Database Management

Course title	Database Management
Level / Semester	M2/ S1
School – Composante	Toulouse Schoolo of Economics
Teacher – Enseignant responsable	Chihab HANACHI
Other teacher(s) – Autre(s) enseignant(s)	
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Lecture Hours – Volume Horaire CM	15
TA Hours – Volume horaire TD	
TP Hours – Volume horaire TP	
Course Language – Langue du cours	
TA and/or TP Language – Langue des TD et/ou TP	

Teaching staff contacts:

Prof. Chihab HANACHI, hanachi@ut-capitole.fr. Office AR365. Available after the courses.

Course Objectives:

Students will learn how to

- analyze textual requirements in order to design a conceptual data schema of good quality (normalized and with integrity constraints) in Entity-Relationship and Relational formalisms;
- write queries to extract information from a database in algebraic and SQL languages (selection, projection, join, aggregate functions, set oriented operators, group by…);
- use a Database management System (creating schemas and views, instantiating a database and querying it in SQL);
- handle data with SQL through a host language (e.g. Python);
- query semi-structured data.

Prerequisites:

Basic knowledge about:

- relational databases and Query By Example principles;
- programming language concepts.

Practical information about the sessions:

Personal Computers are not required. We use the computers of the university. Slides of the lectures are available on the moodle platform.

Grading system:

Project (70%) and practical works (30%). No exam.

Bibliography/references:

Database Systems - Concepts, Languages and Architectures
Paolo Atzeni, Stefano Ceri, Stefano Paraboschi and Riccardo Torlone
Ed. McGraw Hill
free copy made available by the authors here: http://dbbook.dia.uniroma3.it/

Session planning:

The course mixes lectures, tutorials and practical works in a IT room. The last lecture will be devoted to the project launching. The project will be done in pairs and completed outside of the class.

Distance learning – Enseignement à distance :

Different distance learning approaches will be followed in case of lockdown situation (due to Covid): - Interactive virtual classrooms (zoom or equivalent); - MCQ tests and a project on Moodle; - course in powerpoint format available on Moodle; - Chatrooms/Forum during practical exercises on computer.