# Faculty of Economic, Social and Political Sciences



## GETI2101   Information systems analysis and design

[65h] 7.5 credits

**Teacher(s):**     Manuel Kolp, Alain Pirotte
Language:     French
Level:     Second cycle

## Aims

This course teaches the various stages of modeling an information system, more particularly the database systems, by using UML, the Unified Modeling Language.
The course concentrates on the various requirements analysis and conceptual modeling techniques throught the study of the models proposed by UML: use case, class, sequence, collaboration, activity, statechart,object diagrams, operations specification, etc.
The design phases are also covered through relational databases development, as well as their exploitation through SQL (StructuredQuery Language).

## Main themes

This module aims at studying and using, but also evaluating UML, the Unified Modeling Language) for modeling and developing enterprise software information systems. It also covers the stages of analysis and design of data bases.

## Content and teaching methods

Content :
" To present the development of a system while referring directly to software engineering
" To familiarize the students with the aspects of language UML.
" To teach the various models proposed by UML
" To introduce the analysis and the modeling of data bases and its relationship with UML.
" To introduce the exploitation and the maintenance of databases through the SQL language.
" To use, from case studies, UML models for the analysis and design of a software system.
Methods:
" Theoretical content including the participation of the students (preliminary readings);
" Exercises allowing to practice the modeling of information systems;
" Interactive tutorials with self-evaluation
" Intermediary practical evaluation
" Individual research paper
" Real case study for which the students will work in groups with identified roles (including a technical report)

## Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

Prerequisite : ECGE1215 (algorithmic et programming, introduction to object oriented development, knowledge of java)
Evaluation : Written Exam (MCQ), individual paper, group assignment, intermediary practical evaluation
Support : Bennett, S. McRobb and R. Farmer, Object-Oriented Systems Analysis and Design, 2nd ed, McGrawHill, 2002.
Elmasri, R. and S. Navathe, Fundamentals of database systems, 4nd ed, Addison-Wesley, 2004.
References : idem
Pedagogic team: Assistants of the ISYS unit