

# Postgraduate Certificate Intelligent Systems



## Postgraduate Certificate Intelligent Systems

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Credits: 6 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/information-technology/postgraduate-certificate/intelligent-systems](http://www.techtute.com/us/information-technology/postgraduate-certificate/intelligent-systems)

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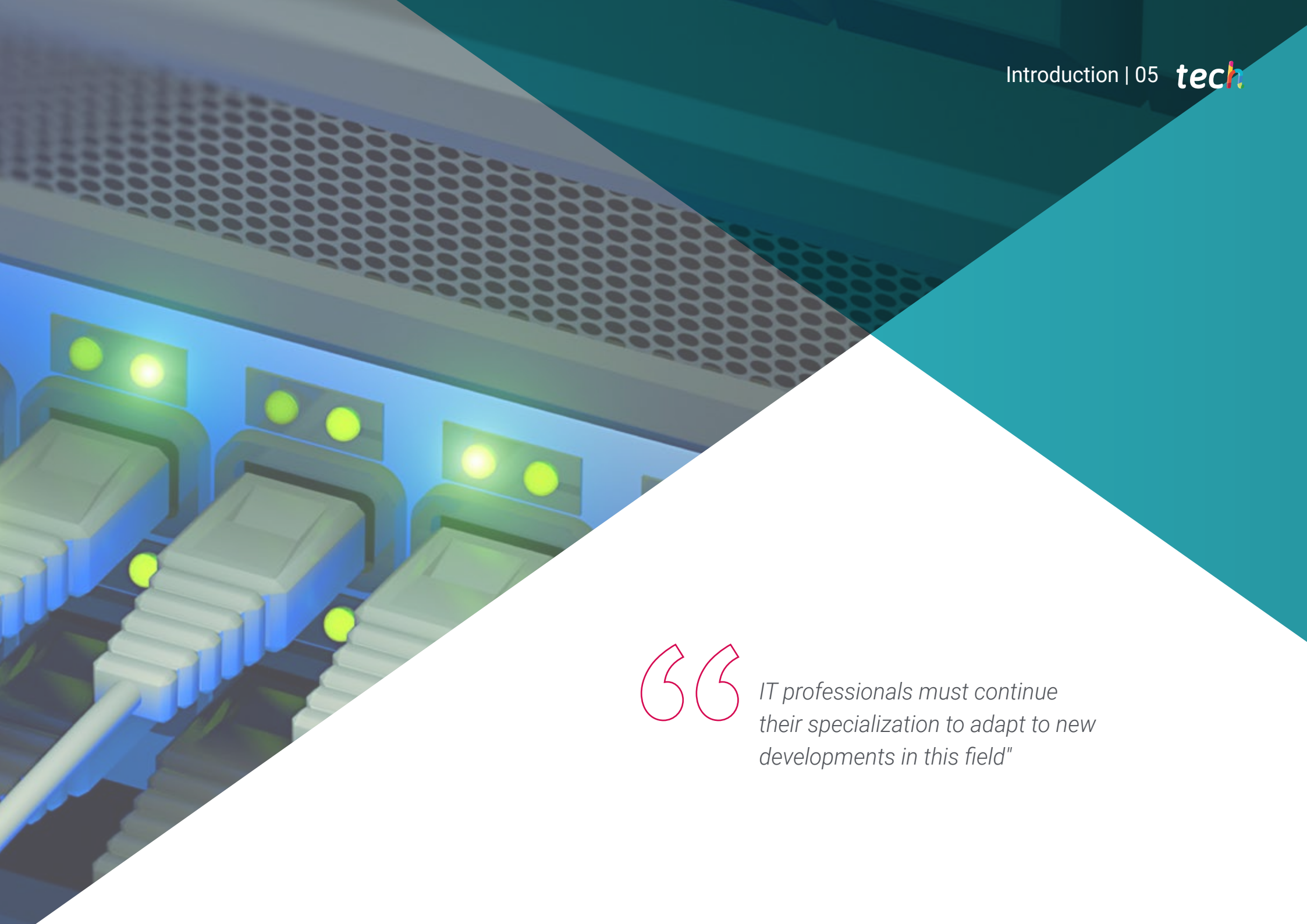
# 01

# Introduction

Keeping up to date in the working with Network and XML Applications is necessary for computer engineers and other professionals who wish to work in this broad field. This program will enable professionals to acquire the necessary knowledge to achieve this in an effective manner that is compatible with their personal and professional lives.







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*IT professionals must continue their specialization to adapt to new developments in this field”*

The teaching team of this Postgraduate Certificate in Intelligent Systems made a careful selection of each of the topics of this specialization in order to offer the students a study opportunity as complete as possible and always related to current events.

The program of this Postgraduate Certificate focuses on the history of computers to introduce students to arithmetic or classical concepts of logic design. The basic operation of a computer, the internal and external memory or the input and output ports, as well as the structure of the processor are key elements of this specialization. In addition, aspects such as the design and evolution of computers or the different processors will also be covered in this program.

This program provides students with specific tools and skills to successfully develop their professional activity in the broad environment of Artificial Intelligence. Likewise, work on key competencies such as knowledge of the reality and daily practice in different computer areas and develop responsibility in the monitoring and supervision of their work, as well as specific skills within this field.

In addition, as it is a 100% online Postgraduate Certificate, the students are not conditioned by fixed schedules or the need to travel to another physical location, but can access the contents at any time of the day, balancing their work or personal life with their academic life.

This **Postgraduate Certificate in Intelligent Systems** contains the most complete and up-to-date program on the market. The most important features include:

- ◆ Case studies presented by experts in Computer Engineering
- ◆ The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- ◆ Practical exercises where self-assessment can be used to improve learning
- ◆ Its special emphasis on innovative methodologies in Intelligent Systems
- ◆ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ◆ Content that is accessible from any fixed or portable electronic device with an Internet connection



*Do not miss the opportunity to take this Postgraduate Certificate in Intelligence Systems with us. It's the perfect opportunity to advance your career"*

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*This Postgraduate Certificate is the best investment you can make when choosing a refresher program to expand your existing knowledge in Intelligent Systems”*

*This program comes with the best educational material, providing you with a contextual approach that will facilitate your learning.*

*This 100% online Postgraduate Certificate will allow you to balance your studies with your professional work while increasing your knowledge in this field.*

Its teaching staff includes professionals belonging to the field of Information Technology, who bring to this program the experience of their work, as well as recognized specialists from leading companies and prestigious universities.

Its multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide an immersive education programmed to learn in real situations.

The design of this program focuses on Problem-Based Learning, by means of which the professionals must try to solve the different professional practice situations that are presented throughout the program. For this purpose, professionals will be assisted by an innovative interactive video system developed by renowned and experienced experts in Intelligent Systems.





# 02 Objectives

The Postgraduate Certificate in Intelligent Systems is designed to facilitate the performance of the professionals in this field and enable them to master the main developments in this IT field.







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*This is the best option to learn  
about the latest advances in  
Intelligence Systems”*



## General Objective

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- ◆ Prepare scientifically and technologically, as well as to develop the professional practice of Intelligent Systems, with a transversal and versatile approach adapted to the new technologies and innovations in this field

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*A way of learning and professional growth that will also provide you with greater competitiveness in the "job market"*





## Specific Objectives

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- ◆ Learn all the concepts related to agent theory and agent architecture and its reasoning process
- ◆ Assimilate the theory and practice behind the concepts of information and knowledge, as well as the different ways of representing knowledge
- ◆ Understand the theory related to ontologies, as well as learn ontology languages and software for ontology creation
- ◆ Learn different models of knowledge representation, such as vocabularies, taxonomies, thesauri and mind maps, among others
- ◆ Understand the functioning of semantic reasoners, knowledge-based systems and expert systems
- ◆ Know how the semantic web works, its current and future state, as well as semantic web-based applications



03

# Structure and Content

The structure of the contents has been designed by the best professionals in the field of Intelligent Systems with extensive experience and recognized prestige in the profession.







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*We have the most complete and up-to-date academic program in the market. We strive for excellence and for you to achieve it too"*

## Module 1. Intelligent Systems

- 1.1. Agent Theory
  - 1.1.1. Concept History
  - 1.1.2. Agent Definition
  - 1.1.3. Agents in Artificial Intelligence
  - 1.1.4. Agents in Software Engineering
- 1.2. Agent Architectures
  - 1.2.1. The Reasoning Process of an Agent
  - 1.2.2. Reactive Agents
  - 1.2.3. Deductive Agents
  - 1.2.4. Hybrid Agents
  - 1.2.5. Comparison
- 1.3. Information and Knowledge
  - 1.3.1. Difference between Data, Information and Knowledge
  - 1.3.2. Data Quality Assessment
  - 1.3.3. Data Collection Methods
  - 1.3.4. Information Acquisition Methods
  - 1.3.5. Knowledge Acquisition Methods
- 1.4. Knowledge Representation
  - 1.4.1. The Importance of Knowledge Representation
  - 1.4.2. Definition of Knowledge Representation According to Roles
  - 1.4.3. Knowledge Representation Features
- 1.5. Ontologies
  - 1.5.1. Introduction to Metadata
  - 1.5.2. Philosophical Concept of Ontology
  - 1.5.3. Computing Concept of Ontology
  - 1.5.4. Domain Ontologies and Higher-Level Ontologies
  - 1.5.5. Building an Ontology





- 1.6. Ontology Languages and Ontology Creation Software
  - 1.6.1. Triple RDF, Turtle and N3
  - 1.6.2. RDF Schema
  - 1.6.3. OWL
  - 1.6.4. SPARQL
  - 1.6.5. Introduction to Ontology Creation Tools
  - 1.6.6. Installing and Using Protégé
- 1.7. Semantic Web
  - 1.7.1. Current and Future Status of the Semantic Web
  - 1.7.2. Semantic Web Applications
- 1.8. Other Knowledge Representation Models
  - 1.8.1. Vocabulary
  - 1.8.2. Global Vision
  - 1.8.3. Taxonomy
  - 1.8.4. Thesauri
  - 1.8.5. Folksonomy
  - 1.8.6. Comparison
  - 1.8.7. Mind Maps
- 1.9. Knowledge Representation Assessment and Integration
  - 1.9.1. Zero-Order Logic
  - 1.9.2. First-Order Logic
  - 1.9.3. Descriptive Logic
  - 1.9.4. Relationship between Different Types of Logic
  - 1.9.5. Prolog: Programming Based on First-Order Logic
- 1.10. Semantic Reasoners, Knowledge-Based Systems and Expert Systems
  - 1.10.1. Concept of Reasoner
  - 1.10.2. Reasoner Applications
  - 1.10.3. Knowledge-Based Systems
  - 1.10.4. MYCIN: History of Expert Systems
  - 1.10.5. Expert Systems Elements and Architecture
  - 1.10.6. Creating Expert Systems



# 04

# 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.





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*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.

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*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.*



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

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.



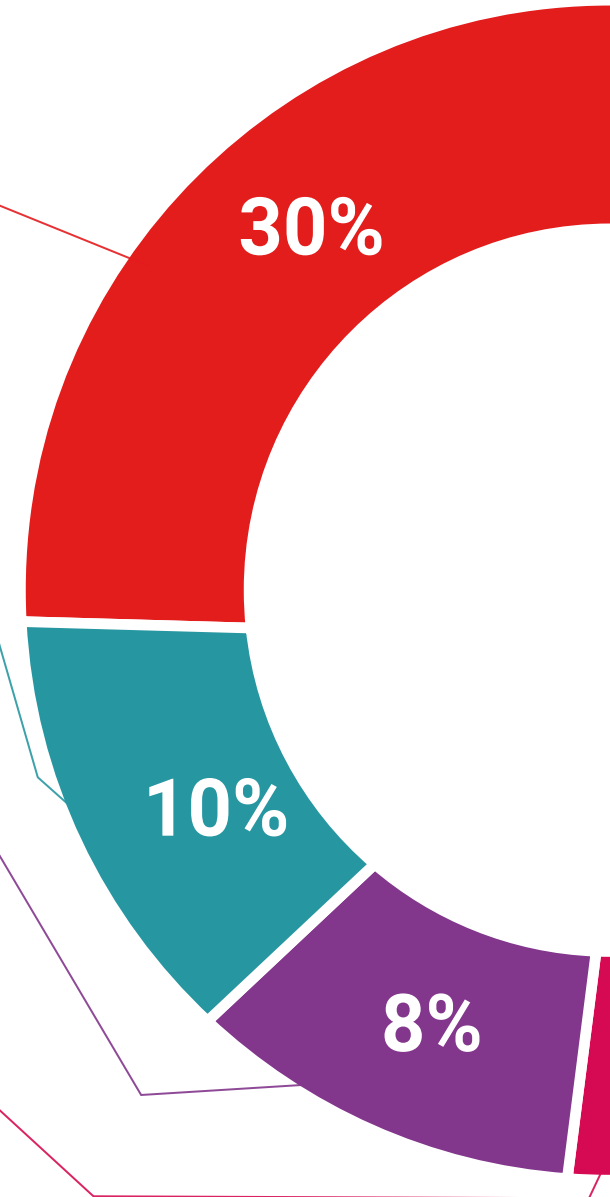
### Practising Skills and Abilities

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.





#### Case Studies

Students will complete a selection of the best case studies chosen specifically for this program. Cases that are presented, analyzed, and supervised by the best specialists in the world.



#### Interactive Summaries

The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



# 05 Certificate

This Postgraduate Certificate in Intelligent Systems guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.





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*Successfully complete this program and receive your Postgraduate Certificate without having to travel or fill out laborious paperwork”*

This program will allow you to obtain your **Postgraduate Certificate in Intelligent Systems** 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: **Postgraduate Certificate in Intelligent Systems**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



\*Apostille Convention. In the event that the student wishes to have their paper certificate issued with an apostille, TECH Global University will make the necessary arrangements to obtain it, at an additional cost.

future  
health confidence people  
education information tutors  
guarantee accreditation teaching  
institutions technology learning  
community commitment  
personalized service innovation  
knowledge present  
development language  
virtual classroom



## Postgraduate Certificate Intelligent Systems

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Credits: 6 ECTS
- » Schedule: at your own pace
- » Exams: online

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