UCL Université catholique de Louvain

LINGI1271

2010-2011

Files and databases

5.0 credits	30.0 h + 30.0 h	2q

Teacher(s) :	Pirotte Alain ;
Language :	Français
Place of the course	Louvain-la-Neuve
Inline resources:	> http://foditic.org
Prerequisites :	-- Algorithmic and datastructures (e.g. SINF1121) -- Discrete mathematics (e.g. INGI1101)
Main themes :	-- Introduction to the entity-relationship model -- Relational model -- Logic-based relational languages -- Database application programming -- Functions and architecture of database-management systems -- Concurrent database accesses
Aims :	Students completing successfully this course will be able to -- list and describe the main functions of a database-management system -- explain the concepts and techniques underlying those functions -- represent in a database the information contents of an application domain -- implement a simple application involving database management (data structuring, and programming database queries and modifications) *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".*
Evaluation methods :	-- Written exam -- Project
Teaching methods :	-- lectures -- project (design and implementation of a database)
Content :	-- Introduction to the entity-relationship model, -- Bases of the relational model: data structures and algebra, -- Logic-based relational languages to define and manipulate data, -- Critical study of the SQL language, -- Database application programming, -- Functions and architecture of database-management systems, -- Management of concurrent database accesses and associated techniques of recovery after failures.
Bibliography :	-- T. Connolly and C. Begg, Database Systems: a Practical Approach to Design, Implementation, and Management, Addison-Wesley, 5th ed., 2010 -- C. J. Date, An Introduction to Database Systems, Addison-Wesley, 8th ed., 2004 -- R. Elmasri and S. Navathe, Database Systems, Addison-Wesley, 6th ed., 2011. -- H. García-Molina, J. Ullman and J.Widom, Database Systems: The Complete Book. 2nd ed., Prentice Hall, 2009. -- J.-L. Hainaut, Bases de données - Concepts, utilisation, et développement, Dunod, 2009 -- R. Ramakrishnan and J. Gehrke, Database Management Systems, McGraw-Hill, 3rd ed., 2003.
Cycle and year of study :	> Master [120] in Linguistics > Master [60] in History > Master [120] in History > Master [120] in Statistics: General > Master [120] in Agricultural Bioengineering > Bachelor in Engineering > Master [120] in Chemistry and Bio-industries > Bachelor in Computer Science > Master [120] in Environmental Bioengineering > Master [120] in Forests and Natural Areas Engineering > Preparatory year for Master in Computer science

Faculty or entity in charge:	INFO