Internship Program
Software and Computer Systems Engineering

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Software and Computer
Systems Engineering

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Introduction

The development of increasingly specific and specialized instruments and complex computer structures for the design of programs and software capable of automating processes that were hitherto unthinkable, has led to a boom in Computer Systems Engineering. the rise of Computer Systems Engineering. This is an area that, through the analysis, design, creation and testing of procedures, can satisfy multiple needs and solve particular problems remotely and effectively. and solve particular problems remotely and effectively. And given the incessant changes that have occurred in this area, TECH has developed a complete program oriented to practice, so that the graduate can catch up on all developments that have arisen in this area through a stay of 120 hours in a prestigious company in the field of software engineering at an international level. prestigious company in the field of software engineering at an international level.

A program with which you will be able to satisfy the needs of your clients through the mastery of the current complex programming that you will acquire with this Practical Training"

The continuous processes of digitalization and technological transformation have brought with them a series of advances in Computer Engineering that have made it possible to develop increasingly specialized and complex software and computer systems, increasing the possibility of creating differentiated quality products of computer science To master this area, the professional must have an exhaustive and specialized knowledge of each of the agents involved in its development, as well as a perfect command of the tools and models applicable to each process, aspects that he/she will be able to work on actively thanks to the practical stay that TECH makes available to him/her. actively thanks to the practical stay that TECH puts at your disposal.

The training consists of 120 hours distributed over 3 weeks in an international software development company. The graduate will be able to participate in the various tasks of the engineering and IT team, acquiring the skills and competencies of an IT specialist. and IT team, acquiring the skills and competencies of a specialist in the sector. specialist in the sector. In addition, you will be accompanied at all times by a tutor who will not only make sure that you get the most out of your stay, but also that you get the most out of your stay. who will not only make sure that you get the most out of your stay, but will also be available to answer any questions will be available to answer any questions that may arise during the course of the stay. during the course of the stay.

It is, therefore, a unique and unparalleled opportunity to implement into your practice the most innovative strategies for achieving maximum security in online applications, to work on the automation of extreme audits and to perfect your skills in web server administration through to perfect your skills in web server administration through the use of the most advanced the use of the most cutting-edge and specialized IT tools. In addition, passing this Practical Training will become a significant asset that the graduate will be able to use to distinguish himself/herself in an increasingly competitive labor market in which he/she will undoubtedly succeed.

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Why Study an Internship Program?

The course of this Practical Training will provide the graduate with all the necessary tools for the mastery of Software Engineering from an integral, exhaustive, novel and specialized perspective. The planning has been carried out in a rigorous manner, so that the student works in a guaranteed and multidisciplinary way in the different areas that make up the analysis, design and management of computer systems. Thus, in just 3 weeks, you will be perfectly prepared to face any job selection process related to this sector with the guarantee of having mastered the strategies and techniques that are marking the forefront of the IT industry today.

"

During the Practical Training period you will have access to a wealth of resources from the software apparatus, so that you can work on their comprehensive mastery and guidelines for their use in today's context"

1. Updating from the Latest Technology Available

The program will give the graduate access to the most sophisticated computer equipment available today. of the present day. In addition, you will have access to the different systems and software that are marking the forefront of specialized engineering in this field. Thus, you will be able to work intensively on their mastery, including in your skills catalog the exhaustive handling of them, an asset that will undoubtedly make you stand out in any selection process.

2. Gaining In-depth Knowledge from the Experience of Top Specialists

Both the background and experience of the team of professionals who will accompany the graduate during the 3 weeks of practical stay will serve as a guide in their specialization. These experts will share with the student their strategies for success and the best techniques for each case, allowing the student to implement those they consider most appropriate for their work methodology. and the best techniques for each case, allowing them to implement in their practice those they consider most appropriate for their work methodology.

3. Entering first-class environments

Access to this Practical Training will allow the graduate to work in a multidisciplinary context of Software Engineering. He will be involved in various processes related to the management and analysis of computer systems, especially in everything related to the security of applications and programs, developing stable protocols and analyzing possible vulnerabilities of customer products.

4. Putting the acquired knowledge into daily practice from the very first moment

The design of this Practical Training is such that everything that is developed during the 3 weeks of the developed during the 3 weeks in which the experience is distributed, is perfectly applicable to any is perfectly applicable to any Software Engineering context. No matter where the graduate wants to work, he/she will have the necessary knowledge and skills to succeed in any field. the necessary knowledge and skills to succeed in any country through a first class job.

5. Expanding the Boundaries of Knowledge

TECH updates its catalog of centers every year, in order to offer the best stays and ensure that the centers have the most up-to-date tools according to the progress of the sector. In addition, it gives graduates the opportunity to select from a range of locations, allowing them access to an international experience that will provide them with an unparalleled professional and cultural background.

You will have full practical immersion at the center of your choice"

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Objectives

This Practical Training has been developed so that the graduate not only acquires new knowledge related to the latest developments in the Software and Computer Systems Engineering sector, but also to improve his or her skills in the use of new technologies and software. In addition, you will have the necessary knowledge to process the data generated in your activity in a professional, optimal and effective manner.

General Objectives

- Acquire new knowledge in Software and Computer Systems Engineering
- Acquire new skills in terms of new technologies, latest developments in software in software
- Process the data generated in Software and Computer Systems Engineering activities

A modern and sophisticated program, at the pinnacle of Computer Engineering, which will help the professional to develop his competences in a practical way"

Specific Objectives

- Know the basics of Software Engineering, as well as the set of rules or principles of ethics and professional responsibility during and after development

- Understand the software development process , under the different programming models and the object-oriented programming paradigm

- Understand the functioning of the processes of procurement, execution, monitoring, control and closure of a project

- Acquire the essential knowledge related to the professional responsibility derived from project management

- Understand the different software development platforms

- Acquire the necessary knowledge for the development of applications and graphical interfaces in Java and .NET languages

- Understand the process of creating web content through HTML markup language

- Understand the procedures and techniques to improve the appearance of a document written in HTML

- Understand the construction of the logical data model, the specification of tables, columns, keys and dependencies, as well as the knowledge necessary for the physical handling of data, file types, access modes and file organization

- Learn how to integrate applications developed in PHP with MariaDB and MySQL databases

- Learn about business continuity plans, their phases and maintenance process

- Know the procedures for the correct protection of the company through DMZ networks, the use of intrusion detection systems and other methodologies

- Understand software security issues, vulnerabilities and how they are classified

- Know the design principles, methodologies and standards in software security

- Understand the concept of distributed multi-server architectures

- Master the functioning of an application server and another proxy

- Acquire the knowledge required for the correct execution of the audit process and internal computer control

- Understand the processes to carry out for the security audit in systems and networks

- Acquire the knowledge required to evaluate and detect the vulnerabilities of online applications

- Understand the security policies and standards to be applied to online applications

Participating in real projects will help you develop your own strategy for dealing with complex situations, which will enrich your professional profile"

Educational Plan

TECH is aware of the importance of having a practical period that allows graduates to develop their knowledge and perfect their professional skills. Therefore, it offers you the possibility of being part of a prestigious company in the field of computer engineering with international recognition and years of experience with the work of computer systems. This experience is developed over 120 hours, distributed in 3 weeks: from Monday to Friday with 8 consecutive hours with a specialist in the area.

In this training proposal, completely practical in nature, the activities are aimed at developing and perfecting the skills necessary for the provision of design and structure of Software, and are oriented towards specific training for the exercise of the activity high professional performance.
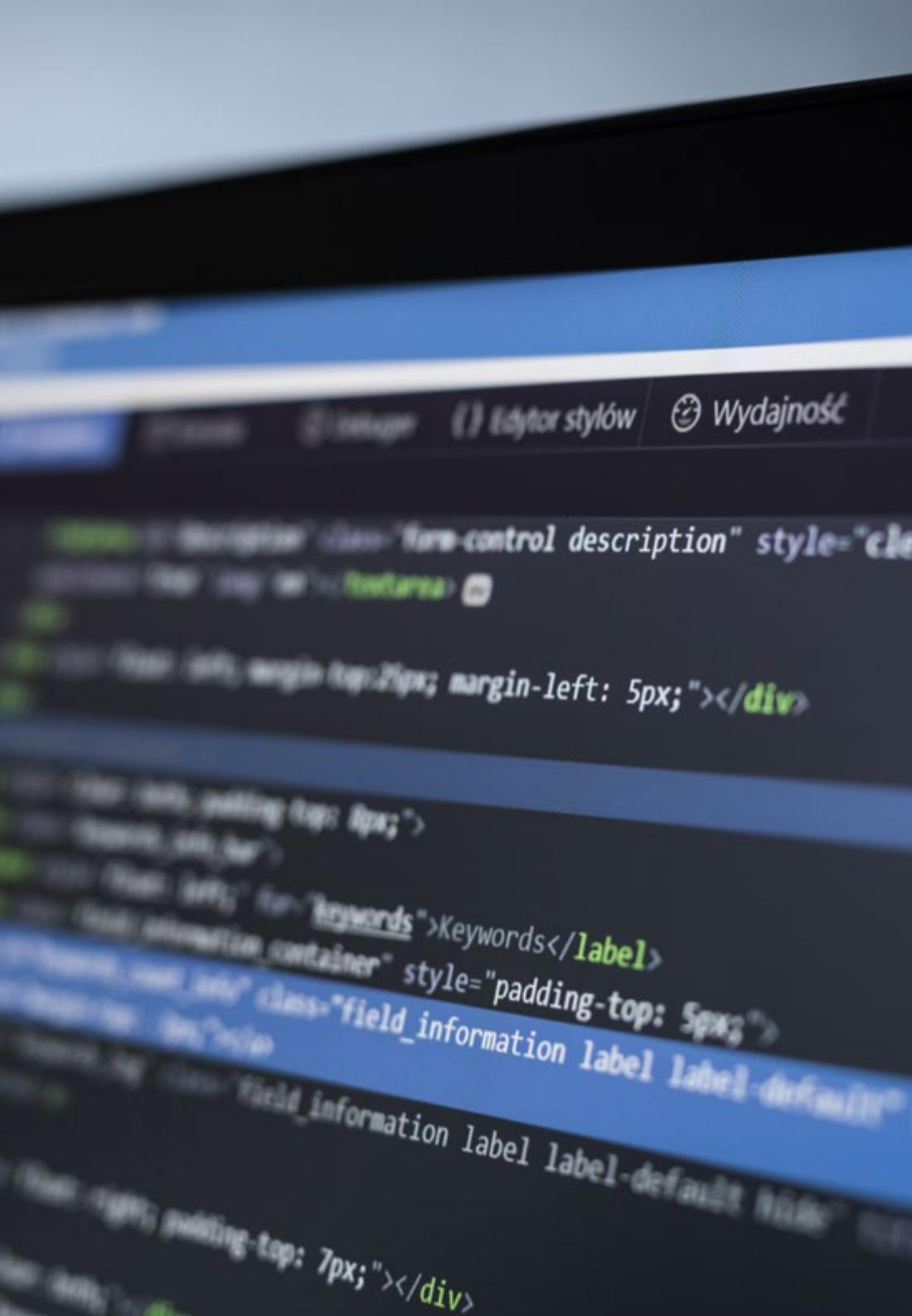
It is, therefore, a unique opportunity to catch up with the latest developments in the profession working in a leading company, with the most modern digital tools and the latest computer technology. In addition, the stay will allow the professional to complete a minimum number of practical activities, a valuable aspect in any recruitment process.

The education will be carried out with the active participation of the student performing the activities and procedures of each area of competence (learning to learn and learning to do), with the accompaniment and guidance of teachers and other fellow trainees who facilitate teamwork and multidisciplinary integration as transversal competencies for the practice of La Software and Computer Systems Engineering (learning to be and learning to relate).

The procedures described below will be the basis of the practical part of the training, and their implementation will be subject to the center's own availability and workload, the proposed activities being the following:

Receive specialized education in an institution that can offer you all these possibilities, with an innovative academic program and a human team that will help you develop your full potential"

Module	Practical Activity
Domain of the methodologies for the development and quality in Software Engineering and project management	Develop object-oriented or model-driven software as required for the job
	Follow agile methodologies such as SCRUM to support software development
	Measure and test the software created based on quality processes
	Plan the software project, from its idea and development phases to the tasks to be performed to be carried out
	Manage the development of the project schedule, time and planning
	Establish an appropriate communication plan among all members of the development team. of the development team
Software development platforms and computing methods in the web client	Develop applications and graphical interface in Java, .NET, Android Studio or the appropriate program for the type of work to be done
	Working in cloud application development environments such as Google Cloud Platform such as Google Cloud Platform
	Proficiency in HTML, CSS or Javascript design work
	Enhance web usability by following specific conceptual design guidelines and principles.
	Designing to overcome barriers and create more accessible sites
Management security management in the online application and in the software	Follow a comprehensive security process in the creation of software
	Implement the principles of secure application coding in daily work
	Automating security tasks through SOAR architecture
	Manage access control in the software project, as well as programs, processes and information security policies
	Build a security architecture, involving processes for prevention, detection, reaction and recovery from potential threats
Effective management administration of Web Servers	Handle the HTTP protocol in the implementation and administration of a web server
	Internet Information Services (IIS) Managing the Systemic Coaching
	Manage Apache as the main tool in the administration of a web server
Security in Software Engineering	Implement rigorous internal controls, with an appropriate organizational chart and classification, to ensure the security of information systems
	Determine Technical Audit of Security on the Systemic Coaching Social Networks and in Mobile Devices
	Perform a security audit following the procedures and techniques advisable in software development environments
	Detect possible vulnerabilities or security problems in the design of web applications. web application design
	Implement Testing Online Safety and Security of Web Applications
	Develop its own manual of good practices to be followed to ensure the security of the applications of the applications

Where Can I Do the Internship Program?

In order to ensure that graduates can get the most out of their practical training, TECH subjects its collaborating companies to strict quality control. Thus, it is possible to guarantee a training in which the professional will be able to actively participate in the company's own tasks, working side by side with professionals in the sector and ensuring the improvement of his or her skills.

You will be able to do your practical period in a center with years of experience in the development of successful software and computer systems and actively participate in their daily tasks"

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The student will be able to do this program at the following centers:

information-technology

Goose & Hopper España

Country
Spain

City
Valencia

Address: La Marina de Valencia, Muelle de la Aduana S/N Edificio Lanzadera 46024

Advertising, design, technology and creative agency and creativity

Related internship programs:
- Digital Communication and Reputation Management
- Organic 3D Modeling

information-technology

Goose & Hopper México

Country
Mexico

City
Michoacán de Ocampo

Address: Avenida Solidaridad Col. Nueva Chapultepec Morelia, Michoacan

Advertising, design, technology and creative agency and creativity

Related internship programs:
- Digital Communication and Reputation Management
- Organic 3D Modeling

information-technology

Grupo Fórmula

Country
Mexico

City
Mexico City

Address: Cda. San Isidro 44, Reforma Soc, Miguel Hidalgo, 11650 Ciudad de México, CDMX

Leading company in multimedia communication and content generation

Related internship programs:
Graphic Design
People Management

Make the most of this opportunity to surround yourself with expert professionals and learn from their work methodology"

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General Conditions

Civil Liability Insurance

This institution's main concern is to guarantee the safety of the trainees and other collaborating agents involved in the internship process at the company. Among the measures dedicated to achieve this is the response to any incident that may occur during the entire teaching-learning process.

To this end, this entity commits to purchasing a civil liability insurance policy to cover any eventuality that may arise during the course of the internship at the center.

This liability policy for interns will have broad coverage and will be taken out prior to the start of the practical training period. This means that the professional will not have to worry if they are faced with an unexpected situation and will be covered until the end of the practical internship program at the center.

General Conditions of the Internship Program

The general terms and conditions of the internship agreement for the program are as follows:

1. TUTOR: During the Internship Program, students will be assigned with two tutors who will accompany them throughout the process, answering any doubts and questions that may arise. On the one hand, there will be a professional tutor belonging to the internship center who will have the purpose of guiding and supporting the student at all times. On the other hand, they will also be assigned with an academic tutor, whose mission will be to coordinate and help the students during the whole process, solving doubts and facilitating everything they may need. In this way, the student will be accompanied and will be able to discuss any doubts that may arise, both clinical and academic.

2. DURATION: The internship program will have a duration of three continuous weeks, in 8-hour days, 5 days a week. The days of attendance and the schedule will be the responsibility of the center and the professional will be informed well in advance so that they can make the appropriate arrangements.

3. ABSENCE: If the students does not show up on the start date of the Internship Program, they will lose the right to it, without the possibility of reimbursement or change of dates. Absence for more than two days from the internship, without justification or a medical reason, will result in the professional's withdrawal from the internship, therefore, automatic termination of the internship. Any problems that may arise during the course of the internship must be urgently reported to the academic tutor.

4. CERTIFICATION: Professionals who pass the Internship Program will receive a certificate accrediting their stay at the center.

5. EMPLOYMENT RELATIONSHIP: The Internship Program shall not constitute an employment relationship of any kind.

6. PRIOR EDUCATION: Some centers may require a certificate of prior education for the Internship Program. In these cases, it will be necessary to submit it to the TECH internship department so that the assignment of the chosen center can be confirmed.

7. DOES NOT INCLUDE: The Internship Program will not include any element not described in the present conditions. Therefore, it does not include accommodation, transportation to the city where the internship takes place, visas or any other items not listed

However, students may consult with their academic tutor for any questions or recommendations in this regard. The academic tutor will provide the student with all the necessary information to facilitate the procedures in any case.

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Certificate

This program will allow you to obtain your **Internship Program diploma in Computer Systems Engineering** endorsed by **TECH Global University**, the world's largest online university.

TECH Global University is an official European University publicly recognized by the Government of Andorra (*official bulletin*). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.
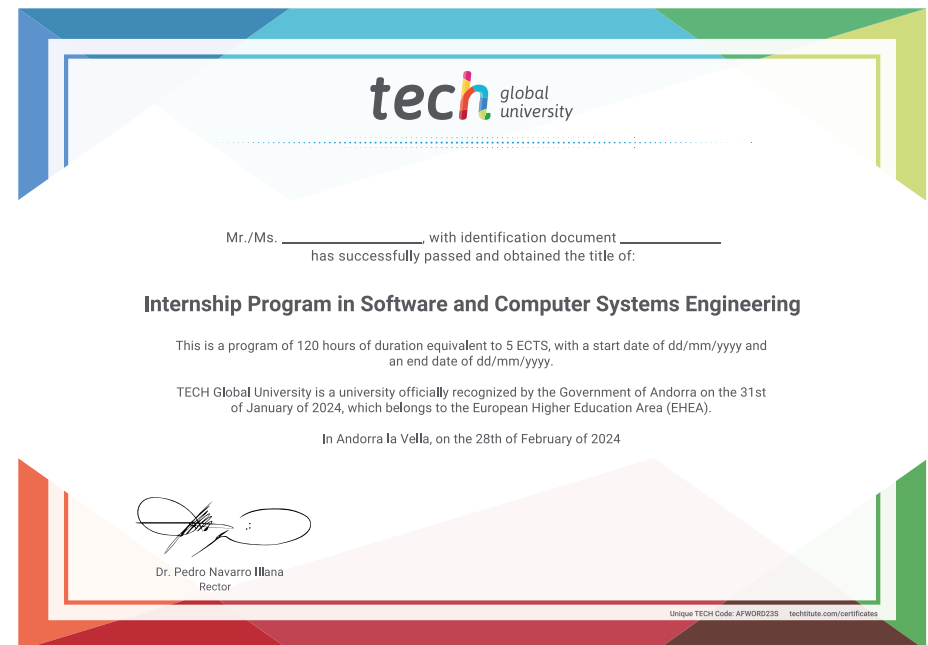
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Internship Program in Software and Computer Systems Engineering**

Duration: **3 weeks**

Attendance: **Monday to Friday, 8-hour consecutive shifts**

Accreditation: **5 ECTS**

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Mr./Ms. _____, with identification document _____ has successfully passed and obtained the title of:

Internship Program in Software and Computer Systems Engineering

This is a program of 120 hours of duration equivalent to 5 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024

Dr. Pedro Navarro Illana
Rector

Unique TECH Code: AFWORD23S   techtitute.com/certificates

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