UCL Université catholique de Louvain

LINGE1322

2010-2011

Computer science: Analysis and Design of Information Systems

5.0 credits	30.0 h + 15.0 h	2q

Teacher(s) :	Vanderdonckt Jean ;
Language :	Français
Place of the course	Louvain-la-Neuve
Main themes :	This module is more specific objectives: To present the development of a system by referring directly to the software engineering. Acquaint listeners with aspects of UML. Teaching the different models proposed by UML use cases, diagrams class, sequence, collaboration, activities, statecharts, diagrams of objects, specification of operations. Introduce analysis and modeling systems, as well as its relations with UML and RUP. Introduce information systems business systems including e-business. Introduce the operation and maintenance of databases and SQL language. Use, from a case study, the UML and RUP for analysis and designing a system, including the databases and e-commerce. Thus, in practice, the module is structured around three themes: A theoretical lectures, practical exercises to practice modeling and design of information systems; A real case study for which students work by group and submit a report.
Aims :	This course teaches the various stages of analysis and design of an information system business, with emphasis on the concept of databases, using the UML (Unified Modeling Language) and RUP process. The course focuses on the different techniques of needs analysis and conceptual modeling through the study of models for this purpose by UML and RUP: use case, class diagrams, sequence, collaboration, d ' activities, statecharts, diagrams of objects, specification of operations. The design are also covered through the stages of designing relational databases, and their exploitation. It deals with corporate information systems including e-business systems *The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit".*
Content :	Content theoretical courses - Introduction and logistical aspects of the course. - Diagrams use case - Activity Diagrams. - Classes, class diagrams, attributes, associations. - Interaction diagrams, sequence, collaboration; relationship with class diagrams. - State Diagrams (Statecharts) and activities; relationship with the other diagrams. - Rational Unified Process - Information Systems business including e-business - Introduction to databases. - - relational model. - Translation Class Diagram - Relationship Diagram - & uot;Structured Query Language (SQL). - Summary * Content practical (tutorial) sessions of practice in relation to the theoretical content will be organized. " Evaluation " The final weights of the various activities of the module are: work 50% / 50% review
Other infos :	§ Grady Booch, James Rumbaugh, Ivar Jacobson, Unified Modeling Language User Guide, 2nd Edition, Addison-Wesley Object Technology Series, 2005 § Philippe Kruchten The Rational Unified Process: An Introduction, Third Edition, , Addison-Wesley Object Technology Series, 2003 § Elmasri, R. and S. Navathe, Fundamentals of Database Systems, 4nd ed, Addison-Wesley, 2004. The slides used by the teacher at the class itself is the reference. They are available in pdf format for the week is required in paper form. Prerequisites

Cycle and year of study :	> Master [120] in Linguistics > Master [120] in Information and Communication Science and Technology > Bachelor in Economics and Management > Bachelor in Business Engineering > Master [120] in Agricultural Bioengineering > Master [120] in Chemistry and Bio-industries > Master [120] in Environmental Bioengineering > Master [120] in Forests and Natural Areas Engineering
Faculty or entity in charge:	ESPO