

Engineering methods

CAD-GIS

AIMS

CAD:

Computer Aided Drawing [CAD] is a discipline that produces technical drawings with computer software. It is distinguished from image synthesis in that it does not involve the rendering of a numerical model but the execution of graphical commands (lines, various forms ...). As a result, in DAO, the mouse and the keyboard replace the pencil and other instruments of the designer.

Have a first level of knowledge of the panorama of the DAO tools of the market and master the functionalities required in the tool of CAD most used in the sector (Autocad) 2D and 3D. Second part of this EC allows the student to work on a new CAD tool - Revit. 3D modeling software dedicated to the building sector, Revit brings together the fields of activity of architecture, fluids and structure. New flagship of the Autodesk editor, it integrates the concepts of BIM [Building Information Modeling], which allows to capitalize all the data of the lifecycle of a construction.

GIS:

Introduction to GIS [Geographic Information System]

The objectives of the course are to:

- understand the different types of geomatic data;
- understand the usefulness of GIS;
- retrieve, work with, analyze and visualize geomatic data;
- create a cartography.

CONTENT

1. AUTOCAD :

- AutoCAD Basic Tools
- Wired 2D - Ex. Building
- 2D-3D Relations, Paper Space
- 3D work, Surfaces & Solids

2. REVIT :

- Presentation of REVIT
- Modeling step by step: grids; level; post; beam; Wall ; opening ; floor; roofing; balcony; terrace; staircase; vault ; foundation
- Family
- Reinforcement
- Leaves, cartridges and layout

GIS:

Software used:

- QGIS (<https://www.qgis.org/fr/site/>) ;
- Excel ;
- Illustrator [option].

IDENTIFICATION

CODE : GCU-3-S2-EC-DAO-SIG
ECTS : 1.0

HOURS

Lectures : 2.0 h
Seminars : 6.0 h
Laboratory : 8.0 h
Project : 0.0 h
Teacher-student contact : 16.0 h
Personal work : 14.0 h
Total : 30.0 h

ASSESSMENT METHOD

CAD:
Continuous during the TP sessions

GIS:
The assessment will be a folder with:
- a cartography in jpeg, pdf format ;
- a database;
- a QGIS project.

TEACHING AIDS

TEACHING LANGUAGE

French

CONTACT

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