Teaching guide

IDENTIFICATION DETAILS

Degree:	Computer Engineering

Field of Knowledge:	Engineering and Architecture

Faculty/School:	Senior Polytechnic School

Course:	ADVANCED PROGRAMMING TECHNOLOGIES

Type:	Compulsory	ECTS credits:	6

Year:	4	Code:	3630

Teaching period:	Seventh semester

Area:	Computing

Module:	Specific Technology

Teaching type:	Classroom-based

Language:	Spanish

Total number of student study hours:	150

SUBJECT DESCRIPTION

The Advanced Programming Technologies course acquaints students with the different advanced programming strategies oriented to the use of frameworks and exploration of Service-oriented Architecture, with a view to using this architecture to solve real problems of information management in business life.

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 design, develop, assess and guarantee the accessibility, ergonomics, usability and security of computer applications, services and systems, and the information managed therein.

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 gain an in-depth knowledge of basic computing principles and models and be able to apply them to interpret, choose, value, model and create new technological developments, concepts, theories and uses linked to computing.

Familiarity with the theoretical foundations of programming languages and associated lexical, syntactic and semantic processing techniques, and an ability to apply them to create, design and process languages.

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.

Familiarity with the fundamental aspects, paradigms and techniques specific to smart systems and an ability to analyse, design and build computer applications, services and systems using said techniques in any field of application.

An awareness of and the ability to develop computational learning techniques and to design and implement applications and systems using said techniques, including those devoted to the automatic extraction of information and knowledge from large bodies of data.

DISTRIBUTION OF WORK TIME

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