

Teaching guide

IDENTIFICATION DETAILS

Degree:	Computer Engineering		
Field of Knowledge:	Engineering and Architecture		
Faculty/School:	Senior Polytechnic School		
Course:	OBJECT-ORIENTED PROGRAMMING		
Type:	Compulsory	ECTS credits:	6
Year:	1	Code:	3621
Teaching period:	Second semester		
Area:	Software Design and Development		
Module:	IT core subject		
Teaching type:	Classroom-based		
Language:	Spanish		
Total number of student study hours:	150		

SUBJECT DESCRIPTION

On the Object Oriented Programming course, students are acquainted with the suitability of the object-oriented computational paradigm and apply it to improving software quality and particularly to encouraging the reuse, extensibility and reliability of programs regardless of the language.

The subject comprises two major conceptual blocks - one theoretical and the other more practical -, which acquaint students with the paradigm of object-oriented programming, its main advantages and the construction of programs. This ranges from the design and definition of the types and objects in them to their implementation and subsequent debugging with a specific language and development environment.

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.

An ability to solve problems with initiative, with effective decision-making, independence and creativity. Capacity for being able to communicate and convey knowledge and skills of the technical computer engineering profession.

Specific skills

An ability to analyse, design, build and maintain applications in a robust, secure and efficient manner, choosing the most appropriate programming languages and paradigm.

An ability to design and assess person-computer interfaces, ensuring accessibility to and usability of computer applications, services and systems.

An ability to design, develop, choose and assess computer applications and systems, ensuring their reliability, security and quality in line with ethical principles, legislation and applicable regulations.

DISTRIBUTION OF WORK TIME

CLASSROOM-BASED ACTIVITY	INDEPENDENT STUDY/OUT-OF-CLASSROOM ACTIVITY
67 hours	83 hours