GETI2100 Information systems

[30h+30h exercises] 6 credits

Teacher(s): Stéphane Faulkner (supplée Jean Vanderdonckt), Jean Vanderdonckt
Language: French
Level: Second cycle

Aims

At the end of the class, students should be able to
- Understand the major concepts of information system
- Structure data which are required to be managed in an information system
- Decompose a project for an information system into applications, phases, and functions
- Structure in time and space the phases of an information system
- Assign the phases of the information system to appropriate resources

Main themes

This course thoroughly examines specific themes for transforming business problems into information systems :
1. A method for structuring data and organizing them into files or data bases,
2. The application of a design methodology for information systems,
3. The use of analyzing techniques for problem solving by information systems.
In order to acquire some programming experience, the BASIC language is used. At the end of this course, the student should be able to elaborate various models used for designing an information system and to develop such an information system with respect to the above models.

Content and teaching methods

Content
The course basically consists of two parts:
1. Basic elements of information systems: this first part introduces the student to the basic concepts belonging to the area of information systems, then the concepts of an advanced data base ; it is demonstrated how to develop files, data bases from a conceptual model of date. The different categories of an information system are given based on a pyramidal structure.
2. A method for designing an information system : this second part addresses a global method for designing an information system from data collected in the real world. This method is articulated around three axes: an approach to be followed, models describing various aspects of the problem to be solved, and software tools supporting the approach.
Methods
The method followed for this course is deliberately illustrative in the sense that two complete case studies will be progressively detailed in the second part : first, data collected from the real world will form the first information ; then, the approach will be applied, step by step, model by model ; and finally, an illustration of a possible results will be given for each case study. The first case study, deliberately simplified, is related to the computerisation of a company selling clothes by correspondence. The second case study, a more complex one than the first one, is related to the management of an insurance company, in particular for car insurance. These two case studies will be considered as running examples throughout the second part. Two sessions will be dedicated also to invited conferences.

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

Prerequisite : to know the fundamental principles of algorithmic (e.g., algorithmic structures).
Evaluation : the final note of this course will be assigned depending on the results obtained for the two parts:
1. the score obtained for the written examination (14 points on a total of 20) with the following parts: three questions related to the theory seen during the course and in the invited conferences, the class diagram, the schema for process decomposition, the schema for process dynamics, or the dataflow diagram;
2. the score obtained in the work accompanying the course (6 points on a total of 20).
No documentation will be available during the written examination.
Support : the hole set of documents and overheads used in the course is available at the course web site:
http://www.icampus.ucl.ac.be/GETI2100/
References : F. Bodart, Y. Pigneur, Conception assistée des systèmes d'information, Ed. Masson, Paris, 1994.

Programmes in which this activity is taught

ECGE3DS/IG	Diplôme d'études spécialisées en économie et gestion (informatique de gestion - Master in Information Systems)

Other credits in programs

ECAP21	Première licence en sciences de gestion	(5.5 credits)	Mandatory