

Teaching guide

IDENTIFICATION DETAILS

Degree:	Computer Engineering		
Field of Knowledge:	Engineering and Architecture		
Faculty/School:	Senior Polytechnic School		
Course:	ALGORITHMS		
Type:	Basic Training	ECTS credits:	6
Year:	1	Code:	3610
Teaching period:	First semester		
Area:	IT		
Module:	Basic Training		
Teaching type:	Classroom-based		
Language:	Spanish		
Total number of student study hours:	150		

SUBJECT DESCRIPTION

The Algorithms course introduces students to basic programming concepts and places particular emphasis on the presentation of the key algorithmic techniques and the use of different programming paradigms, languages and environments for building IT applications, while applying rigorous methodologies that endow students with best practices in software development.

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 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

An ability to understand and use the basic concepts of discrete mathematics, logics, algorithms and computational complexity, and their application for solving engineering-specific problems.

Basic knowledge of the use and programming of computers, operating systems, databases and computer programmes with applications for engineering.

Knowledge of the structure, organisation, operation and interconnection of computer systems, programming foundations and their application to solving engineering-specific problems.

DISTRIBUTION OF WORK TIME

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