



GENERAL INFORMATION

Data of the subject	
Subject name	Fundamentals of telematic systems
Subject code	DTC-GITT-124
Main program	Bachelor's Degree in Engineering in Telecommunication Technologies
Involved programs	Grado en Ingeniería en Tecnologías de Telecom. y Grado en Análisis de Negocios/Business Analytics [First year]
Level	Reglada Grado Europeo
Quarter	Semestral
Credits	7,5 ECTS
Type	Compulsory
Department	Department of Telematics and Computer Sciences
Coordinator	Israel Alonso Martínez

Teacher Information	
Teacher	
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DESCRIPTION OF THE SUBJECT

Contextualization of the subject
Prerequisites
Computer Basics and Programming.

Course contents



Contents

- 1: INTRODUCTION TO OPERATING SYSTEMS.
- 2: THEORETICAL CONCEPTS OF DATABASES. (Relational Model and Logical Design)
- 3: SQL DATABASES (SQL Language and Programming)
- 4: NoSQL DATABASES (MongoDB)

EVALUATION AND CRITERIA

Evaluation activities	Evaluation criteria	Weight
Exams:	Inter-semester test (25%) Final Exam (50%)	75 %
Continuous evaluation:	Participation in class and completion of short tests are evaluated (5%)	5 %
Experimental work evaluation:	Laboratory Reports (20%)	20 %

Grading

Ordinary Exams:

The percentage for the final grade will be:

- Exam (50%)
- Inter-semester test (25%)
- Laboratory Reports + Continuous evaluation (20%+5%)

ExtraOrdinary Exams:

The percentage for the final grade will be:

- Exam (80%)
- Inter-semester test (10%)
- Laboratory Reports + Continuous evaluation (10%)

BIBLIOGRAPHY AND RESOURCES

Basic References

- Bases de datos Relacionales: Fundamentos y Diseño Lógico. Enrique Rivero, Israel Alonso, Luis Martinez. Publicaciones UPCo, 2005.
- Introducción al SQL para usuarios y programadores. Rivero, E., Martínez, L., Reina, L., Benavides, J., Olaizola, J. M^a. Paraninfo, 2002.



COMILLAS

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CIHS

Syllabus
2022 - 2023

- Keir, Thomas. Beginning Ubuntu Linux: From Novice to Professional. ISBN 1590596277.
- Mako Hill, Benjamin; Bacon, Jono; Burger, Corey; Jesse, Jonathan; Krstic, Ivan. The Official Ubuntu Book. p. 320. ISBN 0132435942.
- Grant, Rickford. Ubuntu Linux for Non-Geeks. p. 464. ISBN 1593271182.
- Dan Sullivan. NoSQL for Mere Mortals. Addison-Wesley Educational Publishers Inc; (2015) ISBN-10: 0134023218 ISBN-13: 978-0134023212
- Kristina Chodorow. MongoDB: The Definitive Guide. O'Reilly Media; (2013) ISBN-10: 1449344682 ISBN-13: 978-1449344689

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<https://servicios.upcomillas.es/sedelectronica/inicio.aspx?csv=02E4557CAA66F4A81663AD10CED66792>

FST - GITT 2022-23

	(2h)	(1h)	(2h)
semana1	Presentación (Intro prácticas previas P0.X)	Intro SSOO- Linux	Instalación virtualBox, Máquina, Ubuntu
semana2	Comandos Linux	Usuarios y Grupos	Práctica 1. Comandos
semana3	Permisos, Compresión ficheros.	- Procesos	Práctica 2 Usuarios/grupos
semana4	Intro Normalización	Intro Diseño	Práctica3 Permisos
semana5	Intro Diseño	Ejemplo y Ejercicios Diseño	Instalar MySQL y tablas
semana6	01 Intro Select 02 Sentencia Select	03 Predicados	Práctica 02 Select (Clase) Práctica 03 Predicados
semana7	03 Predicados	04 Funciones Escalares y Columna	Práctica 03 Predicados Práctica 04 Funciones
semana8	INTERSEMESTRAL		
semana9	04 Funciones Escalares y Columna	05 Group by	Práctica 04 Funciones Práctica 05 Group By
semana10	05 Group by	06 Join	Práctica 05 Group By Práctica 06 Join
semana11	07 Lenguaje datos	Práctica 07 Lenguaje Datos	08 WebScraping -SQL
semana12	Semana Santa		
semana13	Introducción Datos NoSQL	Mongo DB Intro	Prácticas Mongo
semana14	Mongo DB (CRUD)	Mongo DB (CRUD)	Prácticas Mongo
semana15	Mongo DB (Índices, rendimiento, agregaci	Mongo DB (Índices, rendimiento, agregaci	Prácticas Mongo