

***Bachelor of Science in  
Geography and Geosystems***

**THIRD YEAR**

**Academic Year 2025/2026**

Programme Coordinator: Dr Terry Morley (he/him)

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All students are cordially invited to address any issues, and questions, they may have about the program or modules with your program coordinators. Make an appointment or drop into our office hours.

### **Introduction Year 3**

Core modules in Semester 1 focus on the introduction to GIS, alongside the development of career readiness and research design. These skills will support the student in semester 2, regardless of their chosen pathway, and in Year 4, when they must apply their research and technical skills during their independent research projects.

The work, research, or Erasmus placements in Semester 2 will enable students to apply their class-based skills critically in a real-world setting. Specific learning outcomes thus relate to developing graduates with practical and applied experience in this regard. Placements will be organized through the Discipline of Geography. Students will also be introduced to International Programme exchange opportunities by the Geography Erasmus Coordinator. Students opting to complement their portfolio with further studies will also have the opportunity to enroll in modules from pathways and/or modules that they have not chosen in year 2 as well as from the great diversity of modules available within the College of Arts.

*On the successful completion of Year 3, students will be able to:*

- Apply skills for sourcing, manipulating, and interpreting spatial data.
- Recognise and describe the functionality of geographic information systems.
- Obtain spatial data from secondary sources such as the Central Statistics Office, Met Eireann, Marine Institute, Ordnance Survey Ireland, and Geological Survey Ireland and employ that data practically within a GIS.
- Apply GIS to identify, explore, understand, and solve spatial problems. Define research and understand the relationship between theory and research.
- Demonstrate an understanding of what constitutes a *geographical* research problem.
- Apply the fundamental steps involved in the design and execution of a research project.
- Appraise career development opportunities.

- Actively engage with the work market.

### **Academic Supervisors:**

At the beginning of Year 3 each student will be paired with an academic supervisor based on their research interests. The academic supervisor will guide students with the design of their research proposal (TI335 – Year 3, Semester 1), placement opportunities (Work, Research, or Erasmus – Year 3, Semester 2), and their final year thesis in Year 4. To pair students with supervisors, students are asked to indicate their general field of interest according to the list below.

- Late Glacial and Holocene Paleoenvironmental change, Pollen Identification
- Beach – Dune Systems (Mapping); Coastal Sedimentology; Coastal Risk
- Environmental geochemistry; Spatial Analysis (GIS); Environment & Health; Soil Chemistry
- Lake sedimentary Archives; Chironomid sub-fossil Identification; Lake ecosystems
- Glacial Geology; Quaternary Landscape Evolution; Sedimentology
- Monitoring of Coastal Systems; Drone Mapping: Data Analysis; Geomorphology
- Nature – Based Solutions; Landscape restoration; Habitat Assessment; Conservation Ecology
- Marine Spatial Planning; Community Based Action Programmes; Coastal Pollution
- Palaeoceanography, Oceanography, Marine Climate Archives; Marine Microplastics

If students are unsure about themes, change their minds, or if supervisors believe that students would be better placed with someone else, a reassignment of supervisors is possible. The goal is that students engage with a research field that they are interested in or are passionate about.

### **General Useful Information:**

- **Academic Calendar and Key dates:** visit <https://www.universityofgalway.ie/registry/academic-term-dates/>
- **College Office:** for general inquiries email: [collegearts@nuigalway.ie](mailto:collegearts@nuigalway.ie)

Location: Room 1019 (Tuesdays & Thursdays) and Room 2041 (Wednesdays) in the Arts Millennium Building. Office Hours: Tuesday - Thursday, 10.30am - 12.30pm & 2.30pm - 4pm

- **Examination Office:** visit <https://www.universityofgalway.ie/exams/>
- **Students Union:** visit <https://su.nuigalway.ie/>
- **University of Galway Registration Office:** visit <https://www.universityofgalway.ie/registration/>
- **Student Support Services:** visit <https://www.universityofgalway.ie/student-life/student-support/>

## Semester 1

| Year 3 Semester 1 |         |                                                  |      |      |
|-------------------|---------|--------------------------------------------------|------|------|
| CORE              | Code    | Title                                            | ECTS | Sem. |
|                   | TI3500  | Professional Skills and Pathways for Geographers | 10   | 1    |
|                   | BSS2103 | Introduction to Sustainability                   | 5    | 1    |
|                   | TI335   | Research Project Design and Development          | 5    | 1    |
|                   | TI2101  | Introduction GIS                                 | 10   | 1    |

*Please note that times and venues are subject to changes. Please track information on Canvas to stay on top of times and venues for each module*

| Semester 1 | Monday                     | Tuesday                         | Wednesday | Thursday           | Friday          |
|------------|----------------------------|---------------------------------|-----------|--------------------|-----------------|
| 09:00      |                            | BSS2103<br>Alice Perry<br>CE342 |           | TI335*<br>CSB-1006 |                 |
| 10:00      | TI2102 L<br>Emily Anderson |                                 |           |                    | TI3500<br>AC203 |
| 11:00      |                            |                                 |           |                    |                 |
| 12:00      |                            |                                 |           |                    |                 |
| 13:00      |                            |                                 |           |                    |                 |
| 14:00      | TI2102 P*<br>AC 216        |                                 |           |                    |                 |
| 15:00      | TI2102 P*<br>AC 216        |                                 |           |                    |                 |
| 16:00      | TI2102 P*<br>AC 216        |                                 |           |                    |                 |
| 17:00      |                            |                                 |           |                    |                 |

*P \* Student only attends 1 practical per week*

*TI335\* Additional tutorials will be scheduled*

### **CORE: TI335 Research Project Design and Development**

| Lectures     | Thursday: 09:00 Venue: CSB-1006                                                              |
|--------------|----------------------------------------------------------------------------------------------|
| Coordinator: | Dr Maura Farrell                                                                             |
| E-mail       | <a href="mailto:maura.farrell@universityofgalway.ie">maura.farrell@universityofgalway.ie</a> |

This course is designed to prepare students for undertaking their dissertation in Year 4 of the Programme. By starting to design research projects in Year 3 BSc students are given the opportunity to engage with their research interests early and design more comprehensive and meaningful projects. Further, designing research projects in Year 3, allows students to use semester 2 of Year 3 to deepen competencies gained via a Work, Research, or Erasmus placement and to apply these when returning in Year 4. The module includes guidance in literature searching, academic writing, and the

design of a research proposal. Students will also be introduced to some of the principal analytical methodologies used by geographers and social scientists, learning highly relevant and transferable skills in the process.

On successful completion of the module students should be able to:

- be able to define research and understand the relationship between theory and research
- understand what constitutes geographical research problems.
- have developed an awareness of the fundamental steps involved in the design and execution of an ethical research project
- Construct an effective research proposal

### **CORE: TI3500 Professional Skills and Pathways for Geographers**

|                 |                                                                                            |
|-----------------|--------------------------------------------------------------------------------------------|
| <b>Lectures</b> | <b>Friday: 10:00 – 12:00 Venue: AC203</b>                                                  |
| Coordinator:    | Dr Thomas Weiss                                                                            |
| E-mail          | <a href="mailto:thomas.weiss@universityofgalway.ie">thomas.weiss@universityofgalway.ie</a> |

The main purpose of TI3500 is to prepare you for undertaking your work OR research placement in Semester 2. It is a compulsory module worth 10 ECTS credits. This course will introduce students to professional skills that will be crucial to their careers after university. It will guide students into how to utilize the skills they have learned throughout their undergraduate degree and how to enhance and build on these transferable skills. Crucially the module will focus on ethical professional actions and how to work with civil society partners, community groups, and other actors in a competent manner. Professional skills include presentation skills, teamwork, negotiation, report writing, applying for jobs/grants/ approval, and other skills that we will cover in this module.

On successful completion of the module students should be able to:

- Demonstrate professional skills and qualities
- Utilise this course to enhance their CV and cover letter
- Present information in oral and written formats
- Manage their academic and personal development
- Be aware of their transferable skills
- Reflect on their strengths and the gaps in their knowledge and use this module to begin to fill the gaps
- Reflect on your work/research placement and practice and link it to other modules within the BSc program.

### **CORE: BSS2103 Introduction to Sustainability**

|                 |                                                                                                      |
|-----------------|------------------------------------------------------------------------------------------------------|
| <b>Lectures</b> | <b>Tuesday: 09:00 – 11:00 Venue: TBD</b>                                                             |
| Coordinator:    | Dr Gesche Kindermann                                                                                 |
| E-mail          | <a href="mailto:gesche.kindermann@universityofgalway.ie">gesche.kindermann@universityofgalway.ie</a> |

The module is future-oriented and explores the concept of sustainability in the face of global change. It encompasses a wide range of theory and practice, including social, economic, and environmental issues, and links international examples to local context

and relevance. The module will challenge students to critically reflect on sustainability and current approaches to sustainability.

On successful completion of this module, the learner will be able to:

- Define and explain key aspects of sustainability
- Critically assess existing evidence in relation to how sustainability can best be promoted, in the face of global change and uncertainty
- Evaluate approaches employed to lead on environmental issues and the impacts they have
- Apply and appraise sustainable approaches that are used to help reduce environmental pressures and promote sustainability
- Recommend appropriate practices to create a sustainable environment

### **CORE: TI2101 Introduction to GIS**

|              |                                                                                                            |
|--------------|------------------------------------------------------------------------------------------------------------|
| Lectures     | Monday: 10:00 Venue: Emily Anderson Theatre<br>Practical: TBD Venue: AC 216 GIS Lab, Arts/Science Building |
| Coordinator: | Dr Oisin Callery                                                                                           |
| E-mail       | <a href="mailto:oisin.callery@universityofgalway.ie">oisin.callery@universityofgalway.ie</a>               |

This course covers the basic concepts and applications of a geographic information system (GIS). The topics of GIS data concept, data modeling, attribute management, data input, and analysis are explained. GIS software ArcGIS is selected as the main training software package for computer practicals in this course. Students will have general knowledge of GIS and acquire the basic techniques of GIS software to independently produce professional maps and carry out spatial queries and GIS analyses. Upon successful completion of this course, students will be able to independently complete a simple GIS project.

On successful completion of the module students should be able to:

- Understand basic concepts in GIS
- Solve basic GIS application problems
- Acquire computer skills in GIS, including data collection, editing, database management, basic analysis, and map design
- Produce professional GIS maps
- Analyse geographical data using GIS

### **Semester 2**

In Semester 2 students have the opportunity to pursue one of four possible options.

1. **A work placement or internship** will enable students to apply their class-based skills critically in a real-world setting.
2. **A research placement.** Here Students have the opportunity to gain hands-on experience in conducting research under the supervision of a Geography Staff member.

3. **Erasmus Semester abroad.** Interested students will be introduced to International Programme exchange opportunities by the Geography Erasmus Coordinator.
4. **Further studies on campus.** Here students can opt to complement their portfolio with further studies and seize the opportunity to enroll in career and skill-oriented modules

**Work and Research Placements** combine learning in the classroom with learning on the job. They are intended to give participating students a practical appreciation of the needs and modus operandi of the workplace, therefore, broadening and significantly improving their knowledge.

Geography Staff have contacts in diverse areas of the private sector relevant to the core pathways that make up the program.

1. *Coastal and Marine Sciences*
2. *Ecosystem Sciences*
3. *Environmental Planning and Policy*
4. *Palaeo-Sciences*

*For detailed information on Work and Research Placements please consult the Placement Handbook posted on Blackboard (TI3500)*

## **ERASMUS Placements**

The University of Galway has student exchange opportunities with host Universities worldwide that are linked to bilateral agreements on a set number of students traveling between each Host Universities and the University of Galway. This means that the number of students traveling to a specific host institution is limited and therefore places are (or can be) competitive. In addition, this also means that potential destinations may vary from year to year.

Further, for Geography and Geosystems students it is important to keep in mind that Host Universities must teach at least 20 ECTS worth of relevant modules (Geography/Geosystems) in English. For the Academic Year 2023/2024 Host Universities that fulfil these requirements are

- Wageningen University; Netherlands
- Gothenburg University; Sweden

Additional places may be available<sup>1</sup> at the following institutions via ENLIGHT:

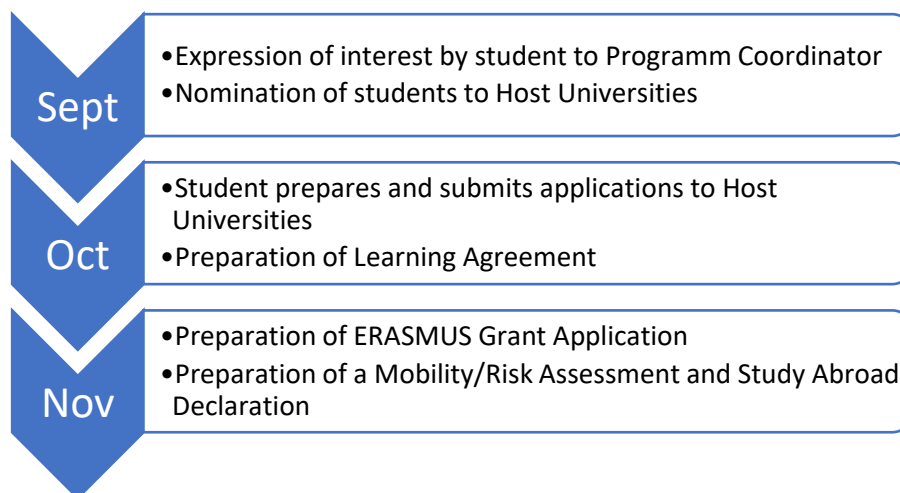
- Comenius University in Bratislava; Slovakia
- Uppsala University; Sweden
- Helsinki University, Finland
- Ghent University, Belgium

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<sup>1</sup> To be confirmed in September 2025

Students are advised to work closely with the Programme Coordinator and to consult the University handbook for outgoing Erasmus students, posted on Canvas (TI3500). The Handbook includes detailed information on the application process, documents needed, and specific deadlines.

For European exchange opportunities for GY134 students, the usual timeline for applications is as follows:



*For detailed information on Erasmus Placements please consult the Erasmus Handbook posted on Blackboard (TI3500)*

- ***If the student is accepted for an Erasmus placement***, they will send in their application (*note the strict deadlines*) and begin to discuss course options, accommodation, etc. with the international office of their host institutions.
- ***If the student is not accepted***, their academic supervisor (via TI335) will advise them on pursuing either a work or research placement or to register for the on-campus options, which allows students to register for 30 ECTS at the University of Galway in a wide variety of courses linked to professional development (*detailed courses included in this on-Campus options are below*).

### **On Campus Option**

Here Students have the opportunity to engage with the Universities *Designing Futures Programme*. This program was designed to promote student engagement with civic society, community, and enterprise while expanding their education and preparedness for life and a career. The objective of this program is to empower students to design personalized skills development pathways and to ensure graduates' transversal skills achievements are recognized alongside their degree.

Students will be required to register for at least 15 ECTS from the *Designing Futures Programme* which includes the following modules:

| <b>Code</b> | <b>Title</b>                                                                    | <b>ECTS</b> |
|-------------|---------------------------------------------------------------------------------|-------------|
| MG3115      | <i>Megatrends</i>                                                               | 5           |
| AJ2114      | <i>Communicating through Storytelling</i>                                       | 5           |
| TBD         | <i>Design Your Life</i>                                                         | 5           |
| TBD         | <i>Global Engagement</i>                                                        | 5           |
| PSXXX       | <i>Vertically Integrated Projects</i>                                           | 5           |
| AJ2101      | <i>Introduction to Wrongful Convictions</i>                                     | 5           |
| AJ2102      | <i>Online and Social Media: T &amp; P</i>                                       | 5           |
| AJ2110      | <i>How Television Lobotomized the World</i>                                     | 5           |
| AJ2116      | <i>Global Migration and Media: Refugees, Climate, Misinformation and Crisis</i> | 5           |
| AJ4105      | <i>Media Law and Ethics</i>                                                     | 5           |

The remaining 15 ECTS (or less) Students can choose from the geography syllabus

| <b>Code</b> | <b>Title</b>                                  | <b>ECTS</b> |
|-------------|-----------------------------------------------|-------------|
| TI236       | <i>Environmental Planning (or)</i>            | 5           |
| TI253       | <i>Spatial Planning of Marine Environment</i> | 5           |
| LW358       | <i>Environmental Law II</i>                   | 5           |
| TI2106      | <i>Introduction to Paleoclimatology</i>       | 5           |
| TI2106      | <i>Field Studies in Palaeoclimate</i>         | 5           |
| TI258       | <i>Rural Environments</i>                     | 5           |
| TI230       | <i>Economic Geographies</i>                   | 5           |