

Faculty of Applied Sciences



LINF2172 Database design

[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: Second cycle

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

Content and teaching methods

see "Main themes"

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

INFO22	Deuxième année du programme conduisant au grade d'ingénieur civil informaticien	(5 credits)	Mandatory
LINF22/GN	Deuxième licence en informatique (informatique générale)	(5 credits)	Mandatory
LINF22/GS	Deuxième licence en informatique (informatique de gestion)	(5 credits)	Mandatory