

NOVA Information Management School

NOVA IMS

Course	Information Technologies Hardware and Software
Coordinator:	Victor Lobo
ECTS	6
Objectives:	This course gives the knowledge about computer hardware and system software necessary to develop information systems, and at the same time understand the advantages and disadvantages of different technologies and computer architectures, so as to use them efficiently in a business environment. The principles and application of computer hardware and systems software are presented through lectures that focus both on theory and on practice, and complemented with classes where practical exercises are given, and classes where the students can practice with the systems themselves.
Attending requirements:	Information Systems
Curricular Unit Contents:	<ul style="list-style-type: none"> • Binary data: Number Systems, binary codes for numbers, text, images, and sound. Boolean Algebra for manipulating data. • Computer Hardware: Digital Systems, Architecture of a CPU, memory, registers, addressing modes, data buses, instruction sets. Multiprocessor versus single processors. • Peripherals: Hard disk drives and other mass storage systems, monitors and visualization systems, controllers, input/output devices. • Operating Systems: function and types of operating systems, processes, process management, memory, and file systems. • Examples of computer architectures and operating systems
Teaching methods:	Theoretical, practical, and laboratory classes
Grading methods:	The students are assessed by homework, mini-testes, a final group project, individual presentation of a theme on which they must also write a short essay, and a final exam.

	<p>For the final grade each of these has the following weights:</p> <p>Final Exam: 60%</p> <p>Final Group Project: 20%</p> <p>Presentation and essay: 10%</p> <p>Homework and mini-tests: 10%</p>
Bibliography:	<ul style="list-style-type: none">• Computer Organization and Architecture, 3rd Edition, Linda Null and Julia Labur, Jones & Bartlett Learning, 2010