

# Teaching guide

## IDENTIFICATION DETAILS

Degree:	Computer Engineering		
Field of Knowledge:	Engineering and Architecture		
Faculty/School:	Senior Polytechnic School		
Course:	COMPUTATIONAL COMPLEXITY THEORY		
Type:	Compulsory	ECTS credits:	6
Year:	2	Code:	3624
Teaching period:	Third semester		
Area:	Computing		
Module:	Specific Technology		
Teaching type:	Classroom-based		
Language:	Spanish		
Total number of student study hours:	150		

## SUBJECT DESCRIPTION

The Computational Complexity course presents different methods of analysis and design of algorithms and their application in the development of solutions that can, ultimately, be expressed in a programming language. The course therefore studies the computational complexity of different algorithmic methods and in the process determines the best in each case.

## 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

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

An ability to conceive and develop computer systems or architectures that are centralised or distributed, integrating hardware, software and networks.

### Specific skills

An ability to assess the computational complexity of a problem, being familiar with algorithmic strategies that may lead to their resolution, and recommend, develop and implement the right strategy to ensure the best performance in line with the requirements established.

### DISTRIBUTION OF WORK TIME

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