Content

Course Code	Course Name	Semester	Theory	Practice	Lab	Credit	ECTS
INF360	Database Management and Security	6	3	0	0	3	4

Prerequisites	
Admission Requirements	

Language of Instruction	French
Course Type	Elective
Course Level	Bachelor Degree
Objective	The main objective of the course is to teach students how to manage and secure a distributed database in real time using the basic database principles they learned in the course "Basics of relational data ". First, the basic principles of database management will be explained, and then other security issues will be explored. After each theoretical lesson, what is learned in the lesson will be applied on one of the database management systems widely used in the industry. At the same time, it is aimed at the student to have knowledge of the security of information systems in general.
Content	1. Introduction, fundamental concepts of distributed databases 2. Management of schemas, tables, indices, views and user permissions 3. Replication in databases 4.Database backup techniques 5.Database recovery techniques 6. Basic principles of database security (1/2) 7. Basic principles of database security (2/2) 8. In Memory Databases 9. Databases in the cloud, DBaaS, Data as a Service (Oracle) (1/2) 10. Cloud databases, DBaaS, Data as a Service (Oracle) (2/2) 11. NoSQL databases (1/2) 12. NoSQL databases (2/2) 13. Database violations (1/2) 14. Database violations (2/2)
References	1. Özsu, M. T. , Valduriez, P. Principles of distributed database systems. Springer Science & Business Media, 2011 2. Basta A, Zgola, M. Database Security, Course Technology Cengage Learning, Boston, MA, USA, 2012 3. Mullins, C. Database Administration: the complete guide to practices and procedures. Addison-Wesley Professional. 2002 4. Complete list of Oracle 11g reference books http://www.oracle.com/pls/db112/homepage 5. SQL Server Books on-line http://technet.microsoft.com/en-us//library/ms130214(SQL.105).asp

Theory Topics

Week	Weekly Contents
1	Introduction, fundamental concepts of distributed databases
2	Managing user schemas, tables, index, views and permissions
3	Replication in databases
4	Database backup techniques
5	Database recovery techniques
6	Basic Principles of Database Security
7	In Memory Databases
8	Databases in the cloud, DBaaS, Data as a Service (Oracle)
9	NoSQL databases
10	Database violations