Geographical Information Systems

NB2122 English course information

GENERAL

Official source section General

Official title	Geographical Information Systems (GIS)
Course code	NB2122
Study area	Natural Sciences
Credits	5 EC
Indicative price	From EUR 410

Course schedule

This course has a fixed start date. Consult the annual timetable to see when the course begins.

Course content

Platforms such as Google Maps have made digital maps and satellite imagery part of everyday life. In environmental research, geographic information systems, or GIS, also offer many ways to use and analyse geographic images. From a desk, researchers can investigate the distribution of plastic pollution in rivers, relationships between living environments and health, and the effects of rainfall on elephant behaviour.

GIS is a tool, often a software package, for managing geographic data, analysing spatial components, and producing clear digital maps that communicate the results. Spatial factors matter in many social issues, so GIS is used in numerous applications and sectors. Through examples and exercises, this English-language course introduces the concepts of spatial analysis and GIS. Alongside the theory, exercises and case studies teach you to analyse spatial data with QGIS.

Learning objectives

After completing the course, you will be able to:

- explain the principal concepts and basic principles of geographic information systems
- organise spatial data from different sources, including remote sensing
- distinguish between spatial interpolation and estimation methods
- translate a problem into a sequence of operations using a flowchart and perform the analysis in QGIS
- present results visually on an informative map
- apply your knowledge and skills to an environmental-science case

SIGNING UP

Official source section Signing Up

Eligibility

Anyone may register.

Registration information

The course has already started and will next be offered in the following academic year.

Prior knowledge

This advanced bachelor course is taught entirely in English, so good reading knowledge of English is desirable. You are also expected to be comfortable using a computer.

GUIDANCE

Official source section Guidance

Guidance format

This course has a fixed start date. Guidance includes online and in-person meetings.

Quarter 1 meetings

Tutor: Dr E Bijnens.

1. Thursday 3 September 2026, online opening meeting, 19:30-20:00
2. Saturday 19 September 2026, tutorial during the themed study day in Utrecht, 10:00-12:00
3. Thursday 8 October 2026, online meeting on blocks 1-3, 19:30-21:00
4. Thursday 5 November 2026, online meeting on blocks 4-6, 19:30-21:00

Teaching staff

Dr Esmée Bijnens, examiner, and Dr Ir Susanne Vogel, deputy examiner.

EXAM

Official source section Exam

Assessment method

Digital individual examination with multiple-choice questions and an assignment.

Registration for the examination

You must register for an examination yourself and do so before the applicable deadline.

Assessment dates

- Digital individual examination: by arrangement
- Assignment: by arrangement

Permitted examination resources

- the online dictionary
- the online calculator
- the online dictionary provided for ANS

MORE INFO

Official source section More Info

Course materials

The course combines theory and assignments. The online learning environment guides you through the materials and links automatically to other sources. You receive GIS Fundamentals by Bolstad and Manson, 2022, which provides the theoretical background. All required data are supplied for the assignment, which uses QGIS. QGIS can be downloaded and used free of charge.

Technology used

- the online learning environment
- QGIS software
- access to the required data

Online learning environment

OU recommends beginning the course on its page in the online learning environment at www.ou.nl/mijnOU. This page contains the latest course information, explanations of study tasks, sample examinations, recordings of meetings where available, and a forum where students can ask questions and read answers.