

<div class="printBefore">
<h1 class="pageTitle">GEOG40820 Introduction to ArcGIS</h1>
<h2>Academic Year 2019/2020</h2>

Geographic Information Systems (GIS) allow the acquisition, storage, analysis and visualisation of location-based data. GIS are increasingly applied in research and practice across a wide range of disciplines and sectors (e.g. planning, demographics, health, social and environmental sciences) and, as such, GIS skills are valuable, transferable and highly sought after.

This module will introduce students to ArcGIS, the most widely used GIS software package. It will enable students developing an understanding of conceptual, theoretical and practical geographical considerations and, most importantly, gaining practical GIS skills for their use and application. These skills will cover spatial data creation, sourcing, management, mapping and geoprocessing.

The module is largely delivered through hands-on computer lab-based practicals, complemented with lectures that will cover theory and analytical themes that GIS are designed to handle. The practicals will focus on the analysis, visualisation and interpretation of spatial data to support environmental and socio-economic assessments, using demonstrative examples and problem-solving exercises. A significant part of the learning will be self-directed, allowing students to develop their skills and spatial awareness through the design and delivery of a spatial analysis project, tailored to individual research and/or interests.

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<div style="text-align:center;"><p>Curricular information is subject to change</p></div>

What will I learn?

Learning Outcomes:

<p>On successful completion of the module the student will have:

- Theoretical and practical knowledge of GIS applications, spatial data sources and data management issues;
- Working competence of the ArcGIS software package;
- Ability to demonstrate the application of GIS tools to support environmental and socio-economic assessments;
- Spatial awareness for data interpretation; and
- An understanding of the relationship between spatial analysis and report writing.

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Indicative Module Content:

<p>ArcGIS interfaces; Adding data; Layer properties; Projections and transformations; Creating and editing shapefiles.

Attribute tables - Creating and managing fields; Geometry calculations; Symbology; Transparency.

Geodatabases. Data types and organising data; Relationships between objects.

GPS and Mobile Apps.

Accessing online data.

Spatial analysis with ArcToolbox: Merge, buffer, clip, erase, intersect, spatial join.

Map layouts: Components; Exporting images.

Working with raster datasets: Spatial analyst tools.</p>

How will I learn?

Student Effort Hours:

Student Effort Type	Hours
Lectures	10
Practical	14
Specified Learning Activities	26
Autonomous Student Learning	120
Total	170

Am I eligible to take this module?

<div class="subHeadCB">Requirements, Exclusions and Recommendations</div>

Learning Requirements:

<p>None required</p>

Learning Recommendations:

<p>Basic file management
IT skills</p>

<div class="subHeadCB">Module Requisites and Incompatibles</div>

Incompatibles:

GEOG40770 - GIS for Env. Assessment, GEOG40850 - GIS for Environ Investigations

How will I be assessed?

Assessment Strategy

Description	Timing	Open Book Exam	Component Scale	Must Pass Component	% of Final Grade
Assignment: Critical review of GIS applications	Week 4	n/a	Graded	No	20
Project: A spatial analysis on a topic of choice	Coursework (End of Trimester)	n/a	Graded	No	50
Studio Examination: GIS test	Week 12	n/a	Graded	No	30

<div class="row">
<div class="col-sm-6">Carry forward of passed components
Yes</div>
</div>

What happens if I fail?

Resit In	Terminal Exam
Spring	No

Assessment feedback

<div class="subHeadCB">Feedback Strategy/Strategies</div>
<p>* Feedback individually to students, post-assessment
* Group/class feedback, post-assessment
* Peer review activities
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<div class="subHeadCB">How will my Feedback be Delivered?</div>
<p>Individual feedback will be provided via Brightspace post-assessment. This will be complemented with in-class feedback. The project assignment will be submitted in printed form and peer-review feedback will be requested in class post-completion.</p>

Reading List

Associated Staff

Name	Role
Assoc Professor Ainhoa Gonzalez Del Campo	Lecturer / Co-Lecturer

Associated Staff (continued)

Name	Role
Dr Tobi Morakinyo	Lecturer / Co-Lecturer
Dr Tine Ningal	Lecturer / Co-Lecturer

<nav class="white-box no-left-arrow zero-top-margin">
<h1 class="printOnly"> UCD Course Search
Introduction to ArcGIS (GEOG40820) </h1><h3 class="printOnly">Academic Year 2019/2020</h3><p class="printOnly">The information
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<h4 class="noPrint">Introduction to ArcGIS (GEOG40820)</h4>
<dl>
<dt>Subject:</dt>
<dd>Geography</dd>
<dt>College:</dt>
<dd>Social Sciences & Law</dd>
<dt>School:</dt>
<dd>Geography</dd>
<dt>Level:</dt>
<dd>4 (Masters)</dd>
<dt>Credits:</dt>
<dd>10.0</dd>

<dt>Trimester:</dt>
<dd>Autumn</dd>
<dt>Module Coordinator:</dt>
<dd>Dr Tobi Morakinyo</dd>
<dt>Mode of Delivery:</dt>
<dd>Face-to-Face</dd>
<dt>Internship Module:</dt><dd>No</dd>

<dt>How will I be graded?</dt>
<dd>Letter grades </dd>

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<div class="noPrint" style="text-align:center; margin-top:10px;"><button class="menubutton" onclick="window.print()"><i class="fa fa-print fa-fw"> Print
Page</button>
(Google Chrome is recommended when printing
this page)</div>

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