Universidad Europea

1. OVERVIEW

Subject area	Professional Internships
Degree	Bachelor's Degree in Computer Engineering
School/Faculty	School of Architecture, Engineering and Design
Year	Fourth
ECTS	6
Type	Compulsory
Language(s)	Spanish
Delivery mode	On campus and online
Semester	S1, S2
Year	2022-2023
Coordinating professor	María de la Luz Morales Botello
Teacher	María de la Luz Morales Botello

2. INTRODUCTION

The university offers internship opportunities annually. The internships will mainly be carried out in-person. The amount of face-to-face attendance considered sufficient will depend on the specific features of the internship, although in the table it is indicated as 100%.

The objective is to place students in a learning environment within a real workplace, where they can build on and apply their knowledge in an integrative manner, and to involve them in a professional environment.

3. SKILLS AND LEARNING OUTCOMES

Basic skills (CB, by the acronym in Spanish):

- CB5: Students have developed the learning skills necessary to undertake further study in a much more independent manner.

General skills of the profession (CG, by the acronym in Spanish):

- CG1. Ability to conceive, draft, organise, plan, develop and sign projects in the field of computer engineering, with the objective of conceiving, developing and making use of the systems, services and computer applications.
- CG2. Ability to manage project activities in the field of computer science.
- CG3. Ability to design, develop, assess and ensure the accessibility, ergonomics, usability and security of systems, services and computer applications, as well as the information they manage.
- CG4. Ability to define, assess and select hardware and software platforms for the development and implementation of systems, services and computer applications.

- CG5. Ability to design, develop and maintain systems, services and computer applications using software engineering methods as a tool for quality assurance, in accordance with the knowledge acquired as established in section 5 of Annex II of the Spanish Official Gazette (BOE) 12977/2009.
- CG6. Ability to conceive and develop centralised or distributed computer systems or architectures, integrating hardware, software and networks.
- CG7. Ability to know, understand and apply the necessary legislation during the professional development of a Technical Engineer in Computer Science and to handle specifications, regulations and compulsory standards.
- CG8. Knowledge of the core topics and technologies, which enable the students to learn and develop new methods and technologies, as well as give them the versatility to adapt to new situations.
- CG9. Ability to solve problems using initiative, decision-making, independence and creativity. Ability to communicate and transfer the knowledge, abilities and skills of a Technical Engineer in Computer Science.
- CG10. Knowledge to carry out measurements, calculations, valuations, appraisals, expert's reports, studies, reports, task planning and other similar computer-related work.
- CG11. Ability to analyse and assess the social and environmental impact of technical solutions, understanding the ethical and professional responsibility of the role of a Technical Engineer in Computer Science.
- CG12. Knowledge and application of the basic elements of economics and human resource management, project organisation and planning, as well as legislation, regulation and standardisation in the field of computer projects.

Transversal skills (CT, by the acronym in Spanish):

- CT1: Independent Learning: Ability to choose the most effective strategies, tools and opportunities for independent learning and implementation of what has been learnt.
- CT2: Self-confidence: Ability to evaluate one's own results, performance and skills with the self-determination necessary to complete tasks and meet any objectives.
- CT3: Ability to adapt to new circumstances: Being able to evaluate and understand different points of view, taking different approaches to suit the situation.
- CT6: Oral or written communication: Ability to communicate and gather information, ideas, opinions and viewpoints to understand and be able to act, spoken through words or gestures or written through words and/or graphic elements.
- CT9: Interpersonal relationship skills: Ability to maintain positive relationships with other people through assertive verbal and non-verbal communication. This means being able to express or communicate what you want, think or feel without discomforting, offending or harming the feelings of other people.
- CT10: Initiative and entrepreneurial spirit: Ability to undertake difficult or risky actions with resolve. Ability to anticipate problems, propose improvements and persevere to ensure they are implemented. Willingness to take on and carry out tasks.
- CT11: Planning and time management: Ability to set objectives and choose the right means to fulfil them through efficient use of time and resources.

- CT15: Responsibility: Ability to fulfil commitments to themselves and others when undertaking a task and try to meet a range of objectives within the learning process. Ability to face and accept the consequences of actions taken freely.
- CT17: Teamwork: Ability to integrate and collaborate actively with other people, departments and/or organisations in order to reach common goals.
- CT18: Use of information and communication technology (ICT): Ability to effectively use information and communication technology, such as tools for searching, processing and storing information, and for developing communication skills.

Specific skills of the profession (CE, by the acronym in Spanish):

Core:

- CE4. Basic knowledge on the use and programming of computers, operating systems, databases and computer programs with engineering applications.
- CE5. Knowledge of the structure, organisation, operation and interconnection of computer systems, the fundamentals of their programming, and how they are used to solve engineering problems.
- CE6. Adequate knowledge of the concept of the company, and the institutional and legal framework of the company. Organisation and business management.

Common to the field of computer science:

- CE7. Ability to design, develop, select and assess computer applications and systems, ensuring their reliability, security and quality, according to ethical principles and the current legislation and regulations.
- CE8 Ability to plan, conceive, use and manage computer projects, services and systems in all areas, leading their implementation and continuous improvement and assessing their economic and social impact.
- CE9 - Ability to understand the importance of negotiation, effective work habits, leadership and communication skills in all software development environments.
- CE11 Knowledge, administration and maintenance of systems, services and computer applications.
- CE12 Knowledge and application of the basic algorithmic procedures of computer technologies to solve problems, analysing the suitability and complexity of the proposed algorithms.
- CE13 Knowledge, design and efficient use of the most appropriate data types and structures to solve a problem.
- CE14 Ability to analyse, design, construct and maintain robust, secure and efficient applications, choosing the most appropriate paradigm and programming languages.
- CE15 Ability to learn, understand and evaluate the structure and architecture of computers, as well as their basic components.
- CE16 Knowledge of the characteristics, functionalities and structure of Operating Systems, and to design and implement applications based on their services.

- CE17 Knowledge and application of the characteristics, functionalities and structure of Distributed Systems, Computer Networks and the Internet, and to design and implement applications based on them.
- CE18 Knowledge and application of the characteristics, functionalities and structure of databases, enabling their appropriate use, and the design, and the analysis and implementation of applications based on them.
- CE19 Knowledge and application of the tools necessary to store, process and access information systems, including web-based systems.
- CE20 Knowledge and application of the fundamental principles and basic techniques of parallel, concurrent, distributed and real-time programming.
- CE21 Knowledge and application of the fundamental principles and basic techniques of intelligent systems and their practical application.
- CE22 Knowledge and application of software engineering principles, methods and life cycles.
- CE23 Ability to design and assess personal computer interfaces that guarantee the accessibility and usability of systems, services and computer applications.

Of specific technology Computers.

- CE25 Ability to possess thorough understanding of the fundamental principles and computational models and know how to apply them to interpret, select, evaluate, model, and create new concepts, theories, uses and technological developments related to computer science.
- CE26 Ability to understand the theoretical foundations of programming languages and the associated lexical, syntactic and semantic processing techniques, and know how to apply them to create, design and process languages.
- CE27 Ability to assess the computational complexity of a problem, know algorithmic strategies that help to solve it, and recommend, develop and implement the strategy that guarantees the best performance according to the established requirements.
- CE28 Ability to learn about the fundamentals, paradigms and techniques of intelligent systems and to analyse, design and build systems, services and computer applications that use these techniques in any field of application.
- CE29 Ability to acquire, obtain, formalise and represent human knowledge in a computable form to solve problems through a computer system in any field of application, particularly those related to aspects of computing, perception and performance in intelligent environments.
- CE30 Ability to develop and evaluate interactive and complex information presentation systems and how they are used to solve human-computer interaction design problems.
- CE31 Ability to understand and develop computational learning techniques and design and implement applications and systems that use them, including those dedicated to automatic information extraction and knowledge from large volumes of data.

Learning outcomes (RA, by the acronym in Spanish):

- RA1: Apply knowledge within a professional context in an integrative manner.
- RA2: Demonstrate the work carried out through well-structured reports that include conclusions on the work.

The following table shows how the skills developed in the subject area match up with the intended learning outcomes:

Skills	Learning outcomes
CB5, CT1, CT2, CT3, CT6, CT9, CT10, CT11, CT15, CT17, CT18, CG1 A 12, CE4, CE5, CE6, CE7, CE8, CE9, CE11, CE12, CE13, CE14, CE15, CE16, CE17, CE18, CE19, CE20, CE21, CE22, CE23, CE25, CE26, CE27, CE28, CE29, CE30, CE31	RA1
CB5, CG7, CG1, CG9, CT6, CT11	RA2

4. CONTENTS

The objective is to place students in a learning environment within a real workplace, where they can build on and apply their knowledge in an integrative manner, and to involve them in a professional environment.

5. TEACHING/LEARNING METHODS

The types of teaching/learning methods are as follows:

1. Survey on aims and interests. This survey is used to establish the aims of the subject and gather the student's interests on the subject. We will then make reference to it throughout the year for the students to evaluate the achievement of the aims and interests.

8. Fieldwork, conferences, visits to companies and institutions. These will be used for the development of conditional knowledge. In the on campus delivery mode, all these learning methods may be used, while in the online delivery mode, only conferences can be carried out, as they will be available for remote access in real time (via streaming technologies) or recorded and broadcast afterwards.

6. LEARNING ACTIVITIES

The types of learning activities, plus the amount of time spent on each activity, are as follows:

On campus and online:

Learning activity (AF, by the acronym in Spanish)	Number of hours
Professional Internships. For students who choose to carry out their internships online, they will follow the same procedure as for external internships (depending on the companies' needs and the student's availability), and the same monitoring method. They will have an academic tutor (in addition to the company tutor), who will guarantee the intended skills are acquired.	150
TOTAL	150

7. ASSESSMENT

The assessment systems, plus their weighting in the final grade for the subject area, are as follows:

On campus and online:

Assessment system	Weighting
5. The professional internships will be evaluated by the company through rubrics. This evaluation will later be reviewed by the internship tutor in the light of the evidence gathered throughout the monitoring of the internship.	100%

On the Campus Virtual, when you open the subject area, you will find all the details of your assessable tasks and the deadlines and assessment procedures for each task.

7.1. Ordinary exam period

To pass the subject area in the ordinary exam period, you will need a final grade of at least 5.0 out of 10.0 (weighted average) for the subject area.

7.2. Extraordinary exam period (resits)

To pass the subject area in the ordinary exam period, you will need a final grade of at least 5.0 out of 10.0 (weighted average) for the subject area.

Activities not passed in the ordinary exam period, or those not submitted, must be submitted after receiving the relevant corrections and feedback from the lecturer.

8. TIMELINE

The timeline with submission dates for the assessable tasks in this subject area will be indicated in this section:

Assessable tasks	Date
Report from the company's tutor (tutor submission)	Submission after the completion of each student's internship
Midterm report	Each student will submit the report half way through his/her internship period
Final internship report	Each student will submit the report after completing their internship period (1-2 weeks)

The timeline may be subject to change for logistical reasons related to the activities. Students will be informed of any changes in due time and course.

9. BIBLIOGRAPHY

The reference material for the subject area is as follows:

It will depend on the subject of the internship

The recommended bibliography is indicated below:

It will depend on the subject of the internship

10. DIVERSITY AWARENESS UNIT

Students with special educational needs:

To ensure equal opportunities, curricular adaptations or adjustments for students with special educational needs will be outlined by the Diversity Awareness Unit (UAD, Spanish acronym).

As an essential requirement, students with special educational needs must obtain a report about the curricular adaptations/adjustments from the Diversity Awareness Unit by contacting unidad.diversidad@universidadeuropea.es at the beginning of each semester.

11. STUDENT SATISFACTION SURVEYS

Your opinion matters!

Universidad Europea encourages you to complete our satisfaction surveys to identify strengths and areas for improvement for staff, degrees and the learning process.

These surveys will be available in the survey area of your campus virtual or by email.

Your opinion is essential to improve the quality of the degree.

Many thanks for taking part.