GEOGRAPHICAL INFORMATION SYSTEMS

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| Lecturers : 7 | TC : 0.0 | PW : 0.0 | Autonomy : 4 | Study : 21 | Project : 0.0 | Language : AN

Objectives

With this course, the objective is to get familiar with Geographical information systems (GIS) and to understand and use their fundamental tools, as well as the possibilities GIS offer and their limits. For this, the open-source software QGIS will be used, and real data from various sources representative of the transverse nature of these tools will be analysed, with particular emphasis on the environment.
This course is shared with: Master SOAC (M1); Master RisE / Water & Wind engineering (M1).

Keywords : GIS, data, visualisation, QGIS

Programme	1. What is a GIS ? / Getting started with QGIS /. Graphic semiology and styles / Map types
	2. OpenStreetMap / Where to find data ?
	3. Attribute tables / Symbols
	4. Creating a layer / Georeferencing
	5. Data selection / Joining attributes / Geoprocessing
	6.. Data collection using a smartphone
	Each lecture will be applied straight away in the form of a tutorial.

Learning outcomes	• Finding relevant data
	• Presentation of data on a map with good use of semiology
	• Proficiency in QGIS
	• Being able to use GIS for various topics

Independent study	Objectifs : Group project : presenting and synthetising a study
	Méhodes : The last slot is reserved for project presentations, while the penultimate one is an autonomy slot. The latter aims at giving the students time to finalise their projects as well as to have discussions and self-evalutations between groups.

Core texts	QGIS project, *QGIS USER GUIDE,* url : https://docs.qgis.org/3.22/en/docs/user_manual/, 2022

Assessment	The students are marked based on their group project, with 60 % of the mark for a report and 40 % for the presentation.