been raised - from chemical contamination to climate change, from oil spills to plastic-filled oceans. Despite growing awareness of these many forms of environmental degradation, the political and societal response has been far from adequate. How can we explain this? One starting point is to interrogate the contested history and development of environmental politics since the 1960s. What we learn from such an approach is that there have been radically different ways of framing environmental problems, giving rise to radically different proposals on how to deal with these problems. This historically informed understanding thus invites us to consider how re-framing current environmental problems may help us to orientate society towards a more just and sustainable future.

This module will introduce students to the emergence of environmental politics as a unique field of policy-making, scientific production, and conflict since the 1960s. It will discuss key texts, writers and thinkers, whose work has been instrumental in shaping how we think about the environment, as well as how private, public and civil society actors have responded to environmental problems in recent times.
**Learning Outcomes:** On successful completion of this module students will be able to:

- Understand the key developments and debates within modern environmentalism over the past fifty years;
- Identify and discuss the key thinkers and texts that have shaped modern environmental thinking;
- Debate the nature and impact of different environmental policies and initiatives at local, national and global scales;
- Use the critical analytic skills developed through the module to better examine a range of sources including documentary films, government reports, academic papers, and more.

**Assessment:** 100% Continuous Assessment (300 word essay abstract, 30%; and 2,000 word essay, 70%).

**Module Breakdown:** Contact Hours (Lectures = 20 hours); Additional Input (Lecture Preparation = 60hrs; Coursework preparation = 85hrs; examination preparation = 85 hours) TOTAL = 250hrs.

**Key Texts:**


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**GGU33010 Living on the Edge: Estuaries and Coasts** 5ECTS

**Module Co-ordinator:** Professor Iris Moeller ([moelleri@tcd.ie](mailto:moelleri@tcd.ie))

**Type:** Optional (NS, TSM & PSG)

**Pre-requisites:** None

**Outline:** Coastal regions are some of the most dynamic on Earth, not least because human and natural processes act in tight connection to each other. This dynamism poses one of the great societal challenges of the 21st Century: as coastal populations are increasing at three times the global rate, they are also experiencing an increasing threat of coastal flooding and erosion under climatic extremes (e.g. tropical and extratropical storm surges), and are ‘locked into’ accelerated sea level rise for centuries to come. Building upon a basic, foundational knowledge of ocean and coastal processes covered in relevant modules within the first and second year (‘Spaceship Earth’ and ‘Sedimentary Processes and Environments’), students will gain wide ranging theoretical and practical skills required to address those challenges. The lectures and seminars take students on a journey that highlights how the natural processes operating within estuaries and on coasts are a function of external factors (past and present climate, geology, human influences) and feedbacks in which the landforms themselves affect the operation of processes that shape the landforms. Equipped with this knowledge, and several examples from around the world, students will put their knowledge into practice. A day-field trip and practical exercise will challenge students to apply what they have learnt to real-world coastal management problems. Working in groups, they will form ‘coastal management
consortia’ that will navigate their way through the stages of problem definition to data acquisition and development of appropriate coastal management solutions. The assessed practical exercise will develop and enhance team-working, independent research, critical thinking, scientific and applied writing, and presentation skills.

**Learning Outcomes:** On successful completion of this module students will be able to:

- Explain the theory behind estuarine and coastal morphodynamics.
- Draw on specific examples to illustrate the societal importance of coastal morphodynamics in the context of human use of the coast.
- Critically reflect on the importance of considering different temporal and spatial scales for an understanding of coastal change.
- Discuss the key impacts of climate change on coastal landforms and ecosystems.
- Carry out basic (bio)geomorphological field surveys to gain a better understanding of estuarine and coastal landforms and associated ecosystems.
- Assist the development of coastal management approaches that consider societal and biophysical aspects of how coasts and estuaries function and deliver ecosystem services.
- Clearly and concisely present the results of their work in written and oral (presentation) form.

**Assessment:** 100% Continuous assessment (lecture content, course and tutorial reading = 20%, field excursions and case study materials = 80%)

**Module Breakdown:** Contact Hours = 34 hours (Lectures = 16 hours, 2 x tutorials, field excursion, lab practical’s and student workshops/presentations); Additional Input (Lecture Preparation = 60hrs; Coursework preparation = 85hrs; examination preparation = 85 hours) TOTAL = 250hrs.

**Key Texts:**

**SENIOR SOPHISTER**

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* Geography Major Students take compulsory 20 credit dissertation module

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**GGU44930 Geography Dissertation**  20 ECTS

Module Co-ordinator: Professor Padraig Carmody (carmodyp@tcd.ie)

**Type:** Compulsory (NS, TSM B & C, also PSG students taking Geography as a single subject in Year 4)

**Outline:** The dissertation is an independent study in which field work or the study of original source material is expected to play an important role.

Data can be collected in a variety of ways - such as through field sampling or survey, laboratory analysis, questionnaire surveys, interviews, content analysis, census material or archival work or some combination of these - depending on the topic chosen. The research topic is developed as part of GGU33928 Advanced Research Methods in Geography 1. A more complete description of the dissertation, together with recommendations regarding supervisor meetings, health and safety regarding field and laboratory work etc and regulations relating to late submission etc, can be found on the Geography website – see Courses, Current Students.

For dissertation preparation regulations specific to Erasmus students, see page 5.

**Learning Outcomes:** On successful completion of this module students will be able to:

- Complete a sustained piece of individual, academic research on a chosen topic within the field of Geography, under the guidance of a member of staff;
- Explain the methodological basis employed in their research;
- Critically evaluate existing research and its implications for the topic of study;
- Demonstrate technical proficiency in the application of the selected methods and techniques of data acquisition and analysis;
• Synthesise and discuss the results with reference to relevant academic literature;
• Present a succinct and precise written report of the research that is well presented, logically structured and accurately referenced.

Assessment: Independent research project dissertation (90%) and presentation (10%). All students must also give a short progress report presentation to the Department in Semester 1 in order to progress to submission in Semester 2.

Module Breakdown: Contact Hours (Supervision = 10hrs); Additional Input (Individual research and dissertation writing = 490hrs). TOTAL = 500hrs.

GGU44961 Understanding Environmental Change 10 ECTS

Module Co-ordinator: Dr Carlos Rocha (rochac@tcd.ie)

Type: Optional (NS, TSM & PSG)

Pre-requisites: None

Outline: The global environment, including climate, is changing. This change has major economic, social and policy implications and will thus underpin living conditions for the whole of humanity going forward. The course will introduce the functional aspects of this change using an Earth Systems Science approach by providing the basis to understand how major components of the Earth System are linked and how these links change over time. Conceptual developments in this understanding, as well as the basic modern concepts in Environmental Change (both human-induced and natural) will be discussed as a basis to comprehend the utility of forecast tools used as a basis for societal response.

Learning Outcomes: On successful completion of this module students will be able to:
• Demonstrate a solid understanding of the earth system
• Articulate the complexity of feedbacks driving current environmental change
• Quantitatively examine the factors shaping the environment, including climate
• Describe and distinguish between natural and human-induced drivers of environmental change
• Critically analyse conflicting arguments on the issues of environmental change
• Examine and evaluate public policy aimed at coping with environmental change

Assessment: 100% Continuous Assessment (CA). CA includes: Homework – two individual quiz/short essay papers (15% each); two group oral presentations and researched class debates (15% each); One individual extended (4,000 words) essay (40%).

Module Breakdown: Lectures (30 hrs); Set reading, activities and independent study (180 hrs); assessed work (38 hrs).

Key Texts:

**GGU44969 Urban Geography: Cities, Space and Culture**  
10 ECTS

Module Co-ordinator: Dr Cian O’Callaghan  
(ocallac8@tcd.ie)

**Type:** Optional (NS, TSM & PSG)

**Pre-requisites:** None

**Outline:** It is now claimed that we have entered an ‘urban age’. The bulk of the world’s population now live in ‘urban’ areas, while the future fate of humanity (either utopian or dystopian) is increasingly being tied to the fate of cities. This module will introduce students to key debates and concepts in urban geography that shed light on what it means to live in an ‘urban society’.

The first part of the module will outline how political economic processes, including the relationship between the supply of credit and the role of the property development sector and the role of entrepreneurial urbanism, produce urban space in highly uneven ways. The second part of the module will examine social and cultural geographies of cities, focusing on the role of identity and difference in shaping urban space and everyday life. The module will also use Dublin as a key case study and research laboratory to explore how these processes are shaping that city. Focussing on contemporary events, it will bring together rich and varied scholarship from leading researchers in Dublin and the experiential analysis of policy makers, community activists, and a range of other urban actors.

Students will be expected to attend lectures and read widely in preparation, engage in group activities and discussions. The course comprises lectures, seminar-based classes, one-day fieldtrip, and group-based activities.

**Learning Outcomes:** On successful completion of this module students will be able to:
• Demonstrate a knowledge of key theoretical debates in urban geography and be able to apply key concepts to real world situations
• Have a detailed knowledge of the factors underlying patterns and approaches to urban economic development.
• Recognise the impacts of urban regeneration and culture-led approaches to urban planning and development.
• Demonstrate knowledge of how identity and difference shapes urban space and everyday life.
• Demonstrate a critical awareness of current socio-spatial issues and challenges relating to Dublin

**Assessment:** 2 hour Examination (50%); coursework (essay and project 50%)
• CW1 Concept essay: The concept essay asks you to pick a concept we covered in class and write a concept essay (literature review) of how it has been used in relevant urban geography studies.
• CW2 Project: The research project asks you to pick one topic we have covered in class, and research how it can be applied to study recent trends or issues in Dublin. You should identify a particular policy, initiative, or case study area that relates to your chosen topic and conduct independent research on this. The independent research you conduct can include interviews, ethnography, surveys and/or documentary analysis. You should then write a report (3,000 words) documenting your research and applying the conceptual literature to analyse your case study.
Module Breakdown: Contact Hours (Lectures = 30 hrs; Seminars = 12 hrs; Fieldtrip = 2 hrs); Additional Inputs (Reading and preparation for class discussions; Essay; Project. examination = 206 hrs). TOTAL = 250 hrs.

Key Texts:


**GGU44971/2 Stormy Geomorphology**

10 ECTS or 5 ECTS

Module Co-ordinator: Dr Mary Bourke ([bourkem4@tcd.ie](mailto:bourkem4@tcd.ie))

Type: Optional TSM, PSG preference given to Geography majors

Pre-requisites: None

This is a 6-day field residential course in western Ireland, usually taking place late August.

Outline: Did you know that the world’s largest wave was recorded off the coast of Ireland in 2016 - a wall of water 19 m high? Or that 180 km/hr winds ripped across Ireland peeling the roofs off houses like tin cans, killing hundreds of people in its path?

There is no doubt that the severity of extreme climate events has become increasingly evident. However, separation of global & regional trends from local effects is confounded by 1. Internal landscape system dynamics and 2. External forcing factors such as changes in land use, river and coastal engineering. Geomorphology is a critical discipline in disentangling climate change impacts from other controlling factors.

During this field trip you will examine the geomorphological evidence for extreme events. The sites will include a location where mega clasts (the size of cars) were thrown on top of cliffs 30 m high by waves. We will build your skills and knowledge so that you can understand the role of extreme events in the evolution of the Irish landscape. You will receive field instruction on how to collect data using established and advanced technologies in order to build data sets on key environmental parameters. For example, students will be shown how to deploy drones to collect data from which to build high resolution topographic data sets.

Learning Outcomes: On successful completion of this module students will be able to:

- Classify and describe landforms in a coastal setting.
- Use their knowledge of systems theory as applied to geomorphology specifically with regard to the concepts of feedback, thresholds, and equilibrium.
- Observe the significance of spatial and temporal scales in geomorphology.
- Analyse geomorphological systems in terms of resisting and driving forces.
- Understand a range of dynamic surface processes that are important in the stability of landforms.
Increase their ability to quantitatively use and evaluate geomorphological data with numerical, statistical and cartographical methods.

Further understand relationships between physical and human aspects of environments and landscapes.

Formulate research hypotheses.

Collect process and analyse primary field data.

Conduct field research safely.

Demonstrate technical proficiency in a range of primary data collection methods

Work collectively to collate and analyse the results of fieldwork within strict time constraints.

Distinguish between observations and interpretations and compile a field notebook recording research activities and results.

Increase their ability to synthesize and communicate scientific findings by their interpretation of their fieldwork and present these findings in oral and written form.

Contribute to debates over societal adaptation to extreme events.

**Assessment:** Course work (100%)
GGU44968 GIS and Remote Sensing Applications in Geography  
5 ECTS

Module Co-ordinator: TBC (please contact moelleri@tcd.ie in interim)

Type: Optional (NS, TSM and PSG)

Prerequisite: GGU33933

Outline: Remote Sensing and Geographical Information Systems (GIS) allow a wide range of environmental and human phenomena to be explored across space and time. The ability to detect and map change within the human and physical/environmental sub-systems at a range of scales has the power to inform science, policy, and planning and often becomes essential when scaling up observations / theories derived within a particular place or at a particular time. In this module, students will learn both the theory behind GIS and Remote Sensing techniques, exploring a range of web-based and stand-alone methods for interrogating geo-spatial data. They will be encouraged to do so critically and will gain an understanding of uncertainties and the relative merits of different sources of geospatial information, with particular emphasis placed on resolution and accuracy, both spatially, temporally, and in the spectral domain. The module contains an appropriate amount of hands-on learning, both within the classroom and in students’ own time via accessible web-based platforms/software.

Learning Outcomes: On successful completion of this module students will be able to:

- Explain the importance and relevance of geo-spatial information to a range of Geographical problems
- Critically evaluate the difference between and importance of resolution, scale, and accuracy within geospatial types of data
- Critically evaluate the appropriateness of different remote sensing platforms for a range of research questions
- Use GIS software to analyse geospatial data and explore the relationships between multiple geo-spatial datasets
- Select data of appropriate resolution, scale and accuracy for specific research questions
- Communicate the outputs of GIS/Remote Sensing projects succinctly and effectively and by using correct technical and scientific terminology

Assessment: Course work (100%) MCQ and assessed final project

Module Breakdown: Contact Hours - Lectures = 8 hrs, Practical classes = 18 hrs; Additional Inputs - Reading and work on project = 100 hrs. TOTAL = 126hrs.

Key Texts:


A list of recommended reading materials, standards, manuals, best practice documents is provided in the project section of the module. Each list is relevant to each specific project.
### GGU44936 Globalisation & African Development  
**5 ECTS**

**Module Co-ordinator:** Professor Pádraig Carmody (carmodyp@tcd.ie)

**Type:** Optional (NS, TSM & PSG)

**Pre-requisites:** None

**Outline:** This module explores the nature and impacts of globalisation in Africa. Particular attention is paid to the geography of HIV/AIDS, gender and development, China’s rising role in the continent, oil politics and the so called “resource curse” or paradox of plenty that Africa is the most resource rich continent in the world but also the poorest. Other topics covered included gender and the mobile phone revolution.

**Learning Outcomes:** On successful completion of this module students will be able to:

- Discuss critically the historical evolution of Africa’s incorporation into the global political economy;
- Judge and critique different perspectives on the nature of the globalization in Africa;
- Critically evaluate the influence of organizations such as the International Monetary Fund, World Bank and International Non-Governmental Organisations in Africa;
- Apprehend the construction and interaction between issues such ethnicity, conflict and terrorism; regionalisation and globalization and gender and development;
- Interrogate the geography and evolution of HIV/AIDS in Africa and its causal factors;
- Independently evaluate broader literatures on development in Africa.

**Assessment:** 2 hour examination (50%) Answer 2Q/6; Essay (50%)

**Module Breakdown:** Contact Hours (Lectures = 18hrs; Tutorials = 4 hours; Additional Input (Essay = 52 hrs; Other reading = 85hrs; Revision and examination = 66hrs). TOTAL = 250hrs.

**Key Texts:**


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### GGU44926 Environmental Governance 2  
**10 ECTS**

**Module Co-ordinator:** Dr Rory Rowan (rowanro@tcd.ie)
Outlook: There is little disagreement that far-reaching societal, technological, political, and economic transformations are required if we are to avoid the worst effects of global, anthropogenic environmental change. What form these transformations should take and who should take responsibility for them are, however, far from settled.

This module considers some of the key conceptual debates and environmental conflicts arising in this context. Examination of these debates and conflicts will demonstrate the contested and uneven nature of environmental change and the measures sought to address these changes. The overall aim of the module is to help students develop a more nuanced, critical and multi-disciplinary understanding of environmental change and the different, often contested, ways of responding to such changes.

The module will consist of weekly interactive lectures/seminars, guest lectures, and set readings. Lectures will introduce students to key concepts and perspectives drawn from the broad field of political ecology. Each week part of the class will be set aside for students to develop their research projects. These projects will focus on a key area of environmental contestation in Ireland through a political ecology lens. The projects will involve group work and individual work, written assignments, oral presentations, and primary research. Class attendance is essential.

Learning Outcomes: On successful completion of this module students will be able to:
- Understand and apply key theoretical concepts from the field of political ecology to contemporary environmental debates and issues;
- Identify and critically discuss key sites of environmental contestation in Ireland today;
- Explain why an in-depth understanding of environmental problems today requires an understanding of the political, economic and social contexts out of which they emerge and within which they are managed

Assessment: 100% Course work: Research Project 80% (incl. two written assignments = 40% each), Oral group presentation 20%

Module Breakdown: Contact Hours (Lectures = 10hrs; Seminars = 10hrs); Additional Input (Lecture & Seminar Preparation = 60hrs; Reading = 60hrs; Assessment Preparation = 110 hrs). TOTAL = 250 hrs.

Key texts:
Pre-requisites: None

Outline: This module presents an overview of the historical geography of Ireland from the earliest evidence of human settlement in the Mesolithic through to c.1840 A.D. Throughout the module developments in Ireland are set within appropriate comparative and theoretical contexts. The principal topics explored are settlement, land use and agriculture, the changing environment (including human impacts), patterns of cultural variation and interaction and how these have come together to forge changing landscapes and regions.

Learning Outcomes: On successful completion of this module students will be able to:

- Understand the development of landscapes and regional patterns in Ireland from prehistory to the modern period;
- Place developments in Ireland in appropriate comparative contexts;
- Critically evaluate alternative explanations/interpretations of the pattern of landscape and regional change in Ireland;
- Critically evaluate archaeological, field and documentary evidence relating to this topic.

Assessment: 3 hour examination (50%); coursework (50%)

Module Breakdown: Contact Hours (Lectures = 50 hrs); Additional Inputs (Reading and preparation for class discussions = 100 hrs; preparation and completion of assessment= 100 hrs)

Key Texts:
4. Examinations and Assessment

Throughout your degree, your progress will be evaluated by examination and course work. Details concerning examination procedures are documented in the College Calendar and you are advised to familiarise yourselves with these at the earliest opportunity. Modules are assessed in the semester in which they are taught.

In all cases, the end-of-year Geography mark is calculated according to the relative ECTS weightings of the modules taken.

Please refer to documentation on relevant pathway webpages, be it NS, TSM or PSG when considering contributions of minor or major moderatorships, TSM or percentage contribution of JS years.

The Haughton Prize is awarded annually to the student who achieves the highest overall Geography mark in the Junior Sophister year, and The James Killen prize to the highest performing JS student in PSG. For more information please contact the geography office geography@tcd.ie

Examinations

The regulations governing examinations are set out in the College Calendar. Examination timetables are published in advance of the dates of examinations. See the examinations office website for more details (http://www.tcd.ie/Examinations/Timetables/). You must ensure that you are available for the duration of the examinations period as presented in the College Calendar (http://www.tcd.ie/calendar/).

It is the student’s responsibility to establish the dates, times and venues of examinations

No reminders will be sent to you

The College employs anonymous marking where practically possible. Results will be published by student number. The marking criteria used when marking Geography examination scripts are presented in the relevant section below.

Course work

The form of course work will vary between modules. Details concerning the assessment requirements, value, marking criteria, and deadline/process for submission will be circulated by the module co-ordinator or lecturer when the assessment task is set.

Under normal circumstances, course work will be submitted on a Monday and marked within 20 working days of submission (this does not apply to the Dissertation). The results will be notified to students by the module coordinator or lecturer.

All submitted course work must have a completed Assignment Submission Form attached. These are available from the Geography website – see Courses, Current Students – or from the Geography Desk.
Marks are returned in the form of indicative grades as presented in the table below. These grades are provisional, being subject to moderation at the Examiners’ Meeting.

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Submission of assessed course work in the Sophister Years
It is the student’s responsibility to ensure that you accurately note the deadline and procedure for submission of assessed work.

When work is handed in a register of its receipt is kept. The register includes the date of submission and the student’s signature.

For work that is submitted electronically, the student must obtain acknowledgement from the member of the academic staff responsible that the submission has been received. Unless otherwise stipulated, all written work must be word-processed.

The student must keep a paper and electronic copy of all work submitted for assessment.

Policy regarding absence from in-class assessments
Please note that attendance at all undergraduate classes (lectures, laboratory classes etc.) in the freshman years is mandatory. Unsatisfactory attendance can result in you not being permitted to rise with the year. Please see the college calendar for the regulations regarding attendance (general regulations ii, 17 – 23).

In Sophister years, the importance of attendance increases as both years generally contribute directly to your final degree mark.

Attendance at assessments is compulsory in all years. Students must be available during term and certainly during the teaching term. However, in exceptional circumstances and if a reasonable case is made, staff can make special arrangements for students regarding assessments. Each case will be considered on its merits. Students should contact their tutor and the module coordinator in the first instance to seek advice.

Paid employment, family holidays, weddings, birthdays etc. do not constitute grounds for making special assessment arrangements.

The Undergraduate Studies website contains further information concerning the academic regulations governing study at Trinity College.
Deadlines and penalties for late submission
The time, date and mode of submission of all coursework will be communicated to you by the lecturer concerned. It is your responsibility to accurately note this information and plan your time accordingly. In the event that you are unclear about any aspect of coursework submission, you should seek clarification from the lecturer in advance of the deadline.

Failure to submit assessed work by the stipulated deadline will result in a zero mark for that component. Students failing to submit more than a third of the required coursework in any term will be reported as ‘non-satisfactory’ and may be required to repeat the year (general regulations ii, 25-26). Requests for extensions on medical or other grounds should be made via your tutor in advance of the deadline. Further information can be found in part II of the College Calendar (General Regulations 45).

Students registered with the Disability Office
Students registered with the Disability Office are advised to contact the Module Coordinator or Lecturer at the beginning of a module, to ensure their learning and assessment requirements are met and to enable any adjustments to examination conditions are implemented.

The student should bring a copy of their LENS report with them.

Important note regarding plagiarism
All students (undergraduate and postgraduate, new entrants and existing students) must ensure that they have a clear understanding of what plagiarism is, how Trinity deals with cases of plagiarism, and how to avoid it.

We ask you to take the following steps:

- Visit the online resources to inform yourself about how Trinity deals with plagiarism and how you can avoid it at http://tcd-ie.libguides.com/plagiarism You should also familiarise yourself with the Calendar entry on plagiarism and the sanctions which are applied.

- Complete the ‘Ready, Steady, Write’ online tutorial on plagiarism at http://tcd-ie.libguides.com/plagiarism/ready-steady-write. Completing the tutorial is compulsory for all students.

- Familiarise yourself with the declaration that you will be asked to sign when submitting course work at http://tcd-ie.libguides.com/plagiarism/declaration (coursework/assignment submission forms can be downloaded from Geography’s Undergraduate web page - https://www.tcd.ie/Geography/local/#assignmentsubform)

- Contact your College Tutor, your Course Director, or your Lecturer if you are unsure about any aspect of plagiarism.

Plagiarism is interpreted by the University as the act of presenting the work of others as one’s own work, without acknowledgement. Plagiarism is considered as academically fraudulent, and an offence against University discipline. The University considers plagiarism to be a major offence, and subject to the disciplinary procedures of the University.

Plagiarism can arise from deliberate actions and also through careless thinking and/or methodology. The offence lies not in the attitude or intention of the perpetrator, but in the action and in its consequences.

Plagiarism can arise from actions such as:
   a) copying another student’s work;
   b) enlisting another person or persons to complete an assignment on the student’s behalf;
c) quoting directly, without acknowledgement, from books, articles or other sources, either in
printed, recorded or electronic format;
d) paraphrasing, without acknowledgement, the writings of other authors.
Examples (c) and (d) in particular can arise through careless thinking and/or methodology where
students:

- fail to distinguish between their own ideas and those of others;
- fail to take proper notes during preliminary research and therefore lose track of the sources
  from which the notes were drawn;
- fail to distinguish between information which needs no acknowledgement because it is firmly
  in the public domain, and information which might be widely known, but which nevertheless
  requires some sort of acknowledgement;
- come across a distinctive methodology or idea and fail to record its source.

All the above serve only as examples and are not exhaustive.

Students should submit work done in co-operation with other students only when it is done with the
full knowledge and permission of the lecturer concerned. Without this, work submitted which is the
product of collusion with other students may be considered to be plagiarism.

It is clearly understood that all members of the academic community use and build on the work of
others. It is commonly accepted also, however, that we build on the work of others in an open and
explicit manner, and with due acknowledgement. Many cases of plagiarism that arise could be avoided
by following some simple guidelines:

- Any material used in a piece of work, of any form, that is not the original thought of the author
  should be fully referenced in the work and attributed to its source. The material should either
  be quoted directly or paraphrased. Either way, an explicit citation of the work referred to should
  be provided, in the text, in a footnote, or both. Not to do so is to commit plagiarism.
- When taking notes from any source it is very important to record the precise words or ideas
  that are being used and their precise sources.
- While the Internet often offers a wide range of possibilities for researching particular themes,
  it also requires particular attention to be paid to the distinction between one’s own work and
  the work of others. Particular care should be taken to keep track of the source of the electronic
  information obtained from the Internet or other electronic sources and ensure that it is
  explicitly and correctly acknowledged.

It is the student’s responsibility to ensure you do not commit plagiarism. If in doubt, you
should seek advice from a lecturer, tutor or supervisor on avoiding plagiarism. See Guidelines on Referencing below.

NB: Assignments may be checked using anti-plagiarism software

Guidelines on Referencing

Geography employs the Harvard Referencing system and students must use this method in all written
work (including presentations). Please note the following points:

- You should insert a citation when referring to the work or ideas of others. This can be done
  when you are reviewing existing work or using the work of others to support your own
  arguments.
- You should cite all references within the text using the author’s surname (no first names or
  initials) followed by the year of publication. For example, “Smith (2009) demonstrates that…”
  or “These results support previous work in this area (Smith, 2009).”
• If there are two authors, include both in the citation within the text. For example, “Smith & Jones (2009) demonstrate that...”. If there are three or more authors, insert “et al.” after the first author. For example, if Smith & Jones write a paper with their colleague Bloggs, this should be cited in the text as “Smith et al. (2009) demonstrate that...”.

• When citing multiple works, references must be arranged in chronological order within the text. For example, “These results support previous work in this area (Smith, 2001; Jones, 2004; Smith et al., 2009).

• At the end of your assignment, you must compile a reference list that includes all of the material cited in your work. This differs from other forms of Bibliography that may list work that has not been cited (e.g. recommended reading).

• Your reference list must be in alphabetical order by first author’s surname, with material by individual authors ordered chronologically. For example, the papers above would be listed as:
  Smith, C.D. (2001)
  Smith, C.D. (2009)
  Smith, C.D., Jones, A.B. (2009)

• The precise format of the references varies with publication type. Common examples are:
  
  * Academic Journal papers:
  
  * Books:
  
  * Website:
    Author names (Year) *Title of webpage* (online), URL, [Date Accessed]

For more information see the Freeman Library website:

[https://www.tcd.ie/Geography/freeman-library/](https://www.tcd.ie/Geography/freeman-library/)
### Marking Criteria

Geography uses the following guidelines on awarding grades for essays and examination answers.

<table>
<thead>
<tr>
<th>Class</th>
<th>Mark Range</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>90-100</td>
<td>EXCEPTIONAL ANSWER; This answer will show original thought and a sophisticated insight into the subject, and mastery of the available information on the subject. It should make compelling arguments for any case it is putting forward and show a rounded view of all sides of the argument. In exam questions, important examples will be supported by attribution to relevant authors and, while not necessarily giving the exact date, should show an awareness of the approximate period. In essays, the referencing will be comprehensive and accurate.</td>
</tr>
<tr>
<td>I</td>
<td>80-89</td>
<td>OUTSTANDING ANSWER; This answer will show frequent originality of thought and make new connections between pieces of evidence beyond those presented in lectures. There will be evidence of awareness of the background behind the subject area discussed, with evidence of deep understanding of more than one view on any debatable points. It will be written clearly in a style which is easy to follow. In exams, authors of important examples may be provided. In essays all important examples will be referenced accurately.</td>
</tr>
<tr>
<td>I</td>
<td>70-79</td>
<td>INSIGHTFUL ANSWER; showing a grasp of the full relevance of all course material discussed and will include one or two examples from wider reading to extend the arguments presented. It should show some original connections of concepts. There will be only minor errors in examples given. All arguments will be entirely logical and well written. Referencing in exams will be sporadic but referencing should be present and accurate in essays.</td>
</tr>
<tr>
<td>II-1</td>
<td>65-69</td>
<td>VERY COMPREHENSIVE ANSWER; good understanding of concepts supported by broad knowledge of subject. Notable for synthesis of information rather than originality. Evidence of relevant reading outside lecture notes and coursework. Mostly accurate and logical with appropriate examples. Occasional lapse in detail.</td>
</tr>
<tr>
<td>II-1</td>
<td>60-64</td>
<td>LESS COMPREHENSIVE ANSWER; mostly confined to good recall of coursework. Some synthesis of information or ideas. Accurate and logical within a limited scope. Some lapses in detail tolerated. Evidence of reading the assigned course literature.</td>
</tr>
<tr>
<td>II-2</td>
<td>55-59</td>
<td>SOUND BUT INCOMPLETE ANSWER; based on coursework alone but suffers from a significant omission, error or misunderstanding. Usually lacks synthesis of information or ideas. Mainly logical and accurate within its limited scope and with lapses in detail.</td>
</tr>
<tr>
<td>II-2</td>
<td>50-54</td>
<td>INCOMPLETE ANSWER; suffers from significant omissions, errors and misunderstandings, but still with understanding of main concepts and showing sound knowledge. Several lapses in detail.</td>
</tr>
<tr>
<td>III</td>
<td>45-49</td>
<td>WEAK ANSWER; limited understanding and knowledge of subject. Serious omissions, errors and misunderstandings, so that answer is no more than adequate.</td>
</tr>
<tr>
<td>III</td>
<td>40-44</td>
<td>VERY WEAK ANSWER; a poor answer, lacking substance but giving some relevant information. Information given may not be in context or well explained, but will contain passages and words, which indicate a marginally adequate understanding.</td>
</tr>
<tr>
<td>Fail</td>
<td>35-39</td>
<td>MARGINAL FAIL; inadequate answer, with no substance or understanding, but with a vague knowledge relevant to the question.</td>
</tr>
<tr>
<td>Fail</td>
<td>30-34</td>
<td>CLEAR FAILURE; some attempt made to write something relevant to the question. Errors serious but not absurd. Could also be a sound answer to the misinterpretation of a question.</td>
</tr>
<tr>
<td>Fail</td>
<td>0-29</td>
<td>UTTER FAILURE; with little hint of knowledge. Errors serious and absurd. Could also be a trivial response to the misinterpretation of a question.</td>
</tr>
</tbody>
</table>
Geography uses the following agreed guidelines on marking for project/dissertation assessment.

<table>
<thead>
<tr>
<th>Class</th>
<th>Mark Range</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>80-100</td>
<td>Exceptional project report showing broad understanding of the project area and excellent knowledge of the relevant literature. Exemplary presentation and analysis of results, logical organisation and ability to evaluate critically and discuss results coupled with insight and originality.</td>
</tr>
<tr>
<td></td>
<td>70-80</td>
<td>A very good to excellent project report showing evidence of wide reading, with clear presentation and thorough analysis of results and an ability to evaluate critically and discuss research findings. Clear indication of some insight and originality. A very competent and well-presented report overall but with some room for improvement.</td>
</tr>
<tr>
<td>II-1</td>
<td>60-69</td>
<td>A good to very good project report which shows a reasonably good understanding of the problem and knowledge of the relevant literature. Mostly sound presentation and analysis of results but with occasional lapses. Relevant interpretation and critical evaluation of results, though somewhat limited in scope. General standard of presentation and organisation adequate to good.</td>
</tr>
<tr>
<td>II-2</td>
<td>50-59</td>
<td>A moderately good project report which shows some understanding of the problem but limited knowledge and appreciation of the relevant literature. Presentation, analysis and interpretation of the results at a basic level and showing little or no originality or critical evaluation. Insufficient attention to organisation and presentation of the report.</td>
</tr>
<tr>
<td>III</td>
<td>40-49</td>
<td>A weak project report showing only limited understanding of the problem and superficial knowledge of the relevant literature. Results presented in a confused or inappropriate manner and incomplete or erroneous analysis. Discussion and interpretation of results severely limited, including some basic misapprehensions and lacking any originality or critical evaluation. General standard of presentation poor.</td>
</tr>
<tr>
<td>Fail</td>
<td>20-39</td>
<td>An unsatisfactory project containing substantial errors and omissions. Very limited understanding or, in some cases, misunderstanding of the problem and very restricted and superficial appreciation of the relevant literature. Very poor, confused and, in some cases, incomplete presentation of the results and limited analysis of the results including some serious errors. Severely limited discussion and interpretation of the results revealing little or no ability to relate experimental results to the existing literature. Very poor overall standard of presentation.</td>
</tr>
<tr>
<td>Fail</td>
<td>0-19</td>
<td>A very poor project report containing every conceivable error and fault. Showing virtually no real understanding or appreciation of the problem and of the literature pertaining to it. Chaotic presentation of results and, in some cases, incompletely presented and virtually non-existent or inappropriate or plainly wrong analysis. Discussion and interpretation seriously confused or wholly erroneous revealing basic misapprehensions.</td>
</tr>
</tbody>
</table>
5. Geography Staff and Contact Information

The Geography Undergraduate Teaching and Learning desk is in the School of Natural Sciences Office on the ground floor of the Museum Building.

Email: geography@tcd.ie  
Telephone: +353-(0)1 896 1576  

**Head of Geography:** Prof Iris Moeller  
**Contact:** moelleri@tcd.ie

Members of staff from across the School of Natural Sciences contribute to the teaching programmes in Geography. Specific enquiries relating to individual modules should be directed to the module co-ordinator or the member of teaching staff involved.

### Academic Staff

**Dr Mary Bourke** BA, MA (UCD), Ph.D. (Australian National University) FTCD  
Research Interests: Physical Geography: Geomorphology of Mars and Earth; fluvial, aeolian, mass wasting and rock breakdown, arid zone geomorphology, natural hazards, rock coasts.  
Contact: bourkem4@tcd.ie

**Professor Pádraig Carmody** BA (Dublin), MSc (Dublin), PhD (Minnesota), FTCD, MRIA  
Research Interests: Development and economic geography, political economy, globalisation, Africa.  
Contact: carmodyp@tcd.ie

**Professor Peter Coxon** BSc (Sussex), PhD (Cantab.), FTCD, MRIA, Science course coordinator  
Research Interests: Dating and analysis of landscape change using pollen analysis; biostratigraphy of late Tertiary and mid-late Pleistocene deposits; glacial geomorphology; bog flows; environmental archaeology of buried walls and Early Christian structures in western Ireland.  
Contact: pcoxon@tcd.ie

**Dr Federico Cugurullo** BA, MA (Cagliari), PhD (London)  
Research interests: sustainable urban development; smart cities; eco-cities; experimental urbanism; the ideal city; Southeast Asia; Middle East.  
Contact: cugurulf@tcd.ie

**Professor Anna Davies** BA (Cantab.), MSc (Oxf Brookes), PhD (Cantab), FTCD, MRIA  
Research Interests: Human geography and the environment; environmental values and valuation; environmental planning and governance; environmental conflicts and justice with a special interest in waste management and public participation in environmental issues.  
Contact: daviesa@tcd.ie

**Dr Robin Edwards** BSc (Southampton), PhD (Dunelm)  
Research Interests: Sea level change & climate; foraminifera; quantitative palaeoenvironmental reconstruction; oceanography; coastal change; environmental archaeology.  
Contact: robin.edwards@tcd.ie
Dr Mark Hennessy  BA (NUI), MA (Dublin), PhD (NUI)
Research Interests: Historical geography; history and philosophy of geography; history and theory of cartography; Australasia.
Contact: mhnnessy@tcd.ie

Dr Philip Lawton  BA, MA (UCD), PhD (Dublin)
Research Interests: Urban Social and Economic Change, Suburbanization and Urban Processes, Urban Public Space, Film and the City.
Contact: lawtonp@tcd.ie

Prof Iris Moeller  BA (Oxon), MPhil, PhD (Cambridge)
Research Interests: Coastal geomorphology and management; sea-level rise adaptation; coastal flood risk mitigation; coastal protection provided by dynamic coastal landforms and ecosystems; climate change adaptation.
Contact: moelleri@tcd.ie

Dr Susan P. Murphy  BA, MA, PhD (UCD)
Research Interests: Ethics and climate change; Human rights; Humanitarian and Development practice; Theories of justice (domestic, international, and global); Ethics of assistance; Gender and development.
Contact: susan.p.murphy@tcd.ie

Dr Cian O'Callaghan  BA (Cork), PhD (Cork)
Research Interests: Urban political economy, Creativity and place, Neoliberalism, Urban vacancy and ‘new ruins’.
Contact: ocallac8@tcd.ie

Dr Carlos Rocha  BSc (Lisbon). PhD (Lisbon)
Research Interests: Marine and Environmental Biogeochemistry, Oceanography, Climate Change forcing on Carbon and Nitrogen Cycling, Benthic nutrient cycling, Estuarine nutrient dynamics.
Contact: rochac@tcd.ie

Dr. Rory Rowan  , BA, MA, PhD (Royal Holloway, University of London)
Research Interests: environmental governance, political ecology, geopolitics, the Anthropocene, outer space, intellectual history, artistic collaboration.
Contact: rowanro@tcd.ie

Dr Martin Sokol  IngArch (Bratislava), MA (Grenoble), PhD (Newcastle)
Research Interests: Economic geography; Urban and regional development; Post-socialist geographies; Geographies of finance.
Contact: sokolm@tcd.ie

Professional Staff

In addition to the academic staff list above, the Geography teaching programmes are supported by the invaluable contributions of range of further staff.
Mr Francis Hendron  
Role: Chief Technical Officer (Geography and Geology) - Facilities Management, Management of Technical Staff  
Contact: fhendron@tcd.ie

Dr Elaine Treacy BA (Dublin), PhD (Dublin)  
Role: Chief Technical Officer (Specialist) – Geography Technical Queries, Laboratory and Field Procurement, Facilities Management, Safety Officer.  
Contact: treacyel@tcd.ie

Dr James Canavan BSc (Hons) (Glasgow), PhD (Glasgow)  
Role: Technical Officer - Laboratory and Field equipment Management; Safety Officer.  
Contact: canavaj1@tcd.ie

Library Technical Staff TBC,  
Role: Librarian (Freeman Library)  
Contact: geography@tcd.ie

Members of staff from across the School of Natural Sciences contribute to the teaching programmes in Geography. Specific enquiries relating to individual modules should be directed to the module co-ordinator or the member of teaching staff involved.

6. Facilities, Conduct and Safety

The Discipline of Geography is one of the constituent disciplines of the School of Natural Sciences. Other disciplines within the School include the Disciplines of Botany, Environmental Science, Geology and Zoology. The Discipline of Geography is primarily housed within the Museum Building in New Square. Geography has several dedicated facilities in the Museum Building that may be used by undergraduate students. These facilities include lecture rooms, laboratories and a library.

Laboratories

The Geomorphology Laboratory is the primary teaching laboratory within the discipline. The laboratory is mainly used for soil and sediment based work as well as non-hazardous chemical work.

The Palynology Laboratory is reserved for work that requires the use of hazardous chemicals. It is primarily used for dissertation research projects. The Technical Officer, James Canavan, or Chief Technical Officer (Specialist), Elaine Treacy, must be consulted before undertaking laboratory work in order that the appropriate hazardous chemical training and a lab induction can be arranged.

The Basement Laboratory houses our particle size analysis (PSA) instrument; The Malvern 2000. Anyone required to use this instrument will be given full training in its operation in advance of work commencing.

Safety

The Discipline of Geography Safety Statement is located within Room B8A, Palynology Laboratory.
The safety statement is also available online at [https://www.tcd.ie/Geography/local/healthsafety/](https://www.tcd.ie/Geography/local/healthsafety/). The document contains all relevant safety information for the discipline, including risk assessments, policies and forms.

Undergraduates should familiarise themselves with the specific regulations and safety information for all facilities in the Discipline of Geography. In addition, the general College regulations which are set out in the College Calendar (available from the Freeman and Berkeley Libraries or online at [http://www.tcd.ie/calendar/](http://www.tcd.ie/calendar/)) can be consulted.

Under the *Safety, Health and Welfare at Work Act (2005)*, Trinity College Dublin has a duty to provide, within reason, a safe place of work and safe working practices. As a student using facilities in the Discipline of Geography, you have responsibility for your own safety and that of your fellow students and staff. To this end, all safety protocols and instructions as laid out in the Safety Statement and any additional instructions given by the staff in charge of a class/laboratory practical/fieldtrip must be understood and adhered to.

Please contact Dr Elaine Treacy: [treacyel@tcd.ie](mailto:treacyel@tcd.ie) or Dr James Canavan: [canavaj1@tcd.ie](mailto:canavaj1@tcd.ie) for further support or information.

### Emergencies

Situations which may require emergency response include:

- Fire
- Emergency evacuation due to bomb alerts, gas leaks, chemical spills, biological or radioactive incidents
- Serious accident and injury
- Natural disaster
- Off-site incidents
- Power failure

In the event of an emergency, contact the college Emergency number Ext 1999 (from an internal line) or 01 896 1999 (from a mobile). You should give your name, location and the nature of the emergency. If necessary, you can evacuate the building by using one of the break-glass units.

### Project Work

Before commencing with any new project work, all students must meet with the technical staff and complete a Project Assessment form. This is particularly relevant for Senior Sophister dissertation projects. The main point of contact for undergraduate technical assistance is James Canavan (Room B8A, [canavaj1@tcd.ie](mailto:canavaj1@tcd.ie)). The Project Assessment will help you identify any areas of your proposed work that may need risk assessment and may also be useful for planning and scheduling your work before you begin. All students must also complete a School of Natural Sciences, Discipline of Geography Health Questionnaire and a Personal Details and Emergency Contact Form.
Laboratory Safety

Laboratory protocols exist for each of the laboratories within the Discipline of Geography. These protocols are available in the Discipline of Geography Safety Statement which is available at https://www.tcd.ie/Geography/local/. Laboratory protocol must be signed off before using any of the laboratories. Any new experimental or project work taking place in any of the laboratories will require a Risk Assessment for Laboratory Procedures to be completed before the work can begin. Risk Assessment forms are available from https://www.tcd.ie/Geography/local/healthsafety/. Assessments should be reviewed by a Safety Officer before being read and signed by your Supervisor and the Head of Discipline.

Fieldwork Safety

Fieldwork forms an important part of Geography research and teaching. Any staff member, postdoctoral researcher, postgraduate student or undergraduate student must read the Discipline of Geography Fieldwork Safety Manual prior to undertaking fieldwork. Undergraduate students must initially discuss the proposed fieldwork with their academic supervisor and obtain their consent prior to undertaking any fieldwork. A Fieldwork Risk Assessment must be undertaken before embarking on any fieldwork. The risk assessment should be reviewed by a Safety Officer before being read and signed by your Supervisor and the Head of Discipline.

All of the above assessment forms and manuals are available from the technical staff and online from https://www.tcd.ie/Geography/local/healthsafety/

Fire Safety

The Fire Wardens for the Discipline of Geography are Elaine Treacy (Room 1.2A) and James Canavan (Room B8A). However, individuals are responsible for checking the fire precautions in their work areas. Any defects or potential fire hazards should be reported to the Discipline Fire Wardens or to the Head of Discipline immediately.

Within your work area, note the position of the nearest fire extinguishers and note the position of the nearest fire exit. Under no circumstances should fire doors be wedged or left open. The curtailment of fire spread is dependent on fire doors being kept shut.

When the fire alarm sounds within the building, stop whatever function you are engaged in and leave it in a safe condition. Leave the building by one of the exits. Proceed to the appropriate assembly point for your area. You should ensure to lock your office/lab door behind you when you leave. The assembly point for the museum building is Fellows Square, located outside the arts building.

If you discover a fire, raise the alarm by using one of the break glass units, leave the building, closing or locking all doors behind you, notify the security centre by calling Ext 1999 or 01 8961999 and report to your assembly point.
First Aid

If a student is injured or falls ill during a class, laboratory practical or fieldtrip, the person in charge must be informed immediately. First Aid Kits are located in the Administration Office, Palynology Laboratory, Geomorphology Laboratory, Basement Laboratory and Freeman Library. The First Aid Kits contain a range of dressings and bandages for treatment of minor cuts and burns as well as eyewash solution. If you use any items from the First Aid Kits, please inform a Safety or Technical Officer so the items can be replaced.

Staff trained in Occupational First Aid for the discipline are; Elaine Treacy (Room 1.2A) and James Canavan (Room B8A). They also hold fully stocked First Aid Kits in their offices.

All accidents must be reported to a Discipline Safety Officer and entered in the accident book which is kept in room B8A. An accident report form will be completed for each incident.

If an injury requires a doctor or nurse, the college health centre number is Ext 1556 (from an internal line) or 01 896 1556 (from a mobile). The doctor should be informed of when and where the illness took place. In emergencies where immediate attention or ambulance is required call the emergency number Ext 1999 (or 01 896 1999 from a mobile).

Security

As the museum building is open to the public, it is particularly vulnerable to intruders and potential thieves and as a result, cash, personal items and valuable equipment disappear without apparent explanation. You are advised never to leave a phone, handbag, purse, wallet, camera, personal computer, etc. unattended in the laboratories or unlocked offices. Intruders often set off the fire alarm in order to gain entry to vacant offices. When evacuating the building once the fire alarm sounds, ensure that you lock doors behind you.

If you encounter an intruder or if a person seems to be acting suspiciously, inform a member of staff or phone:


7. The Freeman Library

The Freeman Library is located off the main concourse of the Museum Building. It is supplementary to the main library system of College and to the College Map Library. It provides a wide range of materials useful for coursework and a quiet working environment. In addition to course-related texts, reference books, bibliographies, periodicals, pamphlets, maps, postgraduate theses and undergraduate dissertations

Membership of the library is open to all those reading geography. Enquiries concerning the use the Freeman Library should also be addressed to geography@tcd.ie.

Library opening hours are subject to change but generally follow the pattern of 9.00 a.m. - 5.00 p.m. on Mondays & Wednesdays, and 9.00 a.m. - 1.00 p.m. on Fridays during term time. The Library is normally closed on Tuesdays and Thursdays. However, the Library will open full time, (9.00 a.m. - 5.00 p.m., Monday – Friday) during busy periods such as the weeks prior to exams. Notices will be
placed on the door to let students know any changes in the opening hours. Only key-holders may use the Freeman Library outside these hours and must sign in and out when making use of the library outside normal opening hours.

All books on open access may be borrowed, with the exception of those placed on reserve. No other category of material in the library (periodicals, pamphlets, maps, atlases etc.) may be borrowed except by special arrangement with the librarian. Borrowers are responsible for all books until they are returned. Undergraduate students may borrow up to three books at a time for a period of one week.

During normal opening hours, reserved books may be consulted only in the library. Books placed on reserve may be borrowed overnight. Intending borrowers must apply to the librarian after 4.00 p.m. on the relevant day. Reserved books on overnight loan must be returned by 10.00 a.m. the following day. Similarly, books on reserve may be borrowed for a weekend (Friday, 2.00 p.m. - Monday, 10.00 a.m.).

If students need help in finding information, locating books or using databases please do not hesitate to contact geography@tcd.ie.

8. Beyond a Geography Degree

Careers for Geography Graduates

Trinity College geography graduates are to be found in almost every branch of employment. These include teaching at all levels, research in industry, semi-state bodies and academic institutions; planning and development in the civil service, local government and overseas development agencies. Graduates of the Department are also found in industry, marketing, property management, housing management and research, banking, accountancy, advertising, journalism, publishing, librarianship, television, agriculture, soil surveying, meteorology, hydrology and tourism.

The breadth of the subject enables geographers to be more adaptable to cyclical variations in employment opportunities than the graduates of many narrower specialisms. Moreover, the integrating nature of geography has become a major asset in a world of constant change in which many employers seek adaptability and flexibility, rather than narrow technical knowledge which is soon outdated.

Research Opportunities

Geography has a thriving postgraduate community with students engaged in PhD research in both human and physical geography. Further research information will be available from the Geography Research Directory.
The School of Natural Sciences also runs taught M.Sc. programmes in Environmental Science and Biodiversity & Conservation. These one-year courses comprise 60 ECTS of specialist taught modules followed by an independent research project worth 30 ECTS.

The Masters in Development Practice (MDP) is a one year interdisciplinary degree programme consisting of twenty academic modules across four intersecting disciplines—health, natural, social, and management sciences combined with cross-sectoral field training, professional work-based placements, and a research based dissertation. It blends theory and practice, science and social science to further international development solutions. It is part of a global network under the remit of the United Nations Sustainable Development Solutions Network headquartered in Columbia University in New York.

Further course details including admission requirements and applications process can be obtained from the Postgraduate Prospectus on the Graduate Studies website or via the School of Natural Sciences.