

Teaching guide

IDENTIFICATION DETAILS

Degree:	Computer Engineering		
Field of Knowledge:	Engineering and Architecture		
Faculty/School:	Senior Polytechnic School		
Course:	ELECTRONICS AND COMPUTER TECHNOLOGY		
Type:	Basic Training	ECTS credits:	6
Year:	1	Code:	3612
Teaching period:	Second semester		
Area:	Physics		
Module:	Basic Training		
Teaching type:	Classroom-based		
Language:	Spanish		
Total number of student study hours:	150		

SUBJECT DESCRIPTION

The Electronics and Computer Technology course encourages learning of the basics of electronics and their relation with the physical workings of computers, peripherals and communication systems used in information technology. It addresses the following key issues: principles of electromagnetism, basic characteristics of semiconductors, diodes and transistors, operation and characteristics of the main logic families and analysis and synthesis of digital circuits.

SKILLS

Basic Skills

Students must have demonstrated knowledge and understanding in an area of study that is founded on general secondary education. Moreover, the area of study is typically at a level that includes certain aspects implying knowledge at the forefront of its field of study, albeit supported by advanced textbooks

Students must be able to apply their knowledge to their work or vocation in a professional manner and possess skills that can typically be demonstrated by coming up with and sustaining arguments and solving problems within their field of study

Students must have the ability to gather and interpret relevant data (usually within their field of study) in order to make judgments that include reflections on pertinent social, scientific or ethical issues

Students must be able to convey information, ideas, problems and solutions to both an expert and non-expert audience

Students must have developed the learning skills needed to undertake further study with a high degree of independence

General Skills

Knowledge for preparing measurements, calculations, valuations, appraisals, inspections, studies, reports, task planning and other similar computing work.

An ability to conceive, develop and maintain computer applications, services and systems using software engineering methods as an instrument to ensure quality.

Knowledge of the basic materials and technologies, giving rise to learning and the developing of new methods and technologies, and which also provide huge versatility to adapt to new contexts.

Specific skills

Understanding and using the basic concepts of fields, waves and electromagnetism, electric circuit theory, electronic circuits, the physical principles of semiconductors and logic families, electronic and photonic devices, and their application for solving engineering-specific problems.

DISTRIBUTION OF WORK TIME

CLASSROOM-BASED ACTIVITY	INDEPENDENT STUDY/OUT-OF-CLASSROOM ACTIVITY
68 hours	82 hours