

Database Management

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| Course title | Database Management |
| Level / Semester | Master 2, semester 1 |
| School – Composante | Toulouse School of Economics |
| Teacher – Enseignant responsable | Chihab HANACHI |
| Other teacher(s) – Autre(s) enseignant(s) | |
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| Lecture Hours – Volume Horaire CM | 15 hours mixing lectures, TA, TP. |
| 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.