

Hybrid Master's Degree

Advanced Systems Computing



Hybrid Master's Degree

Advanced Systems Computing

Modality: Hybrid (Online + Internship)

Duration: 12 months

Certificate: TECH Global University

Accreditation: 60 + 4 ECTS

Website: www.techtute.com/us/information-technology/hybrid-master-degree/hybridmaster-degree-advanced-systems-computing

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01

Introduction

Advanced Systems Computing is in a stage of rapid evolution, marked by the continuous advancement of emerging technologies and the increasing complexity of technological environments. Indeed, the integration of cloud computing and distributed systems is redefining how organizations manage and deploy their IT infrastructures, enabling unprecedented scalability and flexibility. In addition, the adoption of microservices-based architectures and the use of containers, such as Docker and Kubernetes, are revolutionizing application development and management. In this context, TECH has developed this comprehensive program, which combines the online format for theory, based on the innovative learning methodology known as Relearning, with a practical stay in a renowned IT company.



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Thanks to this Hybrid Master's Degree, you will gain expertise in cutting-edge areas such as IT project management, distributed systems, cloud computing and Artificial Intelligence”

In today's Computing landscape, Advanced Systems are undergoing a rapid evolution driven by the growth of Artificial Intelligence (AI), cloud computing and cybersecurity. This requires constant updating of knowledge and skills to stay ahead in a perpetually changing technological environment.

This is how this Hybrid Master's Degree was created, thanks to which computer scientists will learn to differentiate between IT projects and processes, identifying success criteria and evaluating the scope and requirements to justify solid business cases. In addition, they will be trained in the selection and application of appropriate management methodologies, using specific tools and techniques for the evaluation and improvement of real projects.

Likewise, the characteristics and advantages of distributed systems and cloud computing, as well as the different types of distributed systems and Cloud First models will be discussed in depth. Integration architectures and emerging technologies, such as Blockchain, will also be analyzed, applying this knowledge to design and manage efficient and secure systems in distributed environments.

Finally, software engineering, IoT technology, development on mobile devices, Artificial Intelligence and computer security will be explored. In this sense, professionals will develop skills in application lifecycle, building IoT solutions and big data analysis, preparing and managing platforms for data exploitation.

In this way, TECH has implemented a comprehensive program, which will be divided into two distinct sections. First, the graduate will be able to study the theory completely online, only needing an electronic device with an Internet connection, with the support of the revolutionary Relearning learning methodology, consisting of the reiteration of key concepts for an optimal assimilation of the contents. Ultimately, the degree includes a 3-week internship in a prestigious IT company.

This **Hybrid Master's Degree in Advanced Systems Computing** contains the most complete and up-to-date program on the market. The most important features include:

- ♦ Development of more than 100 case studies presented by IT professionals, experts in advanced systems and university professors with extensive experience in this field
- ♦ The graphic, schematic and eminently practical contents with which they are conceived, gather essential information on those techniques and tools that are indispensable for professional practice
- ♦ All of this will be complemented by theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ♦ Content that is available from any fixed or portable device with an Internet connection
- ♦ Furthermore, you will be able to carry out an internship in one of the best companies



You will design robust security strategies and manage emerging technologies in governance and IT management contexts, through the best didactic materials, at the forefront of technology and education"

“

This multidisciplinary program will prepare you to face current and future technological challenges, with a comprehensive and updated vision, thanks to an extensive library of innovative multimedia resources”

In this Professional Master's Degree proposal, of a professionalizing nature and blended learning modality, the program is aimed at updating IT professionals who develop their functions to the development of advanced systems, and who require a high level of qualification. The contents are based on the latest evidence, and oriented in a didactic way to integrate theoretical knowledge in computer science practice, and the theoretical-practical elements will facilitate the updating of knowledge and allow decision making.

Thanks to its multimedia content elaborated with the latest educational technology, they will allow the education professional a situated and contextual learning, that is to say, a simulated environment that will provide an immersive learning programmed to specialize in real situations. This program is designed around Problem-Based Learning, whereby the physician must try to solve the different professional practice situations that arise during the course. For this purpose, students will be assisted by an innovative interactive video system created by renowned experts in the field of educational coaching with extensive experience.

Bet on TECH! You will immerse yourself in cloud computing, addressing topics such as deployment models, economic benefits and associated security capabilities and challenges.

You will take an intensive 3-week internship at a prestigious IT company, where you will acquire all the knowledge to grow personally and professionally.



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Taking this Hybrid Master's Degree in Advanced Systems Computing is a strategic decision for those seeking to advance in the field of technology with flexibility and depth”

1. Updating from the latest technology available

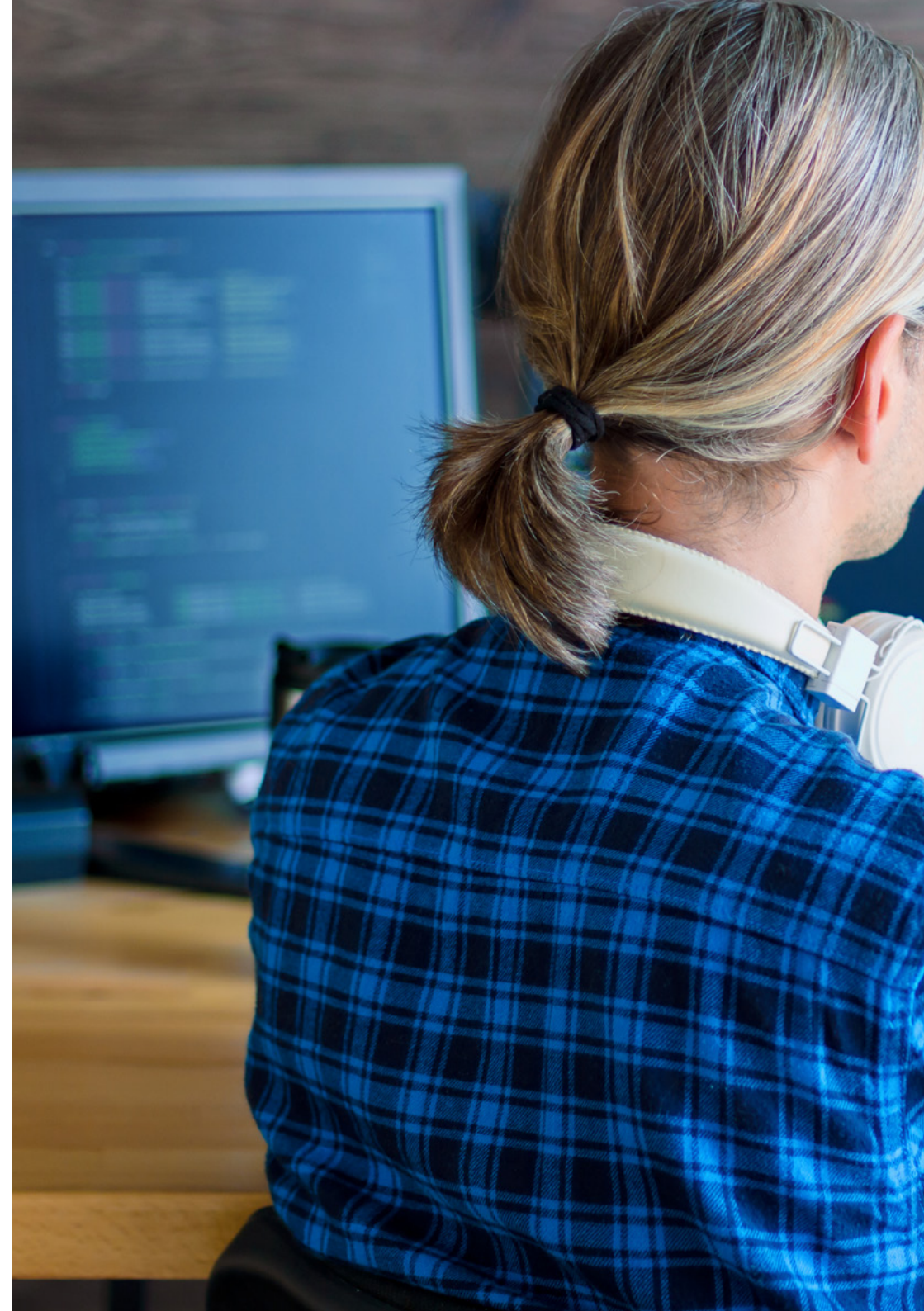
One of the latest emerging technologies in the field of Advanced Systems Computing is quantum computing, which promises to revolutionize the way we process and analyze data. This will allow quantum computers to tackle complex problems at an exponentially faster rate than classical systems, opening up new possibilities in areas such as cryptography, simulation of molecules for drug development and optimization of logistics systems. In addition, recent advances, such as IBM's and Google's developments in quantum computing, are paving the way for their integration into practical applications.

2. Gaining in-depth knowledge from the experience of top specialists

The large team of professionals that will accompany the specialist throughout the practical period is a first-class and an unprecedented guarantee of updating. With a specifically designated tutor, the student will be able to work on real projects, in a state-of-the-art environment, which will allow them to incorporate the most effective procedures and tools in Advanced Systems into their daily practice.

3. Entering first-class professional environments

TECH carefully selects all available centers for Internship Programs. Thanks to this, specialists will have guaranteed access to a prestigious clinical environment in the field of Advanced Systems. In this way, they will be able to experience the day-to-day of a demanding, rigorous and exhaustive area of work, always applying the latest techniques in their work methodology.





4. Combining the best theory with state-of-the-art practice

The academic market is plagued by teaching programs that are poorly adapted to the daily work of the specialist and that require long teaching hours, often not very compatible with personal and professional life. For this reason, TECH offers a new learning model, 100% practical, that allows you to get in front of state-of-the-art procedures in the field of Advanced Systems and, best of all, to put it into professional practice in only 3 weeks.

5. Opening the door to new opportunities

As disruptive technologies such as Artificial Intelligence, machine learning and cloud computing emerge, professionals skilled in Advanced Systems will apply these advances to solve complex problems and optimize processes in various industries. As such, the ability to adapt to these new technologies will not only expand their career opportunities, but also enable them to create innovative and strategic solutions that can transform entire industries.

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

03 Objectives

This university degree will provide computer scientists with a comprehensive understanding of the management and lifecycle of IT projects, as well as the application of advanced methodologies and tools for their success. In addition, it will focus on the design and management of distributed systems and cloud solutions, ranging from systems architecture, to the integration of emerging technologies such as Artificial Intelligence and Big Data. Professionals will also be prepared to address cybersecurity challenges and develop practical skills in software development, IoT and mobile devices.



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You will address the identification and analysis of relevant technologies in the market, enabling you to stay abreast of the latest innovations and their practical applications in the industry”



General Objective

- ♦ The overall objective of the Hybrid Master's Degree in Advanced Systems will be to provide IT professionals with a specialized and up-to-date knowledge of the IT project management and project lifecycle. This will include a thorough understanding of project requirements and the development of a solid business case, as well as the evaluation and application of various management methodologies using the most advanced tools and techniques. In addition, you will consolidate your knowledge of distributed systems, updating with the latest trends and evolutions in the field, and modernize your view on current fundamentals



You will analyze the cloud computing paradigm, examining its main architectural components and developing skills in software creation. What are you waiting for to enroll?"





Specific Objectives

Module 1. IT Project Management and Direction

- ♦ Evaluate the difference between IT Projects and IT Processes
- ♦ Identify the success criteria of an IT project
- ♦ Analyze project scope and requirements to evaluate and defend your business case
- ♦ Identify the most appropriate management methodology for the project
- ♦ Apply the techniques and tools specific to the selected methodology
- ♦ Present, evaluate and discuss real cases, preparing the lessons learned report

Module 2. Design and Management of Distributed Systems and Networks

- ♦ Determine the characteristics and advantages of digital solutions based on Distributed Systems
- ♦ Analyze the main types of distributed systems, advantages, main differences between them, as well as the operation of each one of them
- ♦ Establish the types, characteristics and advantages of going to a Cloud First Model, as reference platforms for a distributed system
- ♦ Delve into the key aspects of a client-server model, the basis of communications for distributed systems
- ♦ Generate specialized knowledge on the main integration architectures, based on distributed systems models that are currently being implemented by important customers in different sectors
- ♦ Analyze Blockchain technology as the main disruptive exponent of a distributed system today

Module 3. Cloud Computing in Computer and Information Systems Engineering

- ♦ Determine the different Cloud deployment options: multi-cloud, Hybrid Cloud, etc
- ♦ Delve into the benefits inherent in cloud computing
- ♦ Analyze the principles of cloud computing economics: shift from CAPEX to OPEX
- ♦ Examine commercial offerings from different cloud providers
- ♦ Evaluate cloud supercomputing capabilities
- ♦ Analyze security in cloud computing

Module 4. Software Engineering

- ♦ Acquire specialized knowledge in project management methodologies
- ♦ Analyze the life cycle of an application
- ♦ Explore the different architectures
- ♦ Identify programming methodologies

Module 5. IoT Technologies Architecture

- ♦ Generate specialized knowledge on IoT
- ♦ Define the criteria for building an IoT solution
- ♦ Develop consultative capabilities in the application of IoT use cases
- ♦ Determine the operating model of an IoT solution
- ♦ Justify the importance of IoT technology in society and in the coming years

Module 6. Technology and Development in Mobile Devices

- ♦ Identify the most important features of the main wireless communication protocols with the greatest presence and use today
- ♦ Analyze the evolution of mobile devices from their emergence to the present day
- ♦ Develop the main features of the essential components of mobile devices
- ♦ Establish the main differences between the two major operating systems for mobile applications. iOS vs Android
- ♦ Determine the main tools for Android-based mobile application development
- ♦ Evaluate the main tools for the development of iOS-based mobile applications
- ♦ Examine the key aspects of security in terms of communications, users, applications and operating systems

Module 7. Artificial Intelligence in Systems Engineering and Computer Science

- ♦ Generate specialized knowledge on the application and advanced techniques of intelligent systems and their practical application
- ♦ Formalize and design automatic reasoning systems
- ♦ Implement and apply machine learning techniques in prediction problems
- ♦ Generate specialized knowledge on Artificial Intelligence

Module 8. Security Systems

- ♦ Define security requirements
- ♦ Develop a security plan
- ♦ Determine the security systems to be deployed for the execution of a security plan
- ♦ Identify the operations necessary for the prevention mechanisms
- ♦ Establish guidelines for a logging and monitoring system
- ♦ Propose incident response actions
- ♦ Analyze the process of designing a security strategy when deploying corporate services
- ♦ Identify security areas
- ♦ Analyze the services and tools in each of the security areas

Module 9. Big Data Applied in Systems Engineering and Computer Science

- ♦ Identify the benefits of analyzing and exploiting data for decision-making
- ♦ Analyze the course of the data from its origin to its exploitation
- ♦ Define the different forms of storage in which the information can be stored, taking into account the way in which it will be subsequently exploited
- ♦ Assess the importance of data analytics, as well as the generation of predictive models that provide efficient results
- ♦ Establish the minimum requirements in terms of privacy that are necessary in the area of access to and use of information
- ♦ Identify the different elements that make up the platform architecture and the necessary interaction between them
- ♦ Analyze the different sources of data that can be the sources of information for the process

- ♦ Define the different forms of storage in which the information can be stored, taking into account the way in which it will be subsequently exploited
- ♦ Establish the minimum requirements in terms of privacy that are necessary in the area of access to and use of information
- ♦ Identify the different elements that make up the platform architecture and the necessary interaction between them
- ♦ Develop the differences between the different possibilities of analyzing the information according to the result to be obtained
- ♦ Identify the traceability of the data to analyze its usability in those areas where it is present

Module 10. IT (Information Technology) Governance and Management

- ♦ Determine the roles of IT governance and IT management, identifying their differences
- ♦ Develop the main elements of IT Governance
- ♦ Analyze the most common frameworks
- ♦ Present the Common IT Management Processes
- ♦ Establish the importance of IT Governance and Management functions
- ♦ Identify the different reference models and standards
- ♦ Propose actions for the implementation of an IT Government
- ♦ Analyze the COBIT, ITIL frameworks
- ♦ Identify the functions of IT Management
- ♦ Examine how new technologies such as Cloud Computing and AI are being integrated into IT governance

04 Skills

Graduates will acquire advanced skills in IT project management, including the planning, execution and control of complex projects, as well as the application of agile and traditional methodologies. They will also delve into the design and administration of distributed systems and cloud solutions, understanding architecture, security and resource optimization. In addition, they will gain a solid foundation in software development, the implementation of emerging technologies and the integration of mobile devices and IoT solutions.

```
...ings.js
...js
JS command.js
JS editor.js
JS fileManager.js
JS main.js
JS readme.rst
JS sequences.js
```

```
51
52
53
54
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56
57
58
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60
61
62
63
64
65
66
```

```
self
input.on
//escap
if (e.
// th
self.
retur
}
if (e.
e.sto
e.pro
self.
self.
retur
}
//up/d
if (e.
e.pro
e.sto
if (
//
if
```

```
searchHistory;  
= this;  
("keydown", function(e) {  
    if (e.keyCode == 27) {  
        // this is a new line  
        deactivate(true);  
        return; // this is a modified line  
    }  
})  
  
if (e.keyCode == 13) {  
    stopImmediatePropagation();  
    eventDefault();  
    search();  
    deactivate();  
    return;  
}
```

```
if (e.keyCode == 13) {  
    stopImmediatePropagation();  
    eventDefault();  
    search();  
    deactivate();  
    return;  
}
```

```
if (e.keyCode == 38 || e.keyCode == 40) {  
    eventDefault();  
    stopImmediatePropagation();  
    if (e.keyCode == 38) {  
        showPrevious();  
    } else {  
        showNext();  
    }  
}
```

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Thanks to this Hybrid Master's Degree in Advanced Systems Computing, you will equip yourself with key competencies to excel in today's technological arena. With TECH's quality assurance!"



General Skills

- Identify project risks, mitigating their impact and managing communication during project monitoring and control
- Present a holistic view of distributed systems
- Identify the different approaches based on the degree of Automation and Service
- Establish the differences with an on-premise architecture
- Analyze work methodologies
- Evaluate the suitability of the use of IoT solutions
- Examine the different alternatives for the development of mobile applications
- Identify best practices to ensure mobile device security
- Master the technologies for the development of mobile applications with native and hybrid solutions
- Identify security risks in a technological platform





Specific Skills

- ♦ Apply effective communication techniques with project partners and stakeholders
- ♦ Manage the phases of the project, implementing the necessary monitoring and control mechanisms
- ♦ Examine the main components that make up a distributed system infrastructure and how they operate
- ♦ Develop the different types of architectures that make up a good design of a distributed system for its correct implementation
- ♦ Analyze a basic IoT architecture
- ♦ Evaluate market solutions and their best application for each use case
- ♦ Identify which type of learning (supervised, unsupervised) is most appropriate for a given problem
- ♦ Identify the characteristics of an Intelligent System/Agent
- ♦ Assess the importance of data analytics, as well as the generation of predictive models that provide efficient results
- ♦ Develop the elements of IT Governance

05

Course Management

The faculty are high-caliber experts, with a unique combination of academic and professional experience in the field of advanced technology. Indeed, they will bring deep expertise in key areas, such as IT project management, distributed systems, cloud computing and Artificial Intelligence, backed by years of industry and research experience. Therefore, in addition to their solid technical knowledge, they are committed to educational innovation and hands-on training, which will give graduates access to real cases, state-of-the-art tools and current methodologies.



“

The teachers' hands-on approach, as well as their ability to integrate theory with real-world applications, will ensure an enriching learning experience”

Management



Mr. Olalla Bonal, Martín

- ♦ Senior Blockchain Practice Manager at EY
- ♦ Blockchain Client Technical Specialist for IBM
- ♦ Director of Architecture for Blocknitive
- ♦ Team Coordinator in Non-Relational Distributed Databases for WedoIT, a subsidiary of IBM
- ♦ Infrastructure Architect at Bankia
- ♦ Head of Layout Department at T-Systems
- ♦ Department Coordinator for Bing Data España SL

Professors

Mr. Gómez Gómez, Borja

- ♦ Business Development Manager for Cloud Innovation in Oracle
- ♦ Head of Blockchain and Presales Architecture Solutions at Paradigma Digital
- ♦ Senior IT Architect and Consultant at Atmira
- ♦ SOA Architect and Consultant at TCP SI
- ♦ Analyst and consultant at Everis
- ♦ Degree in Computer Engineering from the Complutense University of Madrid
- ♦ Master's Degree in Science Computer Engineering at the Complutense University of Madrid

Mr. Calzada Martínez, Jesús

- ♦ Senior Software Engineer at Devo
- ♦ Full-Stack Developer at Blocknitive
- ♦ Front-End Developer at Infinia
- ♦ Full Stack Developer at Resem
- ♦ Java Developer at Hitec
- ♦ Graduate in Computer Engineering from the Complutense University of Madrid

Mr. Castro Robredo, Alejandro Enrique

- ♦ Head of EY's Digital Architecture Department
- ♦ Founder and Director of New Tech & Talent
- ♦ Head of the Digital Architecture Department at KPMG
- ♦ Head of the Innovation Lab in Digital Architecture at Everis
- ♦ Director of Technology Solutions at Vermont Solutions
- ♦ Technology Manager at Ganetec Global Solutions
- ♦ Business Manager and Pre-Sales Manager at TCP Sistemas e Ingeniería
- ♦ Team Leader at Capgemini
- ♦ Master's Degree in Integral Management of Information Technologies by the European University
- ♦ Degree in Technical Engineering in Computer Management from the University of Las Palmas de Gran Canaria

Mr. Nogales Ávila, Javier

- ♦ Enterprise Cloud and Sourcing Senior Consultant at Quint
- ♦ Cloud and Technology Consultant at Indra
- ♦ Associate Technology Consultant at Accenture
- ♦ Graduate in Industrial Organization Engineering from the University of Jaén
- ♦ MBA in Business Administration and Management from ThePower Business School

Mr. Gómez Rodríguez, Antonio

- ♦ Head of the Digital Architecture Department of EY Principal Engineer of Cloud Solutions for Oracle
- ♦ Co-organizer of Málaga Developer Meetup
- ♦ Specialist Consultant for Sopra Group and Everis
- ♦ Team Leader at System Dynamics
- ♦ Software Developer at SGO Software
- ♦ Master's Degree in E-Business from La Salle Business School
- ♦ Postgraduate degree in Information Technologies and Systems from the Catalan Institute of Technology
- ♦ Degree in Telecommunications Engineering from the Polytechnic University of Catalonia

Ms. Gómez-Choco González, Rocío

- ♦ Data Consultant and Data Engineer at IBM
- ♦ Data Engineer in the IT architecture department at Orange Bank
- ♦ Analytical consultant in the analysis department of Ernest and Young
- ♦ Graduate in Communications Systems Engineering at Carlos III University
- ♦ Postgraduate in Big Data & Analytics at Carlos III University
- ♦ Master's Degree in Big Data Architecture at Datahack School

Dr. Goncalves Da Silva, Marlene

- ♦ Researcher at the Polytechnic University of Madrid
- ♦ Consultant in MEG Data Intelligence
- ♦ Analyst Programmer at Megasoftware
- ♦ D. in Computer Science from Universidad Simón Bolívar
- ♦ Degree in Computer Science from Universidad Central de Venezuela
- ♦ Master's Degree in Computer Science from Simon Bolivar University

Mr. Marcano Van Grieken, Alejandro Antonio

- ♦ Product Manager at Vikua
- ♦ Backend Developer at Innovative GX Health
- ♦ Collaborating professor at the Metropolitan University of Caracas
- ♦ Degree in Systems Engineering from the Metropolitan University of Caracas
- ♦ Master's Degree in Cybersecurity from the University of León

Dr. Ceballos van Grieken, Ángel

- ♦ Researcher specialized in the application of ICTs in education
- ♦ Author of the Project for the Creation of Educational Contents for Mobile Devices
- ♦ Teacher in postgraduate studies related to ICTs
- ♦ Teacher in university studies related to Computer Science
- ♦ Doctor in Education from Los Andes University
- ♦ Specialist in Educational Informatics, Simón Bolívar University





Mr. González Courel , Santiago

- ♦ Software Architect at Axpo Iberia
- ♦ Project Manager at Axpo Iberia
- ♦ Lead Project Manager at Software AG
- ♦ Senior Technical Developer at ISBAN
- ♦ Graduate in Computer Engineering at the Open University of Catalonia (UOC)

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You will be prepared to face technological challenges and contribute significantly to their respective areas of expertise, hand in hand with the best digital university in the world, according to Forbes: TECH”

06 Educational Plan

The syllabus of this university program has been structured to offer comprehensive training in the most critical areas of modern technology. As such, it will cover a wide range of topics, from the management and direction of IT projects, to the design and administration of distributed systems and cloud solutions. In this sense, each module has been designed to provide both theoretical and practical knowledge, allowing professionals to apply what they have learned in real scenarios and keep up to date with the latest trends and emerging technologies.



“

This Hybrid Master's Degree will provide you with a combination of flexibility, specialization and applicability, which perfectly matches the demands of the modern job market”

Module 1. IT Project Management and Direction

- 1.1. IT Project Management and Direction
 - 1.1.1. IT Project
 - 1.1.2. Project and Processes. Differences
 - 1.1.3. IT Project. Success Criteria
 - 1.1.4. IT Project Life Cycle
 - 1.1.5. IT Project Management and Direction. Application
- 1.2. IT Project Requirements Management
 - 1.2.1. Project Requirements Management
 - 1.2.2. Requirements Management and Traceability
 - 1.2.3. Requirements Management Tools
 - 1.2.4. IT Project Requirements Management. Application
- 1.3. IT Project Business Cases
 - 1.3.1. IT Project Business Cases
 - 1.3.2. Building the Business Case for the Project
 - 1.3.3. Project Success Criteria
 - 1.3.4. Financial Analysis and Monitoring of the Business Case Throughout the Life of the Project
 - 1.3.5. IT Project Business Cases. Application
- 1.4. IT Project Management and Direction
 - 1.4.1. Waterfall Project Management
 - 1.4.2. Tools of the Classic Management Methodology
 - 1.4.3. Phases of Classic Project Management: Initiation, Planning, Execution, Follow-up and Closure
 - 1.4.4. Classic IT Project Management and Direction. Application
- 1.5. AGILE Project Management and Direction
 - 1.5.1. Agile Project Management: Roles, Artifacts
 - 1.5.2. Scrum Planning
 - 1.5.3. Agile Estimation
 - 1.5.4. Planning and Execution of Sprints
 - 1.5.5. Effective Use of Scrum. Application
 - 1.5.6. Agile Project Management and Leadership. Application
- 1.6. Lean IT and Kanban Project Management and Leadership
 - 1.6.1. Lean IT and Kanban. Application
 - 1.6.2. Lean IT and Kanban Advantages and Disadvantages
 - 1.6.3. Control Panels. Use
 - 1.6.4. Lean IT and Kanban Project Management and Leadership. Application
- 1.7. Risks in the Management and Direction of IT Projects
 - 1.7.1. Risk Types of Risk: Probability
 - 1.7.2. Risk Mitigation. Common IT Techniques
 - 1.7.3. Risk Management and Communication
 - 1.7.4. Risks in the Management and Direction of IT Projects. Application
- 1.8. IT Project Monitoring and Control
 - 1.8.1. Monitoring of Project Progress
 - 1.8.2. Project Cost Control
 - 1.8.3. Project Change Management
 - 1.8.4. Project Communications Management. Application
 - 1.8.5. Reporting and Tracking Metrics
 - 1.8.6. IT Project Monitoring and Control. Application
- 1.9. IT Project Office
 - 1.9.1. Projects, Project Portfolio and Programs
 - 1.9.2. Types of Project Offices: Functions
 - 1.9.3. Project Office Management Processes
 - 1.9.4. Management of a Project Office Application
- 1.10. Software Tools for IT Projects
 - 1.10.1. Requirements Management
 - 1.10.2. Configuration Management
 - 1.10.3. Project Planning and Monitoring
 - 1.10.4. Change Management
 - 1.10.5. Cost Management
 - 1.10.6. Risk Management
 - 1.10.7. Communication Management
 - 1.10.8. Closure Management
 - 1.10.9. Examples of Tools. Templates

Module 2. Design and Management of Distributed Systems and Networks

- 2.1. Distributed Systems
 - 2.1.1. Distributed Systems
 - 2.1.2. Distributed Systems Features
 - 2.1.3. Distributed Systems Advantages
- 2.2. Type of Distributed Systems
 - 2.2.1. Cluster
 - 2.2.2. Grid
 - 2.2.3. Cloud
- 2.3. Distributed System Architectures
 - 2.3.1. Functional Architecture (Business)
 - 2.3.2. Application Architecture
 - 2.3.3. Management Architecture (Government)
 - 2.3.4. Technological Architecture
- 2.4. Infrastructure in a Distributed System
 - 2.4.1. Hardware
 - 2.4.2. Communications
 - 2.4.3. Software
 - 2.4.4. Security
- 2.5. Cloud Computing in Distributed Systems
 - 2.5.1. Cloud Computing
 - 2.5.2. Systems Cloud Computing. Types
 - 2.5.3. Systems Cloud Computing. Advantages
- 2.6. Client-Server Communications
 - 2.6.1. Transmission Types
 - 2.6.2. Communication Models
 - 2.6.3. Event-Driven Communication
- 2.7. Integration Architectures
 - 2.7.1. APIs
 - 2.7.2. Microservice Architectures
 - 2.7.3. Event-Driven Architectures
 - 2.7.4. Reactive Architectures

- 2.8. Distributed Registration Technologies
 - 2.8.1. Distributed Registration Technologies
 - 2.8.2. Distributed Registration Technologies. Typology
 - 2.8.3. Distributed Registration Technologies. Advantages
- 2.9. Blockchain as a Distributed System
 - 2.9.1. Blockchain as a Distributed System
 - 2.9.2. Blockchain Networks. Typology
 - 2.9.3. Tokens and Redes Blockchain. Typology
 - 2.9.4. Blockchain Technologies
 - 2.9.5. Use Case
- 2.10. Blockchain. Decentralized Blockchain Paradigm
 - 2.10.1. Consensus Systems
 - 2.10.2. Mining
 - 2.10.3. Hashing
 - 2.10.4. Security

Module 3. Cloud Computing in Computer and Information Systems Engineering

- 3.1. Cloud Computing
 - 3.1.1. State of the Art of the IT Landscape
 - 3.1.2. Cloud
 - 3.1.3. Cloud Computing
- 3.2. Security and Resilience in the Cloud
 - 3.2.1. Regions, Availability and Failure Zones
 - 3.2.2. Tenant or Cloud Account Management
 - 3.2.3. Cloud Identity and Access Control
- 3.3. Cloud Networking
 - 3.3.1. Software-Defined Virtual Networks
 - 3.3.2. Network Components of Software-Defined Network
 - 3.3.3. Connection with other Systems

- 3.4. Cloud Services
 - 3.4.1. Infrastructure as a Service
 - 3.4.2. Platform as a Service
 - 3.4.3. Serverless Computing
 - 3.4.4. Software as a Service
- 3.5. High-Performance Computing
 - 3.5.1. High-Performance Computing
 - 3.5.2. Creation of a High-Performance Cluster
 - 3.5.3. Application of High-Performance Computing
- 3.6. Cloud Storage
 - 3.6.1. Block Storage in the Cloud
 - 3.6.2. Block Storage in the Cloud
 - 3.6.3. Block Storage in the Cloud
- 3.7. Block Storage in the Cloud
 - 3.7.1. Cloud Monitoring and Management
 - 3.7.2. Interaction with the Cloud: Administration Console
 - 3.7.3. Interaction with Command Line Interface
 - 3.7.4. API-Based Interaction
- 3.8. Cloud-Native Development
 - 3.8.1. Cloud-Native Development
 - 3.8.2. Containers and Container Orchestration Platforms
 - 3.8.3. Continuous Cloud Integration
 - 3.8.4. Use of Events in the Cloud
- 3.9. Infrastructure as Code in the Cloud
 - 3.9.1. Management and Provisioning Automation in the Cloud
 - 3.9.2. Terraform
 - 3.9.3. Scripting Integration
- 3.10. Creation of a Hybrid Infrastructure
 - 3.10.1. Interconnection
 - 3.10.2. Interconnection with Datacenter
 - 3.10.3. Interconnection with other Clouds



Module 4. Software Engineering

- 4.1. Software Applications in Information Technology
 - 4.1.1. Software Applications
 - 4.1.2. Life Cycle
 - 4.1.3. Architecture
 - 4.1.4. Methods
- 4.2. Project Management and IT Methodologies
 - 4.2.1. Project Management
 - 4.2.2. Agile Methodologies
 - 4.2.3. Tools
- 4.3. Front-End Development and Mobile Applications
 - 4.3.1. Front-End Development and Mobile Applications
 - 4.3.2. HTML, CSS
 - 4.3.3. JavaScript, jQuery
 - 4.3.4. Angular
 - 4.3.5. React
- 4.4. Back-End Development of Software Applications
 - 4.4.1. Back-End Development of Software Applications
 - 4.4.2. Back-End Architecture of Software Applications
 - 4.4.3. Back-end Programming Languages
 - 4.4.4. Application Servers in Software Architecture
- 4.5. Data Storage, Databases and Caching
 - 4.5.1. Data Management of Software Applications
 - 4.5.2. File System
 - 4.5.3. Relational Databases
 - 4.5.4. Non-Relational Databases
 - 4.5.5. Cache
- 4.6. Container Management in Cloud Computing
 - 4.6.1. Container Technology
 - 4.6.2. Containers with Docker and Docker-Compose Technology
 - 4.6.3. Container Orchestration with Kubernetes
 - 4.6.4. Containers in Cloud Computing

- 4.7. Testing and Continuous Integration
 - 4.7.1. Testing and Continuous Integration
 - 4.7.2. Unit Tests
 - 4.7.3. Test e2e
 - 4.7.4. Test Driven Development (TDD)
 - 4.7.5. Continuous Integration
- 4.8. Software-Oriented Blockchain
 - 4.8.1. Software-Oriented Blockchain
 - 4.8.2. Cryptocurrencies
 - 4.8.3. Types of Blockchain
- 4.9. Big Data Software, Artificial Intelligence, IoT
 - 4.9.1. Big Data, Artificial Intelligence, IoT
 - 4.9.2. *Big Data*
 - 4.9.3. Artificial Intelligence
 - 4.9.4. Neural Networks
- 4.10. IT Software Security
 - 4.10.1. IT Software Security
 - 4.10.2. Servers
 - 4.10.3. Ethical Aspects
 - 4.10.4. European Data Protection Regulation (GDPR)
 - 4.10.5. Risk Analysis and Management

Module 5. IoT Technologies Architecture

- 5.1. The Art of the Internet of Things (IoT)
 - 5.1.1. Internet of Things IoT
 - 5.1.2. IoT Technologies
 - 5.1.3. Internet of Things. Advanced Concepts
- 5.2. IoT Solution Architecture
 - 5.2.1. IoT Solution Architecture
 - 5.2.2. Design of an IoT Architecture
 - 5.2.3. Operation and Data Management of an IoT Solution

- 5.3. IoT and Other Technology Trends
 - 5.3.1. *Cloud Computing*
 - 5.3.2. *Machine/Deep Learning*
 - 5.3.3. Artificial Intelligence
- 5.4. IoT Solution Platforms
 - 5.4.1. Development Platforms
 - 5.4.2. IoT Solutions
 - 5.4.3. IoT Solution Platforms. Advanced Concepts
- 5.5. *Smart Things*
 - 5.5.1. *Smartbuildings*
 - 5.5.2. *Smartcities*
 - 5.5.3. Intelligent Networks
- 5.6. Sustainability and IoT
 - 5.6.1. Sustainability and Emerging Technologies
 - 5.6.2. Sustainability in IoT
 - 5.6.3. Sustainable IoT use Cases
- 5.7. IoT. Case Uses
 - 5.7.1. Cases of use in the Healthcare Sector
 - 5.7.2. Use Cases in Industrial Environments
 - 5.7.3. Use Cases in the Logistics Sector
 - 5.7.4. Cases of use in the Agriculture and Livestock Sector
 - 5.7.5. Other use Cases
- 5.8. IoT Business Ecosystem
 - 5.8.1. Solution Providers
 - 5.8.2. IoT Consumers
 - 5.8.3. IoT Ecosystem
- 5.9. The Role of the IoT Engineer
 - 5.9.1. IoT Engineer Role. Skills
 - 5.9.2. The Role of the IoT Specialist in Companies
 - 5.9.3. Recognized Certifications in the Market
- 5.10. IoT Challenges
 - 5.10.1. IoT Adoption Targets
 - 5.10.2. Main Barriers to Adoption
 - 5.10.3. IoT Applications Future of IoT

Module 6. Technology and Development in Mobile Devices

- 6.1. Mobile Devices
 - 6.1.1. Mobility
 - 6.1.2. Management
 - 6.1.3. Operability
- 6.2. Types of Mobile Devices
 - 6.2.1. Smartphones
 - 6.2.2. Tablets
 - 6.2.3. Smart Watches
- 6.3. Mobile Device Components
 - 6.3.1. Screens
 - 6.3.2. Touch Keypads
 - 6.3.3. Processors
 - 6.3.4. Sensors and Connectors
 - 6.3.5. Batteries
- 6.4. Wireless Communication
 - 6.4.1. Wireless Communication
 - 6.4.2. Wireless Communication Advantages
 - 6.4.3. Wireless Communication Limitations
- 6.5. Wireless Communication Classification
 - 6.5.1. Personal Networks
 - 6.5.2. Local Networks
 - 6.5.3. Powerful Networks
 - 6.5.4. Standards
- 6.6. Mobile Application Development
 - 6.6.1. Hybrid and Native Applications
 - 6.6.2. Environment
 - 6.6.3. Programming Languages
 - 6.6.4. Distribution and Business

- 6.7. Android Application Development
 - 6.7.1. Android Application Development
 - 6.7.2. Android System Kernel
 - 6.7.3. Android Software Tools
- 6.8. IOS Application Development
 - 6.8.1. IOS Application Development
 - 6.8.2. IOS Application Core
 - 6.8.3. IOS Application Tools
- 6.9. Security on Mobile Devices
 - 6.9.1. Safety Layers
 - 6.9.2. Communications
 - 6.9.3. Users
 - 6.9.4. Applications
 - 6.9.5. Operating System
- 6.10. Mobile Application Development. Tendencies Use Cases
 - 6.10.1. Augmented Reality
 - 6.10.2. Artificial Intelligence
 - 6.10.3. Payment Solutions
 - 6.10.4. Advantages of *Blockchain*

Module 7. Artificial Intelligence in Systems Engineering and Computer Science

- 7.1. Artificial Intelligence
 - 7.1.1. Intelligence in Systems Engineering
 - 7.1.2. Artificial Intelligence
 - 7.1.3. Artificial Intelligence. Advanced Concepts
- 7.2. Importance of Data
 - 7.2.1. Data Ingestion
 - 7.2.2. Analysis and Profiling
 - 7.2.3. Data Refinement
- 7.3. Machine Learning in Artificial Intelligence
 - 7.3.1. *Machine Learning*
 - 7.3.2. Supervised Learning
 - 7.3.3. Unsupervised Learning

- 7.4. Machine Learning in Artificial Intelligence
 - 7.4.1. Deep Learning vs. Machine Learning
 - 7.4.2. Neural Networks
- 7.5. Robotic Process Automation (RPA) in Artificial Intelligence
 - 7.5.1. RPA in Artificial Intelligence
 - 7.5.2. Process Automation. Good Practices
 - 7.5.3. Process Automation. Continuing Improvement
- 7.6. Natural Language Processing (NLP) in Artificial Intelligence
 - 7.6.1. NLP in Artificial Intelligence
 - 7.6.2. NLP Applied to Software
 - 7.6.3. NLP. Application
- 7.7. Image Recognition in Artificial Intelligence
 - 7.7.1. Models
 - 7.7.2. Algorithms
 - 7.7.3. Applications
- 7.8. Neural Networks in Artificial Intelligence
 - 7.8.1. Models
 - 7.8.2. Learning Algorithms
 - 7.8.3. Applications of Neural Networks in Artificial Intelligence
- 7.9. Artificial Intelligence (AI) Model Life Cycle
 - 7.9.1. Development of the Artificial Intelligence Model
 - 7.9.2. Education
 - 7.9.3. Putting into Production
- 7.10. New Application of Artificial Intelligence
 - 7.10.1. Ethics in IA systems
 - 7.10.2. Bias Detection
 - 7.10.3. New Artificial Intelligence Applications

Module 8. Security Systems

- 8.1. Information Technology Security Systems
 - 8.1.1. Information Systems Security Challenges
 - 8.1.2. Types of Threats
 - 8.1.3. Network and Internet Systems
- 8.2. Information Security Governance and Management
 - 8.2.1. Security Governance. Safety Regulations
 - 8.2.2. Risk Analysis
 - 8.2.3. Security Planning
- 8.3. Cryptography and Certificate Technologies
 - 8.3.1. Cryptographic Techniques
 - 8.3.2. Cryptographic Protocols
 - 8.3.3. Digital Certificates. Applications
- 8.4. Network and Communications Security
 - 8.4.1. Security in Communication Systems
 - 8.4.2. Firewall Security
 - 8.4.3. Intrusion Detection and Prevention Systems
- 8.5. Identity and Permission Management Systems
 - 8.5.1. Authentication Management Systems
 - 8.5.2. Authorization Management System: Access Policies
 - 8.5.3. Key Management Systems
- 8.6. Data Security
 - 8.6.1. Securing of Storage Systems
 - 8.6.2. Protection of Database Systems
 - 8.6.3. Securing Data in Transit
- 8.7. Operating Systems Security
 - 8.7.1. Linux
 - 8.7.2. Windows
 - 8.7.3. Vulnerability Scanning and Patching



- 8.8. Detection of Threats and Attacks
 - 8.8.1. Auditing, Logging and Monitoring Systems
 - 8.8.2. Event and Alarm Systems
 - 8.8.3. SIEM Systems
- 8.9. Incident Response
 - 8.9.1. Incident Response Plan
 - 8.9.2. Ensuring Business Continuity
 - 8.9.3. Forensic Analysis and Remediation of Incidents of the Same Nature.
- 8.10. Security in Cloud Environments
 - 8.10.1. Security in Cloud Environments
 - 8.10.2. Shared Management Model
 - 8.10.3. Security Management Systems Application

Module 9. Big Data in Systems Engineering and Computer Science

- 9.1. Big Data Applied to IT
 - 9.1.1. Big Data Applied to IT
 - 9.1.2. Big Data. Opportunities
 - 9.1.3. Big Data. Application
- 9.2. Information and Data
 - 9.2.1. Information Sources
 - 9.2.2. Quality
 - 9.2.3. Transformation
- 9.3. Processing Big Data
 - 9.3.1. Big Data Processing Hadoop
 - 9.3.2. Big Data Processing. Spark
 - 9.3.3. Streaming Processing
- 9.4. Data Storage.
 - 9.4.1. Data Storage. Databases
 - 9.4.2. Data Storage. Cloud
 - 9.4.3. Data Storage. Information Use
- 9.5. Big Data Architecture
 - 9.5.1. Big Data Architecture. Data Lake
 - 9.5.2. Big Data Architecture. Process Monitoring
 - 9.5.3. Big Data Architecture. Cloud Computing

- 9.6. Data Analysis
 - 9.6.1. Data Analysis. Predictive Modeling
 - 9.6.2. Data Analysis. Machine Learning
 - 9.6.3. Data Analysis. Deep Learning
- 9.7. Data Visualization
 - 9.7.1. Types
 - 9.7.2. Visualization Tools
 - 9.7.3. Reporting Tools
- 9.8. Information Use
 - 9.8.1. Business Intelligence
 - 9.8.2. Business Analytics
 - 9.8.3. Data Science
- 9.9. Privacy and Data Protection
 - 9.9.1. Sensitive Data
 - 9.9.2. Consent
 - 9.9.3. Anonymization
- 10.10. Data Governance
 - 10.10.1. Data Governance
 - 10.10.2. Data Lineage
 - 10.10.3. Data Catalog

Module 10. IT (Information Technology) Governance and Management

- 10.1. IT Governance and Management
 - 10.1.1. IT Governance and Management
 - 10.1.2. Advanced IT Governance
 - 10.1.3. IT Governance: Security and Risk
- 10.2. Reference Sources for IT Governance
 - 10.2.1. Frameworks and Models
 - 10.2.2. IT Governance Standards
 - 10.2.3. IT Governance Quality Systems
- 10.3. IT Governance. Structures and Management
 - 10.3.1. Role of IT Governance
 - 10.3.2. IT Governance Structures
 - 10.3.3. Implementation of IT Governance





- 10.4. Key Elements in IT Governance
 - 10.4.1. Enterprise Architecture
 - 10.4.2. Data Governance
 - 10.4.3. Relationship of IT Governance and AI
- 10.5. COBIT. Control Objectives for Information and Related Technologies
 - 10.5.1. COBIT. Control Objectives
 - 10.5.2. COBIT Framework
 - 10.5.3. Areas, Domains and Processes
- 10.6. ITIL v4 Framework
 - 10.6.1. ITIL v4 Framework
 - 10.6.2. *Service Value System*
 - 10.6.3. Dimensions and Principles
- 10.7. IT Governance Performance Measurement
 - 10.7.1. IT Governance Monitoring and Control Principles
 - 10.7.2. IT Governance Control Metrics
 - 10.7.3. Integral Control Panel
- 10.8. IT Management
 - 10.8.1. IT Management
 - 10.8.2. IT Service Provider Procurement and Management
 - 10.8.3. IT Performance Monitoring
 - 10.8.4. IT Quality Assurance
- 10.9. Acquisition and Development of Information Systems
 - 10.9.1. Project Management Structure
 - 10.9.2. Product Development Methodology
 - 10.9.3. Implementation and Exploitation of Information Systems
- 10.10. Governance, IT Management and Cloud Computing
 - 10.10.1. IT Governance and Management in Cloud Computing Environments
 - 10.10.2. Shared Security Management Model
 - 10.10.3. Enterprise Cloud Architectures

07

Clinical Internship

After passing the online theoretical period, the program includes a period of practical training in a leading company. In this way, alumni will have at their disposal the support of a tutor who will accompany them throughout the process, both in the preparation and in the development of the internship.



“

You will have the opportunity to work on real and challenging projects, applying your knowledge in IT project management, distributed systems design and implementation of cloud solutions.”

The Internship Program of this IT Degree in Advanced Systems program consists of a practical internship in an outstanding company in this field, lasting 3 weeks, from Monday to Friday, with 8 consecutive hours of practical training, always alongside an assistant specialist. In this way, this internship allow the graduate to work on real projects alongside a team of professionals of reference in the area of Advanced Systems Computing, applying the most innovative procedures and specialized tools.

In this completely practical Internship proposal, the activities are aimed at developing and perfecting the competencies necessary for the development of projects of Advanced Systems areas and conditions that require a high level of qualification, and are oriented towards specific training for the practice of the activity. It is, without a doubt, an opportunity to learn by working.

The practical 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 training partners that facilitate teamwork and multidisciplinary integration as transversal competencies for the praxis of Computer Science (learning to be and learning to relate).

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



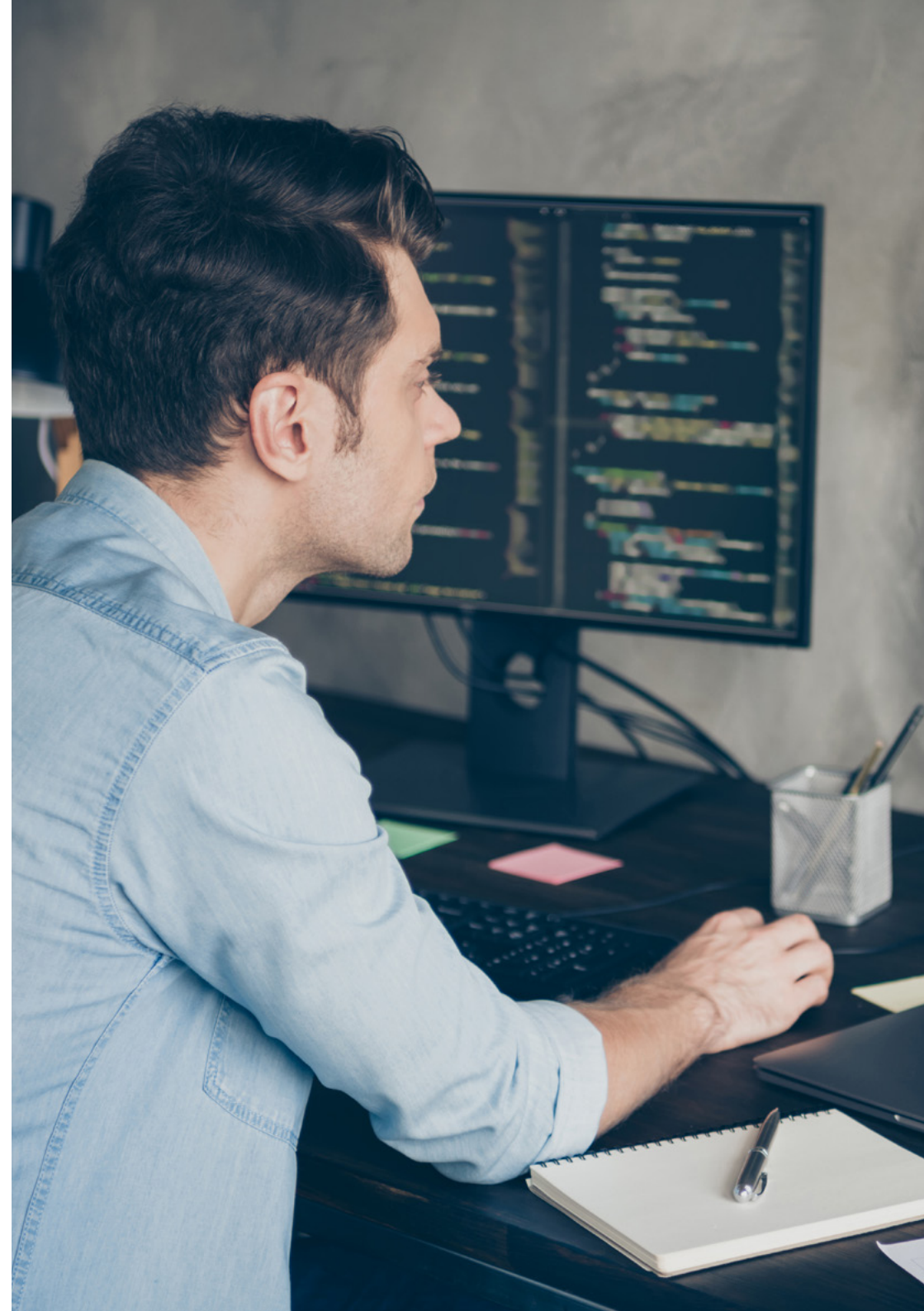
Module	Practical Activity
Project Management	Develop IT project management plan, including schedule, resources and budget
	Identify and analyze project requirements to develop effective business cases
	Apply agile and traditional project management methodologies using specialized tools
	Monitor and control project progress, ensuring adherence to established objectives and timelines
Software Development	Design and develop software solutions based on project requirements and specifications
	Deploy and test applications in different environments, ensuring product quality and functionality
	Integrate software tools and emerging technologies into the development process
	Document the development process and the results obtained, including manuals and user guides
Distributed Systems and Cloud Computing	Analyze and design distributed system architectures to improve performance and scalability
	Implement cloud solutions, configuring and managing resources on platforms such as AWS, Azure, or Google Cloud
	Evaluate and apply virtualization and containerization techniques in the context of distributed systems
	Optimize the use of cloud resources, including cost management and availability assurance
Technology Assessment	Research and analyze the latest emerging technologies in the IT field and their applicability in projects
	Evaluate the impact of new technologies on existing systems and propose solutions for their integration
	Perform comparative testing of different tools and platforms to determine the most appropriate for each need
	Participate in the implementation and evaluation of new technologies within the organization, contributing to innovation and continuous improvement

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. That way professionals will not have to worry in case of having to face an unexpected situation and will be covered until the end of the 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 Hybrid Master's Degree, 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 Hybrid Master's Degree, 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 Hybrid Master's Degree will receive a certificate accrediting their stay at the center.

5. EMPLOYMENT RELATIONSHIP: the Hybrid Master's Degree shall not constitute an employment relationship of any kind.

6. PRIOR EDUCATION: Some centers may require a certificate of prior education for the Hybrid Master's Degree. 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 Hybrid Master's Degree 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.

08

Where Can I Do the Internship?

This Hybrid Master's Degree program includes in its itinerary an internship in a prestigious company, where students will put into practice everything learned in the field of Computer Science in Advanced Systems. In this sense, and to bring this degree to more professionals, TECH offers the opportunity to study it in different organizations around the country. In this way, this institution strengthens its commitment to quality and affordable education for all.



“

You will collaborate with companies and organizations, addressing real problems and using the advanced tools and methodologies that you will have assimilated during the online theory”

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The student will be able to complete the practical part of this Hybrid Master's Degree at the following centers:



IT specialist

**Colegio Territorial
de Arquitectos de Alicante**

Country	City
Spain	Alicante

Address: Plaza Gabriel Miró, nº 2,
03001 Alicante

Represents and supports professionals in Alicante, ensuring that they have the necessary resources.

Related internship programs:

- Event Organization
- Digital Product Design (UX/UI)





“

Boost your career path with holistic teaching, allowing you to advance both theoretically and practically”

09

Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning**.

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.



“

Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

Case Study to contextualize all content

Our program offers a revolutionary approach to developing skills and knowledge. Our goal is to strengthen skills in a changing, competitive, and highly demanding environment.

“

At TECH, you will experience a learning methodology that is shaking the foundations of traditional universities around the world"



You will have access to a learning system based on repetition, with natural and progressive teaching throughout the entire syllabus.



The student will learn to solve complex situations in real business environments through collaborative activities and real cases.

A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch, which presents the most demanding challenges and decisions in this field, both nationally and internationally. This methodology promotes personal and professional growth, representing a significant step towards success. The case method, a technique that lays the foundation for this content, ensures that the most current economic, social and professional reality is taken into account.

“*Our program prepares you to face new challenges in uncertain environments and achieve success in your career”*

The case method has been the most widely used learning system among the world's leading Information Technology schools for as long as they have existed. The case method was developed in 1912 so that law students would not only learn the law based on theoretical content. It consisted of presenting students with real-life, complex situations for them to make informed decisions and value judgments on how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

What should a professional do in a given situation? This is the question that you are presented with in the case method, an action-oriented learning method. Throughout the course, students will be presented with multiple real cases. They will have to combine all their knowledge and research, and argue and defend their ideas and decisions.

Relearning Methodology

TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines different teaching elements in each lesson.

We enhance the Case Study with the best 100% online teaching method: Relearning.

In 2019, we obtained the best learning results of all online universities in the world.

At TECH you will learn using a cutting-edge methodology designed to train the executives of the future. This method, at the forefront of international teaching, is called Relearning.

Our university is the only one in the world authorized to employ this successful method. In 2019, we managed to improve our students' overall satisfaction levels (teaching quality, quality of materials, course structure, objectives...) based on the best online university indicators.



In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

This methodology has trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, and financial markets and instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.

From the latest scientific evidence in the field of neuroscience, not only do we know how to organize information, ideas, images and memories, but we know that the place and context where we have learned something is fundamental for us to be able to remember it and store it in the hippocampus, to retain it in our long-term memory.

In this way, and in what is called neurocognitive context-dependent e-learning, the different elements in our program are connected to the context where the individual carries out their professional activity.



This program offers the best educational material, prepared with professionals in mind:



Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



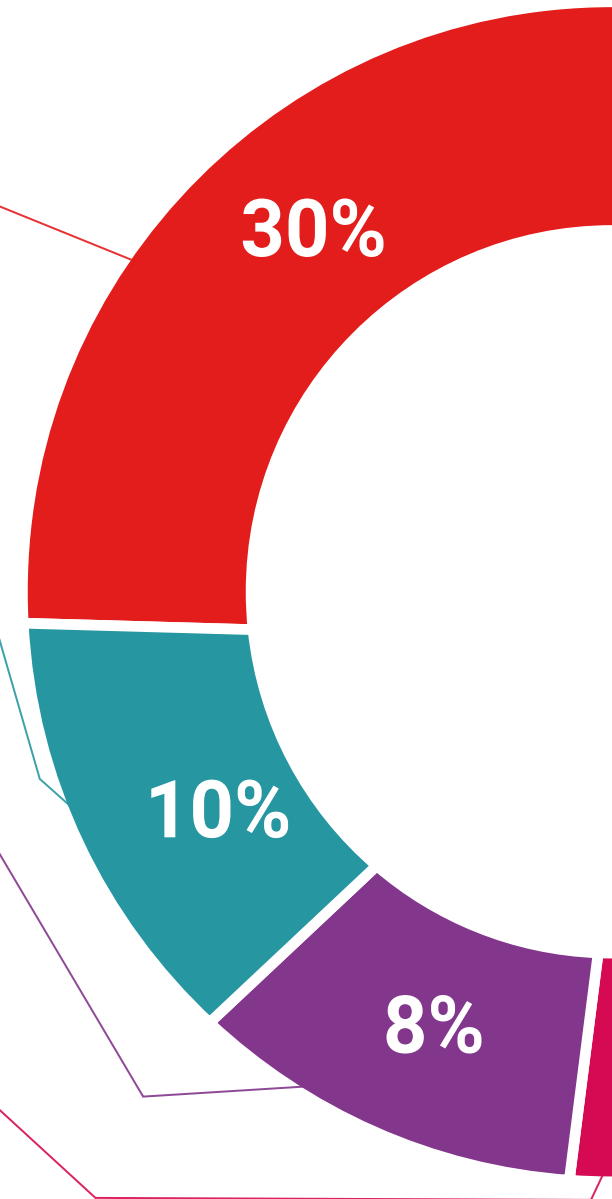
Practising Skills and Abilities

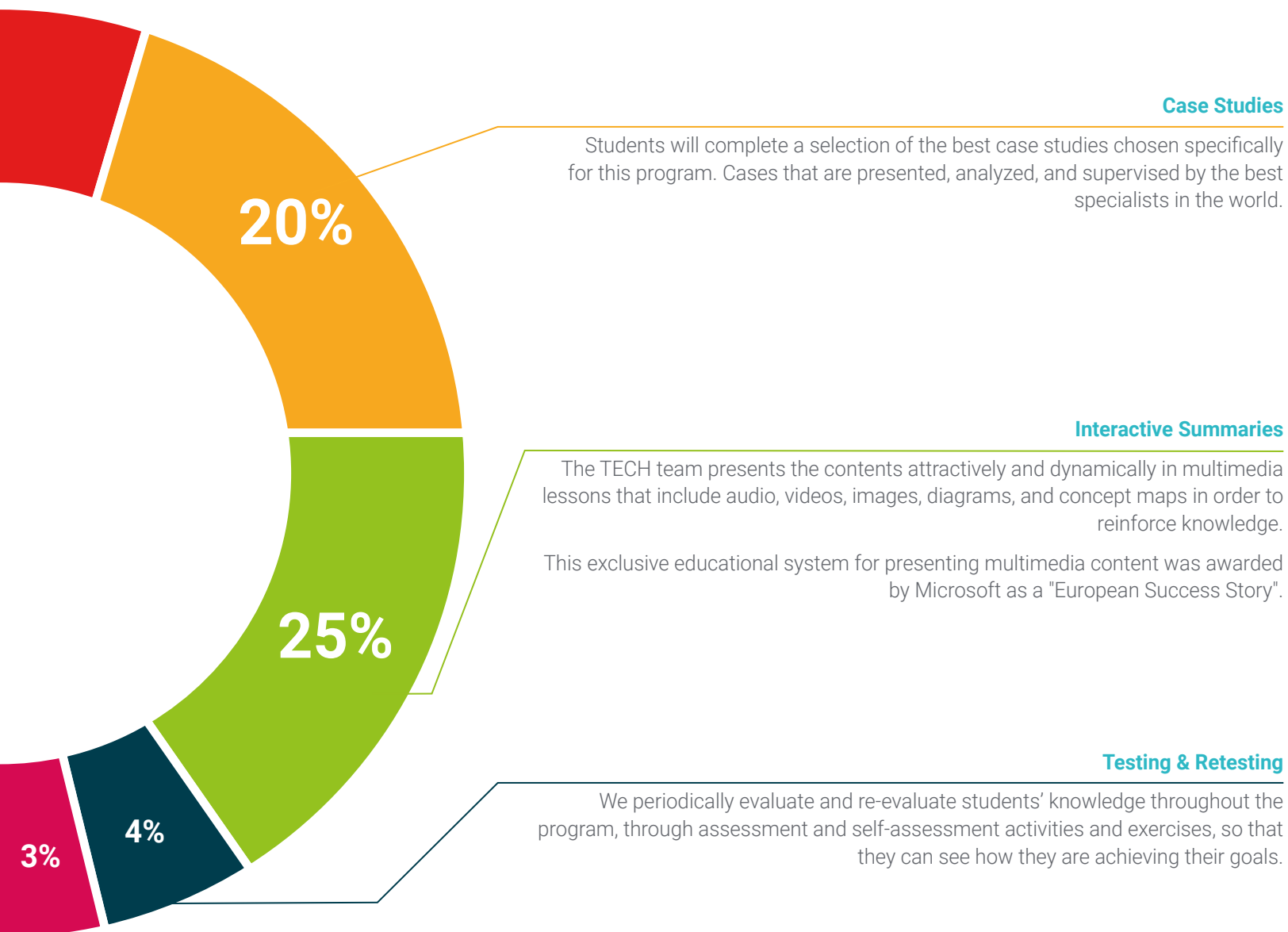
They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





10 Certificate

The Hybrid Master's Degree in Advanced Systems Computing guarantees students, in addition to the most rigorous and up-to-date education, access to a Hybrid Master's Degree issued by TECH Global University.



“

*Successfully complete this program and
receive your university qualification without
having to travel or fill out laborious paperwork"*

This private qualification will allow you to obtain a **Hybrid Master's Degree in Advanced Systems Computing** 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.

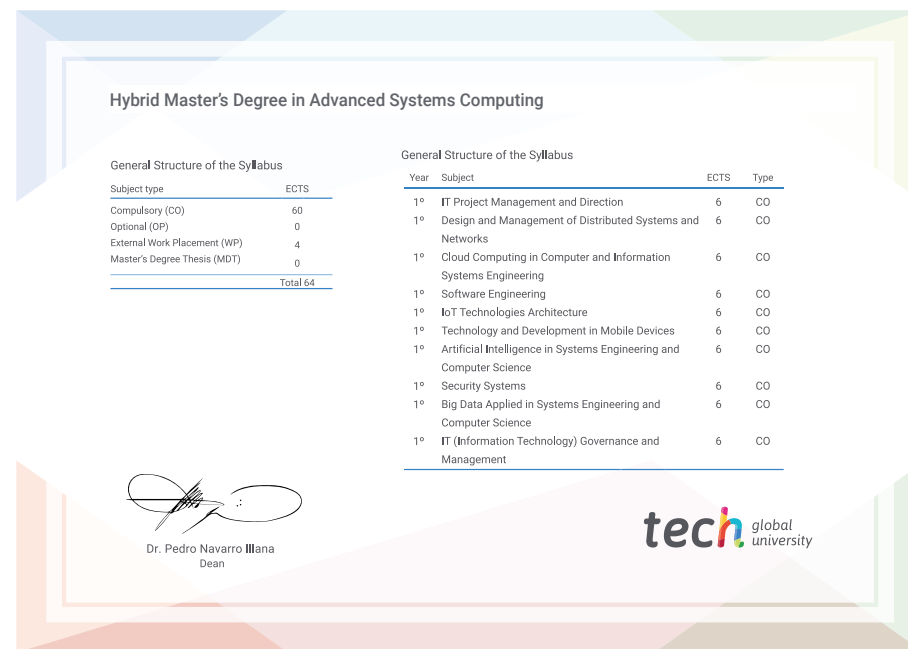
This **TECH Global University** private qualification is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Hybrid Master's Degree in Advanced Systems Computing**

Modality: **Hybrid (Online + Internship)**

Duration: **12 months**

Accreditation: **60 + 4 ECTS**





Hybrid Master's Degree Advanced Systems Computing

Modality: Hybrid (Online + Internship)

Duration: 12 months

Certificate: TECH Global University

Accreditation: 60 + 4 ECTS

Hybrid Master's Degree

Advanced Systems Computing

