Content

Course Code	Course Name	Semester	Theory	Practice	Lab	Credit	ECTS
INF324	Relational Databases	5	2	0	2	3	4

Prerequisites	
Admission Requirements	

Language of Instruction	French
Course Type	Compulsory
Course Level	Bachelor Degree
Objective	The objective of this course is to present an overview of the principles and the current techniques in relational databases subject. The course focuses on the modeling of data and the desing of a database in the context of DBMS SQL Server 2008 Another secondary objective of the course is the development of student autonomy in the use of database management system. This is a reflection of the reality of the labor market data and student are encouraged to respond positively to seeing the opportunity to enhance their knowledge of the DBMS.
Content	Week 1. Introduction, properties and classification of DBMS, fundamental concepts Week 2. Entity-relationship model: entity, association and attribute Week 3. Relational model, normalization of a relationship Week 4. Functional dependencies and normal forms Week 5. Integrity constraints Week 6. Relational Algebra Week 7. Midterm Week 8. SQL Week 9. Aggregate and complex queries Week 10. Functions, Triggers and Stored Procedures Week 11. Transaction Management Week 12. Isolation Level Week 13. Optimisation and Indexing Week 14. Database Tuning
References	• R.Elmasri, S.Navathe,Conception et architecture des bases de données, 2004, Pearson Education • G.Gardarin, Maitriser les bases de données, modèles et langages, 2006, Eyrolles. • C.J. Date, An Introduction to Database Systems, 2000, Addison-Wesley • G. Gardarin, Bases de données—objet & relationnel,1999 Eyrolles • Mark L. Gillenson, Database Step by step, 1990 Wiley

Theory Topics

Week	Weekly Contents
1	Introduction, properties and classification of DBMS, fundamental concepts
2	Entity-relationship model: entity, association and attribute
3	Relational model, normalization of a relationship
4	Functional dependencies and normal forms
5	Integrity constraints
6	Relational Algebra
7	Midterm
8	SQL Queries
9	Aggregate and complex queries
10	Functions, Triggers and Stored Procedures
11	Transaction Management
12	Isolation Level
13	Optimisation and Indexing
14	Database Tuning