Content

Course Code	Course Name	Semester	Theory	Practice	Lab	Credit	ECTS
INF360	Database Management and Security	6	3	0	0	3	5

Prerequisites	INF324
Admission Requirements	INF324

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	Week 1: Introduction to Database Management Week 2: Distributed Databases Week 3: Database Management Week 4: Replication in Databases Week 5: Database Backup Techniques Week 6: Database Recovery Techniques Week 7: Fundamental Principles of Database Security (Part 1 of 2) Week 8: Fundamental Principles of Database Security (Part 2 of 2) Week 9: Midterm Exam Week 10: NoSQL Databases – General Concepts Week 11: NoSQL Database Management and Security Week 12: DevOps, Architecture, and Database Integrations (1/2) Week 13: DevOps, Architecture, and Database Integrations (2/2) Week 14: Database Breaches (1/2) Week 15: Database Breaches (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 database administration
2	Distributed databases
3	Replication in databases
4	Database backup techniques
5	Database recovery techniques
6	Basic Principles of Database Security
7	NoSQL Databases – General Concepts, Management, and Security
8	DevOps, Architecture, and Database Integrations
9	Database violations
10	

Week	Weekly Contents
11	
12	
13	
14	