

Computer Architectures and Operative Systems

ECTS: 3 ECTS

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UNIVERSITY WHERE THE COORDINATOR IS: USC

HAVE YOU GIVEN PERMISSION TO RECORD YOUR CLASSES? Yes

SUBJECT CONTENTS

1. Introduction and evolution of the computer architecture
2. Data representation
3. Architecture of the CPUs
4. Memory Hierarchy
5. Introduction to the Operating Systems

METHODOLOGY

1. Planning of the contents explained in the classroom.
2. Lectures.
3. Practical problems (homework).
4. Assembly programming.
5. Programming using system calls.

LANGUAGE USED IN CLASS: Will depend on the audience.

IS IT COMPULSORY TO ATTEND CLASS? Students can attend via conference system.

BIBLIOGRAPHY

Patterson e Hennessy. Estructura y Diseño de Computadores: Interficie circuitería/programación. Ed. Reverté 2000.

Hennessy e Patterson. Computer architecture, a quantitative approach. 4th edition. Morgan Kaufmann Pub. 2006. ISBN 978-0-12-370490-0.

A. S. Tanenbaum. Sistemas Operativos Modernos (2a edición). Editorial Prentice-Hall, 2003. ISBN 970-26-0315-3.

SKILLS

Basic:

CG1: To have knowledge that provide a basis or opportunity for originality in developing and / or applying ideas, often within a research context, knowing how to translate industrial needs in terms of R & D in the field of mathematics Industrial.

CG3: To be able to integrate knowledge in order to state opinions using information that even incomplete or limited, include reflecting on social and ethical responsibilities linked to the application of their knowledge.

Specific:

CE4: To be able to select a set of numerical techniques, languages and tools, appropriate to solve a mathematical model.

CE5: To be able to validate and interpret the results, comparing them with visualizations, experimental measurements and functional requirements of the physical engineering system.

Numerical simulation specialization:

CS2: To adapt, modify and implement software tools for numerical simulation.

Basic skills (CG1 and CG2) are covered by the discussion in the lectures and the solution of practical problems (homework). Skills CE4, CE5 and CS2 are covered by the development of programming practices and the solution of practical problems.

WILL YOU BE USING A VIRTUAL PLATFORM? No.

WILL YOU BE USING ANY SPECIFIC SOFTWARE? No.

CRITERIA FOR THE 1ST ASSESSMENT OPPORTUNITY

Practical problems will be solved by the students (30% of the final grade, assessment of skills CE4, CE5 and CS2). It's mandatory that the students get a grade of 5 (or higher) in this part to pass the course.

A final theory exam will represent 70% of the grade (assessment of skills CG1 and CG2).

CRITERIA FOR THE 2ND ASSESSMENT OPPORTUNITY

The same as in the 1st assessment opportunity.
