

# Postgraduate Certificate

## Robotics, Drones and Augmented Workers



## Postgraduate Certificate Robotics, Drones and Augmented Workers

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Credits: 6 ECTS
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/artificial-intelligence/postgraduate-certificate/robotics-drones-augmented-workers](http://www.techtute.com/us/artificial-intelligence/postgraduate-certificate/robotics-drones-augmented-workers)

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# 01

# Introduction

Following the advent of Industry 4.0, 91% of leading international companies are investing in AI activities. According to a report by a technology consulting firm, one of the most important fields for organizations is Artificial Intelligence. In this sense, they are looking to optimize their activities through enabling technologies such as Robotics, Drones or Augmented Workers. For this reason, the need for workers to have a comprehensive knowledge of these tools is becoming more and more evident. In this way, they will be able to contribute to the revolution that digital transformation is bringing to their industries. To contribute to this specialization, TECH launches a revolutionary online program that will offer the latest trends in Robotics and Automation.





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*With this Postgraduate Certificate cemented in Relearning, you will handle Cobots to improve efficiency and flexibility in various industrial applications"*

The drone industry worldwide is growing exponentially on an international scale. More and more professionals are turning to this emerging technology for a wide range of applications in various areas. For example, these aircraft are used to capture both high quality images and video, which is extremely beneficial to the film industry. However, these unmanned aerial vehicles pose a number of challenges that need to be addressed by experts in order to get the best possible performance out of them. These challenges include the need to develop obstacle avoidance systems or improve battery endurance and autonomy.

In this context, TECH has created a Postgraduate Certificate in Robotics, Drones and Augmented Workers. Through 150 teaching hours, professionals will have a deep knowledge of the fundamentals of Advanced Automation. The curriculum will analyze both the components and the operation of technological tools such as drones or autonomous vehicles. In this sense, students will be highly qualified to overcome the challenges posed by the implementation of Raas services in companies. In addition, the syllabus will delve into the impact of 5G Technology, delving into the evolution that communications have undergone and its respective implications. It should be noted that the program will include a disruptive topic on the future of Robotics, which will allow graduates to learn about the latest trends in this field to take advantage of all the opportunities it offers at a professional level.

On the other hand, this university degree will be taught 100% online, which makes it easy for students to take it whenever and wherever they want. For this, the only thing they will need is an electronic device connected to the Internet (their cell phone, tablet or computer) to access the Virtual Campus. There they will find both educational materials and additional multimedia resources that will strengthen their knowledge in a dynamic way.

This **Postgraduate Certificate in Robotics, Drones and Augmented Workers** contains the most complete and up-to-date program on the market. The most important features include:

- ♦ The development of case studies presented by experts in Digital Transformation and Industry 4.0
- ♦ The graphic, schematic, and practical contents with which they are created, provide practical information on the disciplines that are essential for professional practice
- ♦ Practical exercises where the self-assessment process can be carried out to improve learning
- ♦ Its special emphasis on innovative methodologies
- ♦ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ♦ Content that is accessible from any fixed or portable device with an Internet connection



*Looking to delve deeper into Learning Transfer? Achieve it in only 6 weeks with this revolutionary program"*

“

*You will master all phases of Prototyping, to ensure that your final products meet the needs of users and perform their functions efficiently”*

The program's teaching staff includes professionals from the field who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

The 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 immersive education programmed to learn in real situations.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the academic year. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

*Thanks to this university program, you will become an expert in Augmented Workers. You will lead the digital transformation in any company!*

*Do you want to learn with less effort and more performance? Then the Relearning system is perfect for you, as it will involve you more in your professional specialization.*

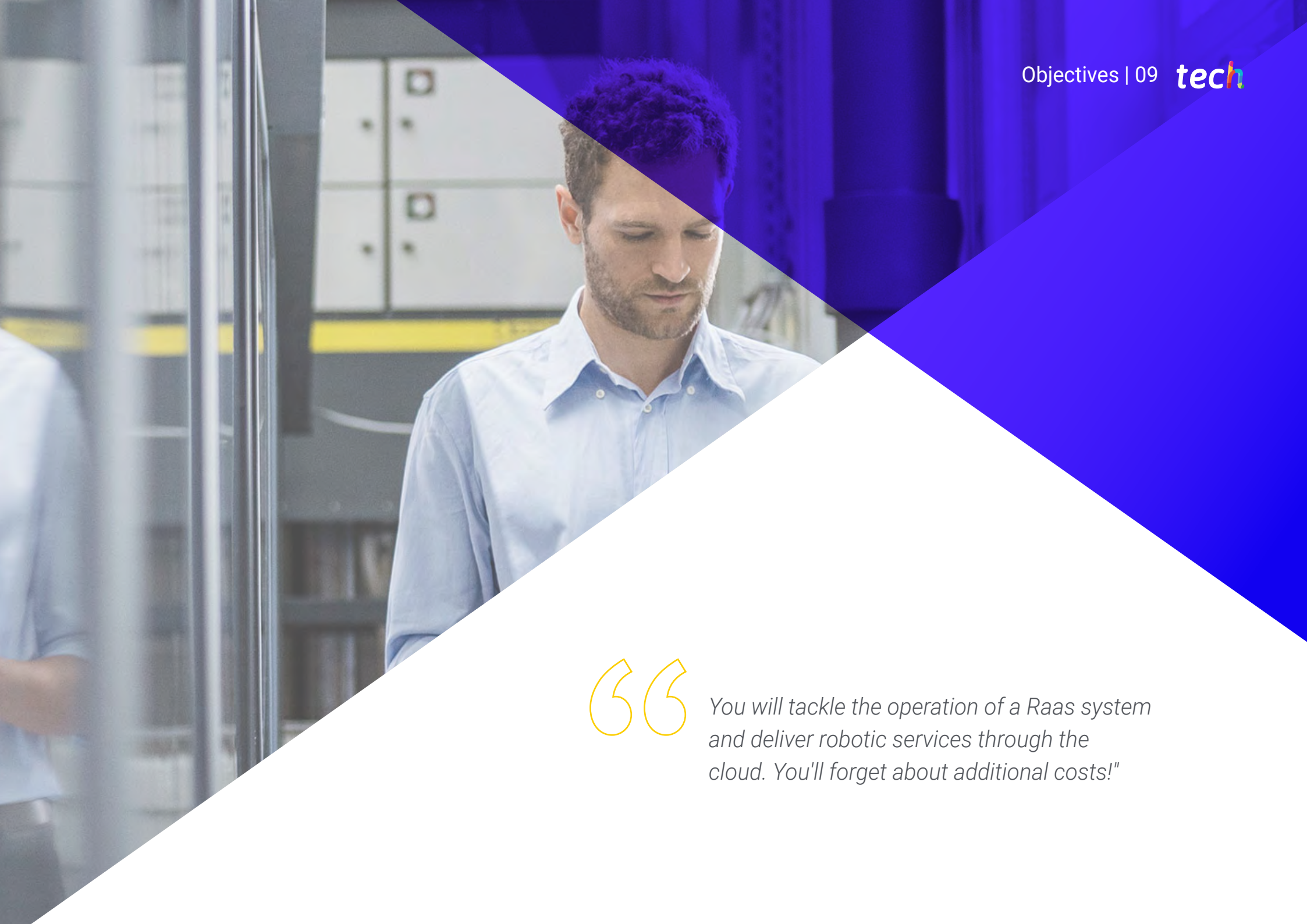


# 02 Objectives

With a theoretical-practical approach, this program will provide students with the skills to design, build and program technological tools such as robots or drones. It will also allow graduates to explore the integration of these elements of Artificial Intelligence in the workplace. This will enable professionals to transform workplaces, improving efficiency and safety in a variety of industries. In addition, the university program will increase both the creativity and innovation of the experts, so that they can generate cutting-edge solutions using enabling technologies. Undoubtedly, all this will open up a wide range of job opportunities for specialists.







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*You will tackle the operation of a Raas system and deliver robotic services through the cloud. You'll forget about additional costs!"*



## General Objectives

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- ◆ Conduct a comprehensive analysis of the profound transformation and radical paradigm shift being experienced in the current global digitalization process
- ◆ Provide in-depth knowledge and the necessary technological tools to face and lead the technological leap and the challenges currently present in companies
- ◆ Mastering the digitalization procedures of companies and the automation of their processes to create new fields of wealth in areas such as creativity, innovation and technological efficiency
- ◆ Leading Digital Change





## Specific Objectives

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- Entering the world of robotics and automation
- Choose a robotic platform, prototype and know about simulators and robot operating system (ROS) in detail
- Study robotics concepts and tools, as well as use cases, real examples and integration with other systems and demonstration
- Analyze the most intelligent robots that will accompany us in the coming years and how humanoid machines will be specialized to perform in complex and challenging environments

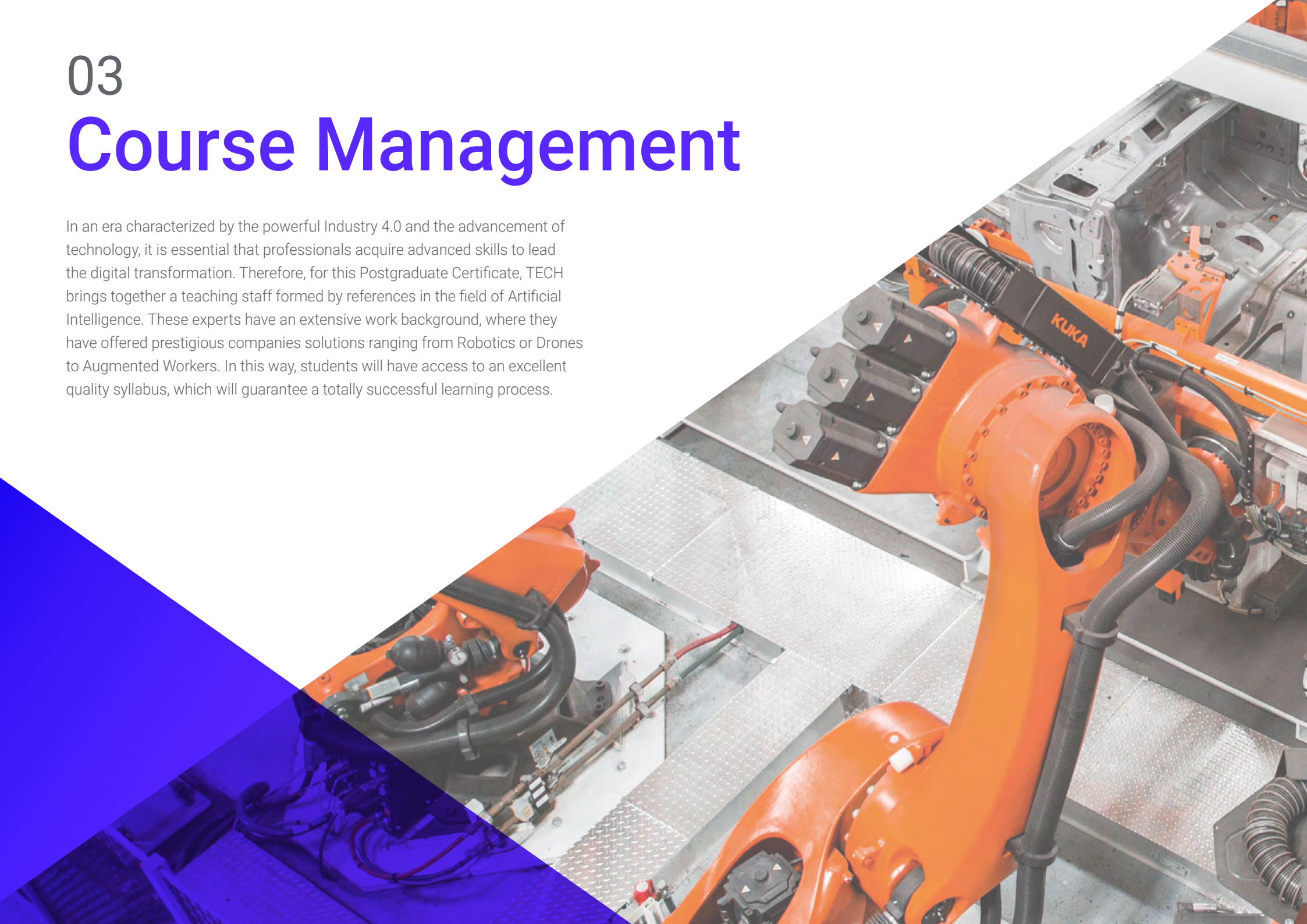


*You will be up to date with the latest trends in Robotization, which will allow you to detect new business opportunities and carry out highly innovative projects"*

# 03

# Course Management

In an era characterized by the powerful Industry 4.0 and the advancement of technology, it is essential that professionals acquire advanced skills to lead the digital transformation. Therefore, for this Postgraduate Certificate, TECH brings together a teaching staff formed by references in the field of Artificial Intelligence. These experts have an extensive work background, where they have offered prestigious companies solutions ranging from Robotics or Drones to Augmented Workers. In this way, students will have access to an excellent quality syllabus, which will guarantee a totally successful learning process.





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*Update your knowledge in Robotics, Drones and Augmented Workers with the best experts in this field. Launch your professional career with TECH!”*

## Management



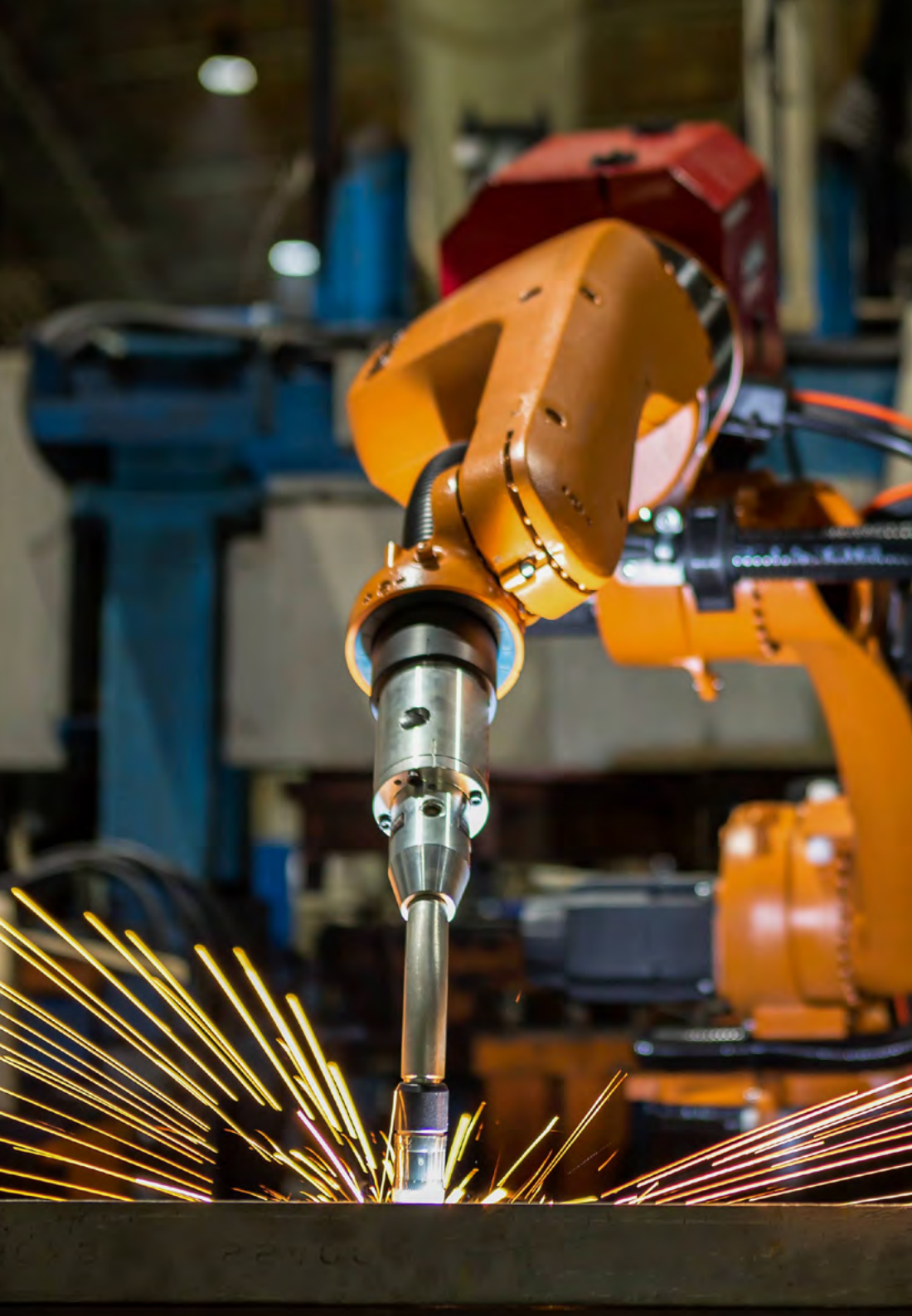
### Dr. Segovia Escobar, Pablo

- ♦ Chief Executive of the Defense Sector in the Company TecnoBit of the Oesía Group
- ♦ Corporate Project Director Indra
- ♦ Master's Degree in Companies Administration and Management by the National University of Distance Education
- ♦ Postgraduate in Strategic Management Function
- ♦ Member of: Spanish Association of People with High Intellectual Quotient



### Dr. Diezma López, Pedro

- ♦ Chief Innovation Officer and CEO of Zerintia Technologies
- ♦ Founder of the technology company Acuilae
- ♦ Member of the Kebala Group for business incubation and promotion
- ♦ Consultant for technology companies such as Endesa, Airbus or Telefónica
- ♦ Wearable "Best Initiative" Award in eHealth 2017 and "Best Technological "Solution" 2018 for occupational safety



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*Take the opportunity to learn about the latest advances in this field in order to apply it to your daily practice"*

# 04

## Structure and Content

This academic pathway will provide students with a solid understanding of the fundamental principles of Robotics, Drones and Augmented Workers. The curriculum will delve into issues such as transfer of learning, advanced automations or Robotic Process Automatization. platforms. This will allow graduates to appreciate both the challenges and opportunities to implement these Artificial Intelligence tools in companies. In addition, the program will delve into the operation of drones and autonomous vehicles, so that students can stay on the cutting edge of technology. In tune with this, the learning materials will examine how to properly integrate humans and machines in industrial environments.



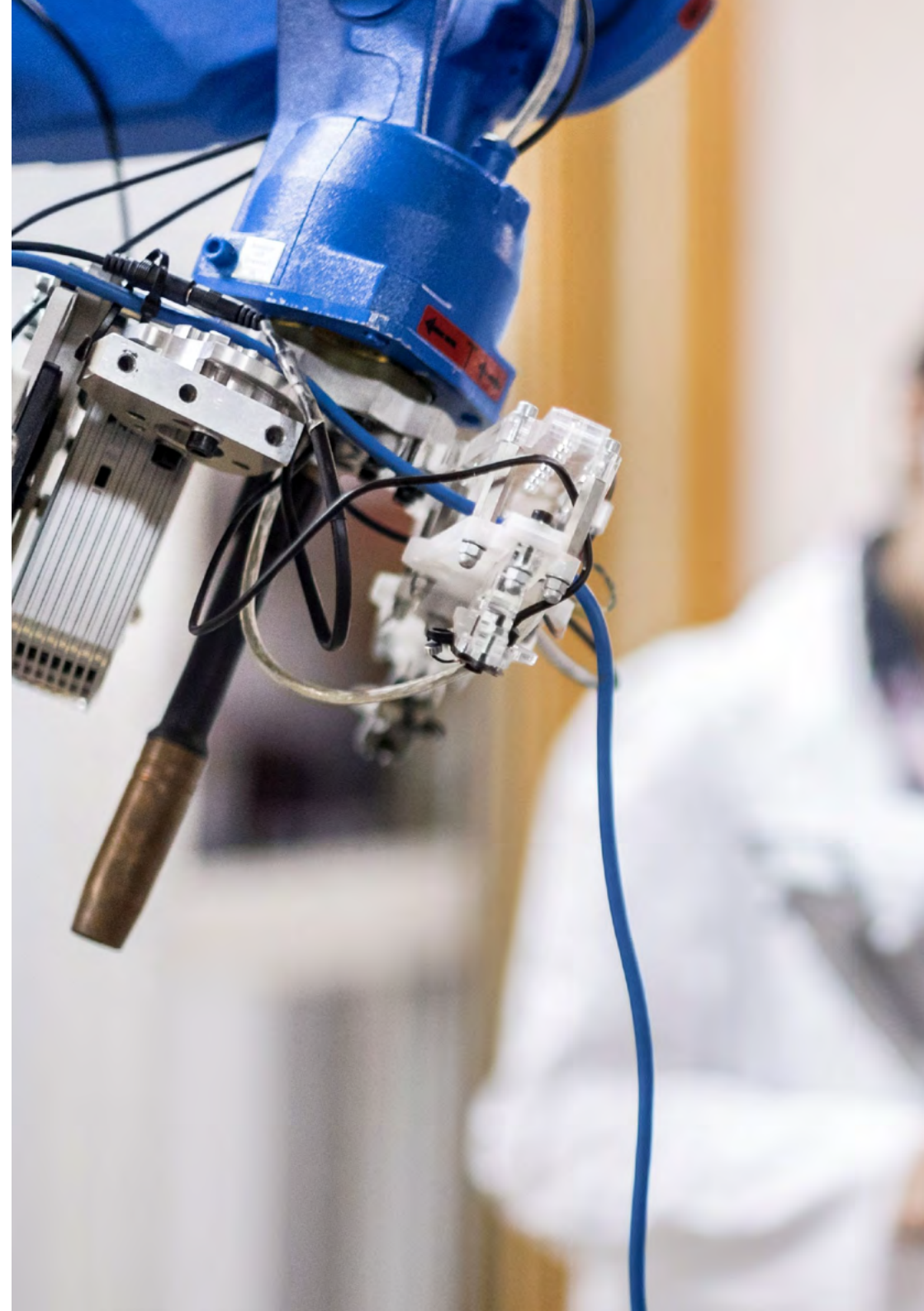


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*You'll get the most out of 5G Technology,  
driving both connectivity and speed in a  
wide variety of applications"*

## Module 1. Robotics, Drones and Augmented Workers

- 1.1. Robotics
  - 1.1.1. Robotics, Societies and Cinema
  - 1.1.2. Components and Parts of Robot
- 1.2. Robotics and Advanced Automation: Simulators, Cobots
  - 1.2.1. Transfer of Learning
  - 1.2.2. Cobots and Case Uses
- 1.3. RPA (Robotic Process Automatization)
  - 1.3.1. Understanding RPA and its Functioning
  - 1.3.2. RPA Platforms, Projects and Roles
- 1.4. Robot as a Service (RaaS)
  - 1.4.1. Challenges and Opportunities for Implementing RaaS Services and Robotics in Enterprises
  - 1.4.2. Functioning of a RaaS system
- 1.5. Drones and Automated Vehicles
  - 1.5.1. Components and Drones Operation
  - 1.5.2. Uses, Types and Applications of Drones
  - 1.5.3. Evolution of Drones and Autonomous Vehicles
- 1.6. The Impact of 5G
  - 1.6.1. Evolution of Communications and Implications
  - 1.6.2. Uses of 5G Technology
- 1.7. Augmented Workers
  - 1.7.1. Human-Machine Integration in Industrial Environments
  - 1.7.2. Challenges in Worker-Robot Collaboration
- 1.8. Transparency, Ethics and Traceability
  - 1.8.1. Ethical Challenges in Robotics and Artificial Intelligence
  - 1.8.2. Monitoring, Transparency and Traceability Methods
- 1.9. Prototyping, Components and Evolution
  - 1.9.1. Prototyping Platforms
  - 1.9.2. Phases to Make a Prototype
- 1.10. Future of Robotics
  - 1.10.1. Trends in Robotization
  - 1.10.2. New Types of Robots





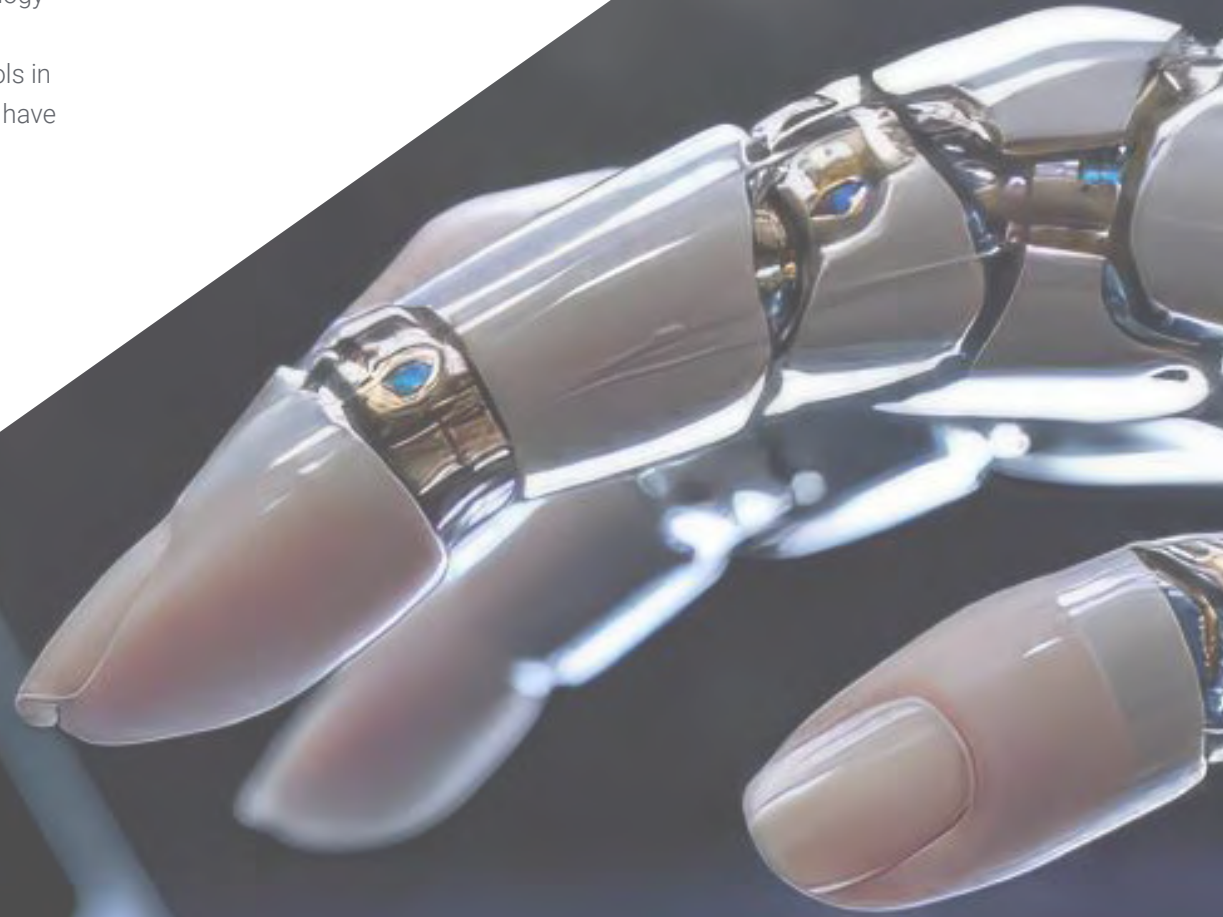
“ *A university program that will help you meet the challenges of collaboration between workers and robots. Bet on TECH!* ”

05

# 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.

“

*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.





#### 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.



06

# Certificate

The Postgraduate Certificate in Robotics, Drones and Augmented Workers 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 university qualification without having to travel or fill out laborious paperwork"*

This program will allow you to obtain your **Postgraduate Certificate in Robotics, Drones and Augmented Workers** endorsed by **TECH Global University**, the world's largest online university.

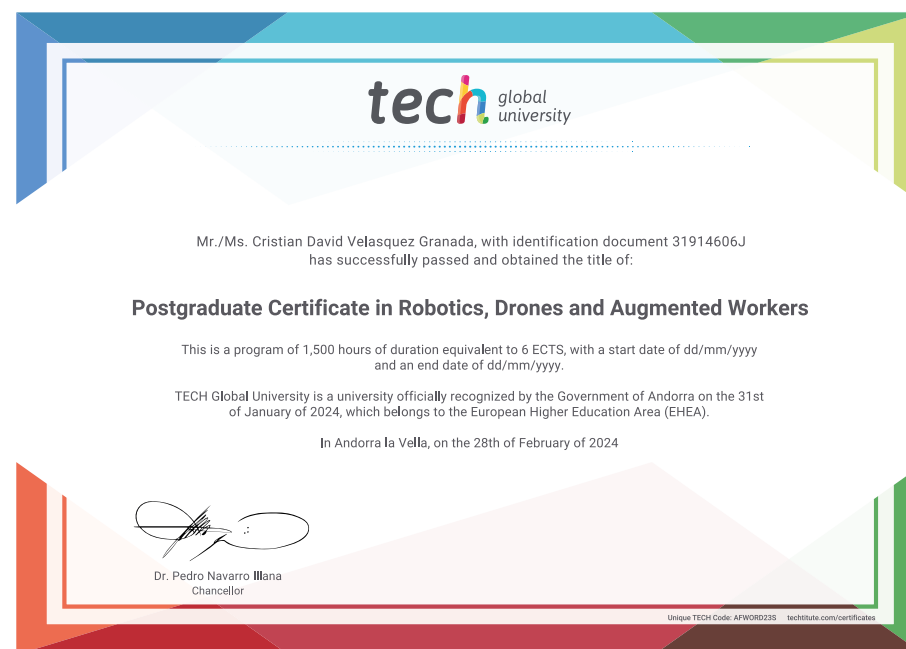
**TECH Global University** is an official European University publicly recognized by the Government of Andorra ([official bulletin](#)). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international 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 Robotics, Drones and Augmented Workers**

ECTS: **6**

Official N° of Hours: **150 h.**



\*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH EDUCATION 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

**tech** global  
university

personalized service innovation

knowledge present

online training

development language

virtual classroom

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