

COMPUTER SCIENCE MODULE INFORMATION SYSTEM DESIGN AND CONCEPTION

Dates: 4 weeks in June

Participants: Sophomores, Juniors and Seniors in Management or Computer Science

Contact time: 36h contact time (seminar, lab work, case study and project)

Course Requirements:

None (the course is based on an intuitive/logical approach to building an information system)

Language of instruction: English

Course Evaluation:

- Student attendance, participation and written work is evaluated daily.
- A final written presentation is required for the two case studies and for the project.

Instructor: Christian Khoury

Course Contents:

The goal of the modeling of an information system is to arrive at a satisfying description of its structure and behaviour. The importance of modeling in the domain of information systems is growing due to their increasing complexity. In this course, students will learn to use software tools that facilitate the modeling process while including diverse variables such as needs analysis, consistency control, database design and documentation.

- The first 2 weeks of the program, mornings will be devoted to the presentation of theoretical concepts in Computer Science, while the afternoon will be dedicated to practical laboratory work.
- Weeks 3 and 4 will be dedicated to a case study. Theoretical concepts essential to resolving these case studies will be presented at regular intervals to encourage greater interaction.
- Throughout the program, Wednesdays and Thursdays will be dedicated to an interdisciplinary project work closely supervised by an instructor. In groups of 6 to 8, the students will put into practice the methodology learned in Management and Computer Science in order to design an IS for a "real world" application, e.g. an airport Traffic Management, a DVD rental system or an online travel reservation system.

Week 1

Information systems and how to design them

- What is an information system?
- Modeling goals
- Modeling process
- Mapping enterprise processes to IS functionalities
- Concepts and fundamentals of information system design
- Requirements Analysis : UML case study

Lab work

- Introducing UML for process description

Week 2

Specification Models

- Defining a structural and behavioural model
- Identifying domains, locating information
- Descriptive data model: the entity/relation model
- Presenting UML diagrams for structural and behavioural Modeling

Lab work

- Manipulating UML diagrams

Week 3

Analysis of enterprise requirements

- Enterprise Requirements Analysis
- The process of analysis: UML case study

Case Study

Analysis of enterprise requirements

- Workflow design
- Existing system diagram comprehension

Week 4

Case Study

Designing a new information system

- Modeling classes
- Defining class diagrams
- Defining workflows

MANAGEMENT MODULE PROJECT PLANNING

Dates: 4 weeks in June

Participants: Sophomores, Juniors and Seniors in Management or Computer Science

Contact time: 36h contact time in total (seminar, lab work, case studies and project)

Course Requirements: None. This module is an introduction to Project Management

Language of instruction: English

Course Evaluation:

- Student attendance, participation and written work are evaluated daily.
- A final written presentation is required for the case studies and for the project.

Instructor: Pierre Cupic

Course Contents:

The objective of the course is to teach software development methods and techniques that enable managers to lead large projects while controlling costs, avoiding delays and ensuring quality.

- The first 2 weeks of the program, mornings will be devoted to the presentation of theoretical concepts in Management, while afternoons will be dedicated to practical laboratory work.
- Weeks 3 and 4 will be dedicated to a case study. Theoretical concepts essential to resolving these case studies will be presented at regular intervals to encourage greater interaction.
- Throughout the program, Wednesdays and Thursdays will be dedicated to an interdisciplinary project work closely supervised by an instructor. In groups of 6 to 8, the students will put into practice the methodology learned in Management and Computer Science in order to design an Internet site able to simulate one of the following applications: Airport Traffic Management, a DVD rental system or an online travel reservation system.

Week 1

Fundamentals of Project Planning

- The planning cycle
- List of tasks and relations
- Evaluating a project's length
- Building a PERT network

Lab work

- Getting used to MS-project

Week 2

Project Resource Management

- Evaluating resource needs
- Distributing resources
- Cost calculations
- Scorecards

Lab work

- Putting classroom theories into practice

Week 3

Case Study

- Piloting a company intranet project

Week 4

Case Study

- Budgetary planning
- Case study: installing new business software applications

French Language and Culture Module

Dates: 4 weeks in June

Participants: Sophomores, Juniors and Seniors in Management or Computer Science

Contact time: 45hrs (language instruction, conference and cultural activities,)

Course Requirements: No previous knowledge of French Language required.

Language of instruction: French

Course Evaluation:

- Student attendance and participation will be evaluated daily and taken into account in the final grade. At the end of the program, the four competences will be formally evaluated.

Instructor: Clémence Cachignard

Course Contents:

- Initiation to French language: This course involves all four language skills: listening, speaking, reading and writing. In functional terms, students will be able to use appropriate greetings and farewells, ask simple questions about daily matters, and respond correctly to questions about their own life and opinions. The course will allow students to satisfy basic survival needs, social courtesies and to have an understanding of main cultural differences and cultural codes. A higher level of French is available for intermediate students who want to develop their proficiency in the language.
- Introduction to French culture: Once a week, a conference in English will address aspects of French and European Institutions or will be devoted to the presentation of a French company by a French Executive. These Conferences contribute to develop an understanding of the specificity of the French and European management context, and the cultural differences between Europe and North America
- Cultural visits in Paris and its surroundings: The program includes one organized cultural activity per week (ie, The Louvre Museum, Montmartre, "Cité des Sciences de la Villette", a company visit, etc.) and one organized weekend during the month such as an outing to the Château de Versailles.