







5.00 credits

30.0 h + 15.0 h

Q2

Teacher(s)	Vanderdonckt Jean ;
Language :	French
Place of the course	Louvain-la-Neuve
Main themes	<p>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.</p>
Learning outcomes	<p>At the end of this learning unit, the student is able to :</p> <p>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</p>
Evaluation methods	<p>The continuous evaluation of this course is scheduled as follows:</p> <ol style="list-style-type: none"> 1. An individual assessment on domain modeling (2 hours during a course - 8 points). Based on a textual scenario, students will be instructed to write a conceptual model of the domain according to the UML notation of a class diagram. 2. An individual assessment on static, dynamic models of functions as well as dataflow diagram (during the examination session - 12 point). This questionnaire will comprise of 20 questions for which 5 possible answers are provided, among which one and only one answer is correct. No negative points.
Teaching methods	<p>The course follows a model-based approach for designing management information systems where conceptual models are devised for various aspects of the systems, as follows:</p> <ul style="list-style-type: none"> • A domain model is expressed as a UML V2.5 Class diagram, with attributes, methods, and relationships. • A function static model expresses the static structuring of functions: a project is decomposed into applications, which are decomposed into phases and functions. • A function dynamic model expresses the dynamic aspects of functions; the model expresses the ordering in time and space of phases. • A flow diagram expresses how phases are physically distributed against organizational cells.
Content	<p>This course concerns the analysis and design of management information systems, which are referred to as the process of and software support for collecting, storing, updating, retrieving of data and communications in any business-oriented organization.</p>
Inline resources	<p>All resources (slides, report template, examples, case studies, references) are available on-line at the Moodle corresponding course: https://moodle.uclouvain.be/course/view.php?id=2965</p>
Bibliography	<p>Joseph Gabay, David Gabay, UML 2 Analyse et conception - Mise en oeuvre guidée avec études de cas, Dunod, Paris. Francois Bodart, Yves Pigneur, Conception assistée des systèmes d'information - Méthode, modèles, outils, Eyrolles, Paris.</p>
Other infos	<p>The course LECGE1215 Informatique en économique et gestion is a pre-requisite for this course.</p>
Faculty or entity in charge	ESPO

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Data Science : Statistic	DATS2M	5		
Master [120] in Linguistics	LING2M	5		
Minor in entrepreneurship	MINMPME	5		
Master [120] in Chemistry and Bioindustries	BIRC2M	5		
Additionnal module in Management	APPGEST	5		
Bachelor : Business Engineering	INGE1BA	5		
Master [120] in Motor Skills: Physical Education	EDPH2M	5		