



122040038 - Bachelor of Computer Science

0038020 - Operating Systems

Dades generals

Codi: 0038020

Tipus: OB

Semestre: 4

Crèdits: 6.0

**Llengua
d'impartició:** Anglès

Requisits

Codi - Assignatura

0038006 - Computer Structure

Professorat

Professorat responsable

Mora Llesuy, Ivan (Àrea de coneixement: Ciències tecnològiques)

Informació

Presentació de l'assignatura:

This course aims to explain structure and functions of an operating system. It is mandatory to fulfill Ordinadors and Estructura d'Ordinadors courses before attending Operating Systems lectures.

Objectius:

At the end of the course, attendees should be able to explain how an OS manage main abstractions (such as processes, address spaces and files) , compare and contrast many CPU efficiency algorithms, and distinguish paged and segmented virtual memory.

Metodologia:

The course will combine lecture courses with laboratory courses. Lecture courses will present periodical group comprehension exercises to help further understanding of theoretical concepts. Labs course are designed to illustrate key operating system aspects by concrete example, using Linux OS and C programming.

Avaluació continuada:

Students will have to take three partial examinations (called CP), that will account for 40% of the final grade and covers the following learning capacity:

SO-1 Student knows the different parts of an operating system and how they interact between them.

Students will deliver three assignments (called TV) throughout the course, that will account for 40% of the final grade and covers the following learning capacity:

SO-2 Student distinguishes the possibilities offered by an operating system for solving problems in the management of processes, files, memory and communication.

Finally, the challenger project covers 20% of the final grade and covers the following learning capacity: SO-3 Proposes solutions to problems that use native operating system resources.

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Avaluació final:

There's an option to improve the QP grade by taking a final examination. If your final examination grade is better than the mean of the three partial examinations, the final examination grade is taking into account instead of QP, following the same formulae as above.

Bibliografia bàsica:

"Modern operative systems", Andrew S. Tanenbaum, Pearson Educación 2009, ISBN 978-607-442-046-3

Competències específiques (1)

Codi - Competència específica

BINFO07 - Administració de bases de dades i sistemes

Competències transversals (3)

Codi - Competència transversal	Àrea
UdA06 - Tractament de la informació	Gestió del coneixement i autonomia en el treball
UdA07 - Autonomia i iniciativa	Gestió del coneixement i autonomia en el treball
UdA10 - Comunicació i expressió oral i escrita	Comunicació

Continguts (5)

1. OS Introduction
2. Processes
3. Memory management
4. File system & I/O Devices
5. OS Security

Activitats (6)

Codi - Activitat	Descripció	Competències	Percentatge
CP1 - Exam 1	Topics 1 & 2	BINFO07	13,30%
TV1 - Assignment 1	Topics 1 & 2	BINFO07, UdA07	13,30%
CP2 - Exam 2	Topics 2 & 3	BINFO07	13,30%
TV2 - Assignment 2	Topics 2 & 3	BINFO07, UdA07	13,30%
CP3 - Exam 3	Topics 4 & 5	BINFO07	13,30%
TV3 - Assignment 3	Topics 4	BINFO07, UdA06, UdA07	13,30%