COURSE PROGRAM

Academic Year: 2024/2025

Identification and characteristics of the course			
Code	401084	ECTS Credits	6
Course name (English)	External Academic Traineeships 2 (Technological Training)		
Course name (Spanish)	Prácticas Externas 2 (Tecnológicas)		
Degree programs	Master Degrees in Telecommunications Engineering, Computer Science and ICT Management		
Faculty/School			
Semester	3	Type of course	Mandatory
Module	Project Management (MUDT) Management and Administration (MUII) Technological Management of Telecommunications Projects (MUIT)		
Matter	Technological Training		
Lecturer/s			
Name	Office	E-mail	Web page
David Cortés Polo	Dept. 71 Computer Science Building	dcorpol@unex.es	
Subject Area	Telematic Engineering		
Department	Department of Computer Systems and Telematics Engineering		
Coordinating Lecturer (If more than one)	David Cortés Polo		

Competencies*
BASIC SKILLS   **CB6** - Get and understand knowledge that provides a basis or opportunity to be original in new ideas development or application, often in a research context.   **CB7** – To know how to apply both knowledge gained by students and their ability to solve problems in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their field of study.   **CB8** – To be able to integrate knowledge and face the complexity of making judgments based on information that, being incomplete or limited, includes reflections on the social and ethical responsibilities linked to the application of their knowledge and judgments.   **CB9** – To know how to pass on their conclusions and knowledge, and those underlying reasons that sustain them, to specialized and non-specialized audiences in a clear and unambiguous way.

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*   The sections concerning competencies, course outline, educational activities, teaching methodologies, learning outcomes and assessment systems must conform to that included in the ANECA verified document of the degree program.

CB10 - Gain the learning skills that allow them to continue studying in a way that will be largely self-directed or autonomous.

GENERAL COMPETENCES

CG1 - Ability to project, calculate and design products, processes and implementations in all areas of Computer Engineering.

CG2 - Ability to manage works and installations of computer systems, complying with current regulations and ensuring the quality of service involved.

CG3 - Ability to lead, plan and manage multidisciplinary teams.

CG4 - Ability for mathematical modeling, calculation and simulation in technology centers and business engineering, particularly in research, development and innovation tasks in all areas related to Computer Engineering.

CG5 - Ability for the development, strategic planning, management, coordination and technical and financial management of projects, in all areas of Computer Engineering, following quality and environmental criteria.

CG6 - Ability for the general, technical and research, development and innovation management of projects, in companies and technological centers, in the field of Computer Engineering.

CG7 - Ability for setting up, leadership and management of processes for computer equipment manufacturing, with safety assurance for people and goods, and the quality of the final products and their approval.

CG8 - Ability to apply knowledge acquired and solve problems in new or unfamiliar environments within broader and multidisciplinary contexts, being able to integrate such knowledge.

CG9 - Ability to understand and apply ethical responsibility, legislation and professional deontology of the profession of Computer Engineering.

CG10 - Ability to apply the economy principles and human resources and projects management, as well as the legislation, regulation and standardization of Information Technology.

TRANSVERSAL COMPETENCES

CT1 - Innovative and entrepreneurial spirit.

CT2 - Ability to manage teams and organizations.

CT3 - Leadership capacity.

CT4 - Ability to communicate conclusions and the knowledge and ultimate reasons that sustain them to specialized and non-specialized audiences, orally and in writing, in Spanish and English.

CT5 - Ability for teamwork.

CT6 - Interpersonal relationship skills.

CT7 - Ability for critical reasoning and creativity, as means to have the opportunity to be original in the generation, development or application of ideas within a research or professional context.

CT8 - Responsibility and ethical commitment in the performance of the professional and research activity.

CT9 - Respect for and promotion of human rights, democratic principles, principles of equality between women and men, solidarity, universal accessibility and design for all, prevention of occupational risks, protection of the environment and promotion of culture of peace.

CT10 - Orientation towards quality and continuous improvement. CT11 - Autonomous learning capacity.

CT12 - Ability to solve problems in new or unfamiliar environments within broader (or multidisciplinary) contexts.

CT13 - Ability to integrate knowledge and face the complexity of making judgments based on incomplete information.

SPECIFIC COMPETENCES

CEDG1 - Ability to integrate technologies, applications, services and systems of Computer Engineering, with a generalist character, in broader and multidisciplinary contexts.

CEDG2 - Capacity for strategic planning, preparation, management, coordination, and technical and economic management in the areas of Computer Engineering related, among others, with: systems, applications, services, networks, infrastructures or computer facilities and centers or factories of software development, respecting the adequate fulfillment of quality and environmental criteria and in multidisciplinary work environments.

CEDG3 - Ability to manage research, development and innovation projects in companies and centers.

CETI1 - Ability to model, design, define architecture, implement, manage, operate, manage and maintain applications, networks, systems, services and computer content.

CETI2 - Ability to understand and know how to apply the operation and organization of the Internet, the technologies and protocols of new generation networks, component models, intermediary software and services.

CETI3 - Ability to ensure, manage, audit and certify the quality of developments, processes, systems, services, applications and computer products.

CETI4 - Ability to design, develop, manage and evaluate mechanisms for certification and guarantee of security in the treatment and access to information in a local or distributed processing system.

CETI5 - Ability to analyze the information needs that arise in an environment and carry out in all its stages the process of construction of an information system.

CETI6 - Ability to design and evaluate operating systems and servers, and applications and systems based on distributed computing.

CETI7 - Ability to understand and be able to apply advanced knowledge of high performance computing and numerical or computational methods to engineering problems.

CETI8 - Ability to design and develop computer systems, applications and services in embedded and ubiquitous systems.

CETI9 - Ability to apply mathematical, statistical and artificial intelligence methods to model, design and develop applications, services, intelligent systems and systems based on knowledge.

CETI10 - Ability to use and develop methodologies, methods, techniques, programs of specific use, norms and standards of graphic computing.

CETI11 - Ability to conceptualize, design, develop and evaluate the human-computer interaction of products, systems, applications and computer services.

CETI12 - Ability to create and exploit virtual environments, and for the creation, management and distribution of multimedia content.

Contents
Course outline*
Interships in enterprises in the Information and Telecommunication sectors, where the student can apply and deepen his knowledge and professional skills of the Computer Engineering profession.

Course syllabus
Not applicable

Educational activities *

Student workload in hours by lesson		Lectures	Practical activities				Monitoring activity	Homework
Lesson	Total	L	HI	LAB	COM	SEM	SGT	PS
TOTAL	150	3,7					3,7	146,3

L: Lectures (85 students)
HI: Hospital internships (7 students)
LAB: Laboratory or field practices (15 students)
COM: Computer room or language laboratory practices (20 students)
SEM: Problem classes or seminars or case studies (40 students)
SGT: Scheduled group tutorials (educational monitoring, ECTS type tutorials)
PS: Personal study, individual or group work and reading of bibliography

Teaching Methodologies*

Scheduled tutoring, individual or in small groups to carry out a more individualized follow-up of the student, with training and orientation activities. Mainly, they will be used to track the work.

Completion of activities, work and study by the student, autonomously.

The activities that the student will develop in a non-face-to-face manner will be mainly oriented to the acquisition of basic knowledge in the field of Information Technology and to the development of the projects and work requested, either individually or in groups

Learning outcomes *

The objective of the internship will be to familiarize the student with the business reality of the region in the field of development and management of computer engineering projects.

Assessment systems *

Module assessment will be made considering all the work done by the student in the internship period. To do this, we will monitor your work through several personal interviews throughout the internship, in which the student will be asked for information about the development of his internship work. Likewise, at the end of the internship period, the student tutor from the company will deliver a confidential report, assessing those tasks done by the student according to the competences of the module.

Finally, at the end of the programme, the student will deliver a report describing the tasks and activities, which will detail (according to a model that will be delivered) the work done.

Therefore, the evaluation will consist of three elements:
- Student Tutor's report in the company.
- Report of the UEx Tutor.
- Report of practices delivered by the student.

The tutor from the UEx will evaluate these three elements and assign a final grade. He may request the student to modify the report in order to improve it as he deemed proper to do so.

Bibliography (basic and complementary)
No applicable

Other resources and complementary educational materials
Online AVUEX platform for the module