

Geographic information systems

Course title - Intitulé du cours	Geographic information systems
Level / Semester - Niveau /semestre	M2/S1
School - Composante	Ecole d'économie de Toulouse
Teacher - Enseignant responsable	Youen Grusson
Other teacher(s) - Autre(s) enseignant(s)	
Other teacher(s) - Autre(s) enseignant(s)	
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Other teacher(s) - Autre(s) enseignant(s)	
Other teacher(s) - Autre(s) enseignant(s)	
Lecture Hours - Volume Horaire CM	4
TA Hours - Volume horaire TD	20
TP Hours - Volume horaire TP	0
Course Language - Langue du cours	English
TA and/or TP Language - Langue des TD et/ou TP	English

Teaching staff contacts - Coordonnées de l'équipe pédagogique :

Youen Grusson youen.grusson@wanadoo.fr

Course's Objectives - Objectifs du cours :

This course aims to introduce students to the concepts and methods of geographic information systems (GIS). This module aims to provide theoretical knowledge and illustrate the interest of GIS in the contexts of research and projects in economics and ecology. This module will also allow the transfer of knowledge between students, according to the prerequisites of the different disciplines. A practical example of an impact study will be treated and will allow students to be confronted with the manipulation of several layers of information, as well as with the notions of landscape ecology and their applications.

Course outline :

The lessons will define GIS, their fields of application, through concrete examples. The courses will discuss the notions of scales, data sources, types of data but also geographical phenomena (georeferences, coordinate systems, cartographic projections). The TD will be the subject of the handling of a software, in order to manipulate several tools and layers of data. The set will introduce concepts and tools to allow the handling of geographical data and the production of maps in an autonomous way, for example in the context of an impact study.

Prerequisites - Pré requis :

None

Grading system - Modalités d'évaluation :

Students will present a small project using GIS and their oral presentation will be evaluated.

Bibliography/references - Bibliographie/références :

Clarke K.C., 2003. Getting Started with Geographic Information Systems. Fourth edition, Prentice Hall, New Jersey, 338 p.

Demers M. N., 2009. Fundamentals of Geographic Information Systems, 4th ed. Wiley, New York, 443 p.

Distance learning – Enseignement à distance :

Distance learning can be provided when necessary by implementing, for example: / En cas de nécessité, un enseignement à distance sera assuré en mobilisant, par exemple :

- Interactive virtual classrooms / Classe en ligne interactive
- Recorded lectures (videos) / Vidéo enregistrée de la présentation du matériel pédagogique
- MCQ tests and other online exercises and assignments / QCM et exercices en ligne
- Remote (online) tutorials (classes) / TP/TD à distance
- Chatrooms / Forums