UCL Faculté des sciences appliquées

FSA

LINF2172	Conception de bases de données

[30h+30h exercises] 5 credits

This course is taught in the 2nd semester

Teacher(s): Manuel Kolp, Alain Pirotte (coord.), Marco Saerens
Language: french
Level: 2nd cycle course

Aims

- To be able to implement the various steps involved in building a complex database (conceptual modeling, physical storage, optimization, re-engineering)
- To understand and be able to adjust the implementation of functions offered by database-management systems

Main themes

- Database lifecycle
- Logical design, relational normalization
- Object-based models
- Other functions: active databases, temporal databases, database integration
- Physical representation: file organization, access structures
- Performance optimization: query-evaluation strategies, evaluation of relational operations, database tuning

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

- Prerequisite: INGI2271 Systèmes de gestion de bases de données
- References
(1) T. Connolly and C. Begg, "Database Systems: a Practical Approach to Design, Implementation, and Management", Addison-Wesley, 5th Edition, 2005
(2) R. Elmasri, S. Navathe, "Fundamentals of Database Systems", 4th Edition, Benjamin/Cummings, 2004
(3) H. Garcia-Molina, J. Ullman, J. Widom, "Database Systems: the Complete Book", Prentice Hall, 2002

Other credits in programs

BIR22/0A	Deuxième année du programme conduisant au grade de bio-ingénieur: Sciences agronomiques (Technologies et gestion de l'information)	(5 credits)	Mandatory
BIR22/0C	Deuxième année du programme conduisant au grade de bio-ingénieur: Chimie et bio-industries (Technologies & gestion de l'information)	(5 credits)	Mandatory
BIR22/0E	Deuxième année du programme conduisant au grade de bio-ingénieur: Sciences et technologies de l'environnement (Technologies et gestion de l'information)	(5 credits)	Mandatory
INFO22	Deuxième année du programme conduisant au grade d'ingénieur civil informaticien	(5 credits)	Mandatory
LINF21	Première licence en informatique	(5 credits)	
LINF21/GS	Première licence en informatique (informatique de gestion)	(5 credits)	
LINF22/GN	Deuxième licence en informatique (informatique générale)	(5 credits)	Mandatory
LINF22/GS	Deuxième licence en informatique (informatique de gestion)	(5 credits)	Mandatory