



Year : 2018/19

## **30238 - Data Centers**

### **Syllabus Information**

<b>Academic Year:</b>	2018/19
<b>Subject:</b>	30238 - Data Centers
<b>Faculty / School:</b>	110 -
<b>Degree:</b>	439 - Bachelor's Degree in Informatics Engineering
<b>ECTS:</b>	6.0
<b>Year:</b>	4
<b>Semester:</b>	Half-yearly
<b>Subject Type:</b>	
<b>Module:</b>	---

### **General information**

#### **Aims of the course**

#### **Context and importance of this course in the degree**

#### **Recommendations to take this course**

#### **Learning goals**

#### **Competences**

#### **Learning goals**

#### **Importance of learning goals**

#### **Assessment (1st and 2nd call)**

#### **Assessment tasks (description of tasks, marking system and assessment criteria)**

#### **Methodology, learning tasks, syllabus and resources**

#### **Methodological overview**

The learning process for this subject relies on performing the prescribed learning activities.

#### **Learning tasks**

In order to achieve the expected results the following activities are required:

Lectures.

Problem-solving classes.

Assisted Labs.

Homeworks.

Study and personal work.

## Syllabus

- Data centers. Technological evolution: keys present and future.
- History of Data Centers, energy efficiency and environmental impact, and energy sources.
- Technical requirements for facilities, construction, power supply, air conditioning, and wiring standards.
- System security and monitoring.
- Internal and external connectivity strategies and scalability. Types of servers and scalability. Consolidation and energy efficiency.
- Reliability, availability and serviceability (RAS) and fault tolerance. Mass storage subsystem. Secondary storage solutions.
- Introduction to ICT provision and support services: ITIL.

## Course planning and calendar

To be specified when the academic calendar gets approved by the school.

## Bibliography and recommended resources

[BB: Bibliografía básica / BC: Bibliografía complementaria]

- Zaragoza:
- [BB] Barroso, Luiz André. The datacenter as a computer : an introduction to the design of warehouse-scale machines / Luiz André Barroso, Urs Hölzle, Jimmy Clidaras . 2nd ed. San Rafael (California, USA) : Morgan and Claypool, 201
- Teruel:
- [BB] Barroso, Luiz André. The datacenter as a computer : an introduction to the design of warehouse-scale machines / Luiz André Barroso, Urs Hölzle, Jimmy Clidaras . 2nd ed. San Rafael (California) : Morgan and Claypool, 2013