Databases and Information Systems

Grado en Ingeniería Informática

2021 - 2022

Code: 11548 ECTS: 6 credits (1'5 + 3 + 1'5)

ARA Group (English) 3E

Wednesdays and Fridays: 11:30 to 13:00
In person

Laboratory sessions:

Tuesday: 17:00 to 18:30 (Starting 21/9/21)
Remote Desktop (Polilabs) + Teams

Emilio Vivancos
Office: 228, 1F Building.
Attention hours: On demand by email: vivancos@dsic.upv.es

Class Schedule (tentative)

Classes

First day: 8/9/21

Last day: 22/12/21

No class: 3/11/21 and 10/11/21 to be **recovered** on 14/9/21 and 30/11/21 (Tuesday, 17 to 18:30)

Lab. Sessions (online - Teams):

First lab SQL session: 21/9/21

Last lab SQL session: 23/11/21

First lab DBMS session: 14/12/21

Last lab DMBS session: 21/12/21

Learning outcomes

After completion of the course, the student will be able to deploy an advanced use and a basic design of relational databases, as a support of current information systems.

Specific objectives:

- Fundamentals of database technology
- Relational data model
- SQL (DML and DDL)
- Relational database design (ER through UML, logical design)
- Relational DBMS

Contents

LAB SESSIONS

8 SQL sessions
(Unit 2.2)
+
2 DBMS sessions
(Unit 3)

Connections to other subjects

Previous:

(11547) "Matemática discreta", Discrete Mathematics (1).

First order logic, quantifications

(11551) "Estructuras de datos y algoritmos", Data structures and algorithms (2)

Data types

Simultaneous:

(11555) "Ingeniería del Software", Software Engineering (3A)

UML diagrams, modelling, XML, persistence

Connections to other subjects

Subsequent:

(11612) “Tecnologías de Bases de Datos”, Database Technology (3B)

(11596) “Diseño y Gestión de Bases de Datos”, Database Design and Management (4)

(11588) “Sistemas de Almacenamiento y Recup. de Inf.“, Storage and Recovery Information Systems(3B)

(11598) “Gestión de las Tecnologias de la Información”, Information Technology Management (3B)

Evaluation: 2 short exams + 2 Partial Exams

Assessment C1 (1 point):

Short questions in classroom (lectures) from Unit 1

There is a make-up exam

Assessment C2 (1 point):

Short questions from Unit 2

There is no make-up exam for this assessment

1st Midterm exam P1 (4 points)

Unit 2

There is a make-up exam

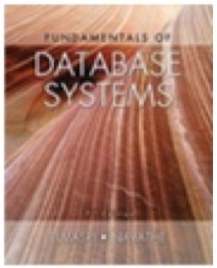
2nd Midterm exam P2 (4 points)

Units 3 and 4

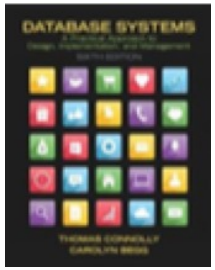
There is a make-up exam

Final mark = C1 + C2 + P1 + P2

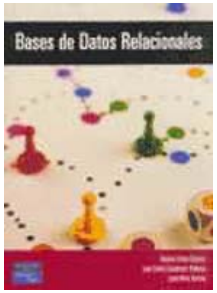
Recommended Readings



- *Fundamentals of Database Systems (7th edition)*
  Ramez **Elmasri**, Shamkant B. Navathe
  Pearson, 2016



- *Database Systems (6th edition)*
  Thomas M. **Connolly**, Carolyn E. Begg
  Pearson, 2015



- *Bases de datos relacionales*
  Matilde **Celma** Giménez, Juan Carlos Casamayor Ródenas , Laura Mota Herranz,
  Pearson Prentice Hall, 2003