

# Postgraduate Certificate Applied Design Technologies and Artificial Intelligence



## Postgraduate Certificate Applied Design Technologies and Artificial Intelligence

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

Website: [www.techtute.com/us/design/postgraduate-certificate/applied-design-technologies-artificial-intelligence](http://www.techtute.com/us/design/postgraduate-certificate/applied-design-technologies-artificial-intelligence)

# Index

01

Introduction

---

*p. 4*

02

Objectives

---

*p. 8*

03

Course Management

---

*p. 12*

04

Structure and Content

---

*p. 18*

05

Methodology

---

*p. 22*

06

Certificate

---

*p. 30*

# 01

# Introduction

The Conversational Interface for user feedback with Artificial Intelligence (AI) is a valuable tool for designers. The main reason is that it collects both feedback and opinions from the public about products or services, using interactive conversations. These systems can adapt to consumers and their specific needs, allowing them to provide answers to questions or even gather relevant information for certain projects. In addition, Machine Learning is useful for identifying critical or recurring problems mentioned by customers. In this way, organizations address these difficulties in a proactive way. Therefore, TECH launches an online university program that will provide the most advanced AI tools for usability evaluation of interface designs.





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*Master the automatic generation of multimedia content in Editorial Design with this 100% online Postgraduate Certificate”*

Technologies Applied to Design and Machine Learning are revolutionizing the way products, services or experiences are designed. AI's own tools generate original ideas and suggest innovative design solutions, greatly expanding the scope of human creativity. In turn, it can foresee future trends, which contributes to both strategic planning and informed decision making. On the other hand, organizations that adopt AI stay competitive by offering higher quality products or services and adapting quickly to changing market demands.

This is how this Postgraduate Certificate in Applied Design Technologies and Artificial Intelligence, which will provide professionals with practical tools and solid knowledge to make the most of technologies in the field of Design. The syllabus will analyze from the incorporation of virtual assistants to AI-assisted collaboration in editorial teams. This will provide students with a comprehensive view of the multiple possibilities offered by these innovations.

In addition, the didactic materials will explore how Machine Learning can boost both creativity and efficiency in the Design process. Furthermore, future challenges in the implementation of AI-assisted collaboration applications will be analyzed.

In this context, TECH has developed a rigorous academic program backed by the innovative *Relearning* method. This educational system will focus on reiterating key principles to ensure a complete understanding of the content. In this way, students will enjoy natural and progressive learning, without the need to resort to techniques such as memorization. In addition, accessibility will be paramount: only an electronic device with an Internet connection will be required to explore the material at any time, allowing students to dispense with the need to attend in person or follow strict schedules.

The **Postgraduate Certificate in Applied Design Technologies and Artificial Intelligence** 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 Applied Design Technologies and AI
- ♦ The graphic, schematic and practical contents of the book provide technical and practical information on those 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



*You will use Artificial Intelligence to empower the generation of functional solutions, promoting more accessible and sustainable designs"*

“

*Thanks to the revolutionary Relearning methodology, you will integrate all the knowledge in an optimal way to successfully achieve the results you are looking for"*

The program's teaching staff includes professionals from the industry who contribute their work experience to this 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 course. For this purpose, students will be assisted by an innovative interactive video system created by renowned and experienced experts.

*Looking to automate the most repetitive tasks in your projects? Get it thanks to this program in just 6 weeks.*

*You will delve into Adaptive and Predictive Design through an extensive library of multimedia resources.*





# 02 Objectives

This university program will provide designers with the skills required to handle the most modern tools and completely revolutionize the field of Design. Graduates will effectively implement microchip architecture optimization techniques using AI to improve both performance and efficiency. Similarly, professionals will correctly employ algorithms for the automatic generation of multimedia content. This will help them to enrich visual communication in editorial projects and capture the interest of the audience. Experts will be able to develop innovative solutions using Machine Learning mechanisms.







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*Enjoy the most up-to-date educational content available in innovative multimedia formats to optimize your studies”*





## General Objectives

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- ◆ Develop skills to implement Artificial Intelligence tools in design projects, covering automatic content generation, design optimization and pattern recognition
- ◆ Develop skills in adaptive design, considering user behavior and applying advanced artificial intelligence tools
- ◆ Critically analyze the challenges and opportunities when implementing custom designs in industry using AI Artificial Intelligence
- ◆ Understand the transformative role of Artificial Intelligence in the innovation of design and manufacturing processes





## Specific Objectives

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- ♦ Improve comprehensive understanding and practical skills to leverage advanced technologies and Artificial Intelligence
- ♦ Understand the strategic integration of emerging technologies and AI in the Design domain
- ♦ Apply microchip architecture optimization techniques using AI to improve both performance and efficiency
- ♦ Properly utilize algorithms for automatic generation of multimedia content, enriching visual communication in editorial projects

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*TECH adapts to your schedule,  
that's why it has designed a  
flexible and 100% online program"*



# 03

# Course Management

One of TECH's priorities is to offer a complete and quality education for all. Therefore, for the delivery of this program, TECH has carefully selected the teaching staff. These professionals have extensive experience in Technologies Applied to Design and Machine Learning, which has allowed them to work in prestigious institutions. These experts have been in charge of creating the didactic materials for this program, offering the most avant-garde tools to guarantee that the graduates obtain the best results. In this way, students will have an immersive learning experience under the guidance of the best teachers.



A hand holding a pen, with a teal and white geometric background. The hand is positioned in the upper left, holding a dark pen. The background is split diagonally from the top right to the bottom left, with a teal color on the top right and white on the bottom left.

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*Thanks to the guidance of the teachers, you will be immersed in a world of possibilities where creativity merges with AI to create a lasting impact on the digital industry”*

## International Guest Director

Flaviane Peccin is a leading **data scientist** with more than a decade of international experience applying **predictive modeling** and **machine learning** in various industries. Throughout her career, she has led innovative projects in the field of **Artificial Intelligence, data analytics and data-driven business decision making**, consolidating herself as an influential figure in the **digital transformation** of large corporations.

In this regard, she has held roles of great importance at **Visa**, as **Director of Artificial Intelligence and Machine Learning**, where she has been responsible for defining and executing the company's global **data science** strategy, with a particular focus on **Machine Learning** as a service. In addition, her leadership has ranged from collaboration with **commercial and scientific stakeholders**, to the implementation of **advanced algorithms and scalable technology solutions**, which have driven efficiency and accuracy in decision making. As such, her experience in integrating emerging trends in **Artificial Intelligence and Gen AI** has positioned her at the forefront of her field.

She has also worked as **Director of Data Science** in this same organization, leading a team of experts that has provided **analytical consulting** to clients in Latin America, developing predictive models that have optimized the cardholder lifecycle and significantly improved the management of credit and debit portfolios. Her career has also included key positions at **Souza Cruz, HSBC, GVT** and **Telefónica**, where she has contributed to the development of innovative solutions for risk management, **analytical models and fraud control**.

Therefore, with extensive experience in Latin American and US markets, Flaviane Peccin has been instrumental in the adaptation of products and services, using **advanced statistical techniques and deep data analysis**.





## Ms. Peccin, Flaviane

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- Director of Artificial Intelligence and Machine Learning at Visa, Miami, United States
- Director of Data Science at Visa
- Customer Analytics Manager at Visa
- Coordinator/Data Science Specialist at Souza Cruz
- Quantitative Modeling Analyst at HSBC
- Credit and Collections Analyst at GVT
- Statistical Analyst at Telefónica
- Master's Degree in Numerical Methods in Engineering from Universidade Federal do Paraná
- Bachelor's Degree in Statistics from Universidade Federal do Paraná



*Thanks to TECH, you will be able to learn with the best professionals in the world"*

## Management



### Dr. Peralta Martín-Palomino, Arturo

- CEO and CTO at Prometheus Global Solutions
- CTO at Korporate Technologies
- CTO at AI Shephers GmbH
- Consultant and Strategic Business Advisor at Alliance Medical
- Director of Design and Development at DocPath
- PhD. in Psychology from the University of Castilla La Mancha
- PhD in Economics, Business and Finance from the Camilo José Cela University
- PhD in Psychology from the University of Castilla La Mancha
- Máster in Executive MBA from Universidad Isabel I
- Master's Degree in Sales and Marketing Management, Isabel I University
- Expert Master's Degree in Big Data by Hadoop Training
- Master's Degree in Advanced Information Technologies from the University of Castilla La Mancha
- Member of: SMILE Research Group



### Mr. Maldonado Pardo, Chema

- ♦ Graphic Designer at DocPath Document Solutions S.L.
- ♦ Founding Partner and Head of the Design and Advertising Department at D.C.M. Difusión Integral de Ideas, C.B.
- ♦ Head of the Design and Digital Printing Department at Ofipaper, La Mancha S.L.
- ♦ Graphic Designer in Ático, Graphic Studio
- ♦ Graphic Designer and Craftsman Printer in Lozano Artes Gráficas
- ♦ Layout and Graphic Designer in Gráficas Lozano
- ♦ ETSI Telecommunications by the Polytechnic University of Madrid
- ♦ ETS Computer Systems ETSI by the University of Castilla-La Mancha

## Professors

### Ms. Parreño Rodríguez, Adelaida

- ♦ *Technical Developer & Energy Communities Engineer at the University of Murcia*
- ♦ Technical Developer & Energy Communities Engineer at the University of Murcia
- ♦ Manager in Research & Innovation in European Projects at the University of Murcia
- ♦ Content Creator in Global UC3M Challenge
- ♦ Ginés Huertas Martínez Award (2023)
- ♦ Master's Degree in Renewable Energies by the Polytechnic University of Cartagena
- ♦ Degree in Electrical Engineering (bilingual) from the Carlos III University of Madrid



# 04

## Structure and Content

This Postgraduate Certificate is based on an approach that combines theory with practice, allowing students to apply Applied Design and Machine Learning Technologies to their procedures. The academic itinerary will provide the keys for the integration of virtual assistants in design interfaces, allowing students to make continuous improvements. The syllabus will analyze in detail the optimization of editorial workflows with algorithms, using the most advanced technologies. The academic materials will delve into both adaptive and predictive design based on user data. This will enable experts to integrate them into various platforms and applications.



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*You will become a change agent in the field of Design with this exceptionally comprehensive program”*




## Module 1. Applied Design Technologies and AI

- 1.1. Integration of Virtual Assistants in Design Interfaces with Dialogflow, Microsoft Bot Framework and Rasa
  - 1.1.1. Role of Virtual Assistants in Interactive Design
  - 1.1.2. Development of Virtual Assistants Specialized in Design
  - 1.1.3. Natural Interaction with Virtual Assistants in Design Projects
  - 1.1.4. Implementation Challenges and Continuous Improvement
- 1.2. Automatic Detection and Correction of Visual Errors with AI
  - 1.2.1. Importance of Automatic Visual Error Detection and Correction
  - 1.2.2. Algorithms and Models for Visual Error Detection
  - 1.2.3. Automatic Correction Tools in Visual Design
  - 1.2.4. Challenges in Automatic Detection and Correction and Strategies for Overcoming Them
- 1.3. AI Tools for Usability Evaluation of Interface Designs (EyeQuant, Lookback and Mouseflow)
  - 1.3.1. Analysis of Interaction Data with Machine Learning Models
  - 1.3.2. Automated Report Generation and Recommendations
  - 1.3.3. Virtual User Simulations for Usability Testing Using Bootpress, Botium and Rasa
  - 1.3.4. Conversational Interface for User Feedback
- 1.4. Optimization of Editorial Workflows with GPT Chat, Bing, WriteSonic and Jasper Algorithms
  - 1.4.1. Importance of Optimizing Editorial Workflows
  - 1.4.2. Algorithms for Editorial Automation and Optimization
  - 1.4.3. Tools and Technologies for Editorial Optimization
  - 1.4.4. Challenges in Implementation and Continuous Improvement in Editorial Workflows
- 1.5. Realistic Simulations in Video Game Design with TextureLab and Leonardo
  - 1.5.1. Importance of Realistic Simulations in the Videogame Industry
  - 1.5.2. Modeling and Simulation of Realistic Elements in Video Games
  - 1.5.3. Technologies and Tools for Realistic Simulations in Video Games
  - 1.5.4. Technical and Creative Challenges in Realistic Video Game Simulations





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- 1.6. Automatic Generation of Multimedia Content in Editorial Design
    - 1.6.1. Transformation with Automatic Generation of Multimedia Content
    - 1.6.2. Algorithms and Models for the Automatic Generation of Multimedia Content
    - 1.6.3. Practical Applications in Publishing Projects
    - 1.6.4. Challenges and Future Trends in the Automatic Generation of Multimedia Content
  - 1.7. Adaptive and Predictive Design Based on User Data
    - 1.7.1. Importance of Adaptive and Predictive Design in User Experience
    - 1.7.2. Collection and Analysis of User Data for Adaptive Design
    - 1.7.3. Algorithms for Adaptive and Predictive Design
    - 1.7.4. Integration of Adaptive Design in Platforms and Applications
  - 1.8. Integration of Algorithms in Usability Improvement
    - 1.8.1. Segmentation and Behavioral Patterns
    - 1.8.2. Detection of Usability Problems
    - 1.8.3. Adaptability to Changes in User Preferences
    - 1.8.4. Automated a/b Testing and Analysis of Results
  - 1.9. Continuous Analysis of User Experience for Iterative Improvements
    - 1.9.1. Importance of Continuous Feedback in Product and Service Evolution
    - 1.9.2. Tools and Metrics for Continuous Analysis
    - 1.9.3. Case Studies Demonstrating Substantial Improvements Achieved Through this Approach
    - 1.9.4. Handling of Sensitive Data
  - 1.10. AI-assisted Collaboration in Editorial Teams
    - 1.10.1. Transforming Collaboration in AI-assisted Editorial Teams
    - 1.10.2. Tools and Platforms for AI-Assisted Collaboration (Grammarly, Yoast SEO and Quillionz)
    - 1.10.3. Development of Virtual Assistants Specialized in Editing
    - 1.10.4. Implementation Challenges and Future Applications of AI-assisted Collaboration

# 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.*





### *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 is the most widely used learning system in the best faculties in the world. 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 we face in the case method, an action-oriented learning method. Throughout the program, the studies 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

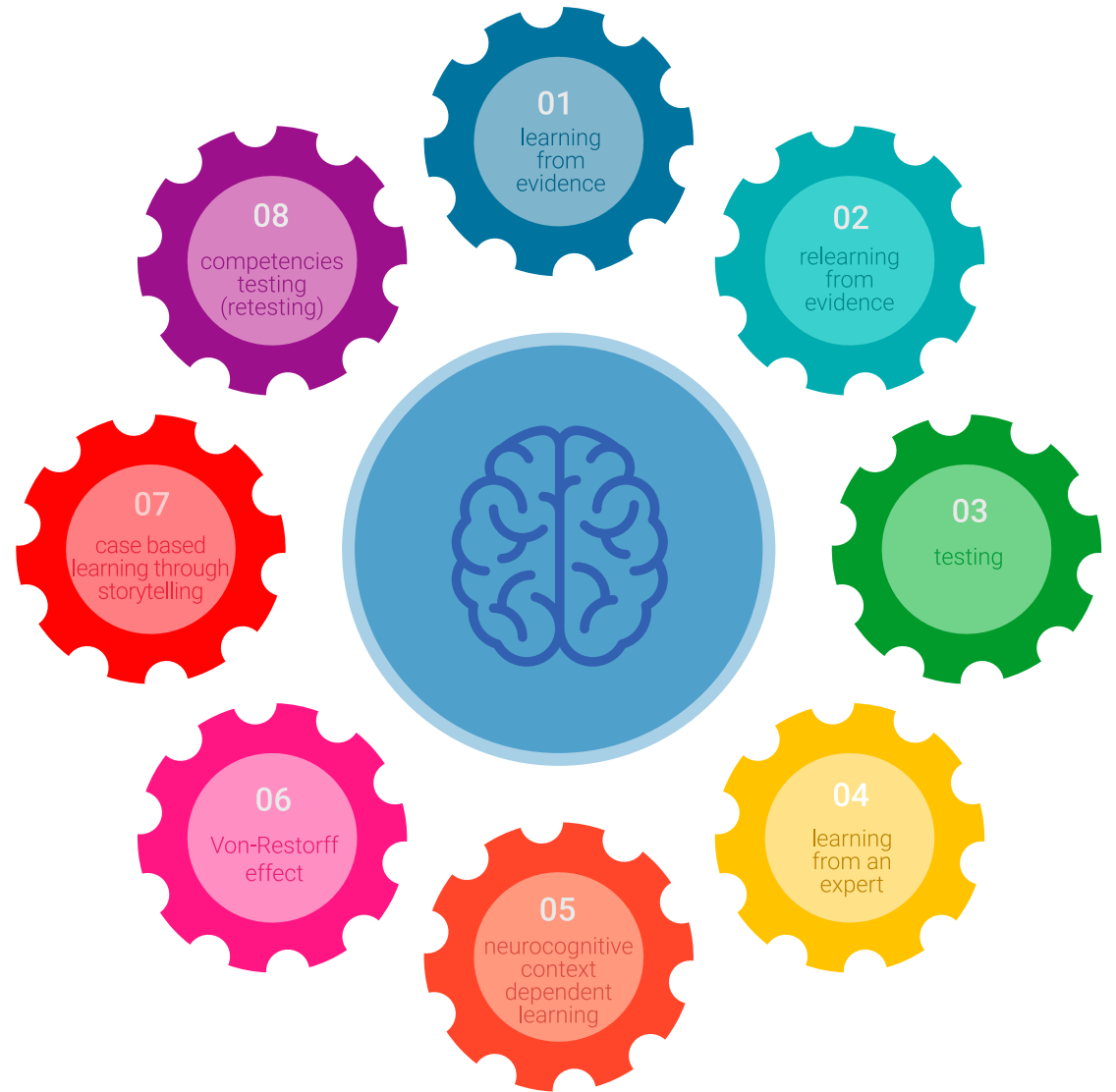
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

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.

With this methodology we have 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, markets, and financial 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.

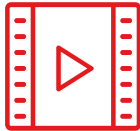
*Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.*

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.



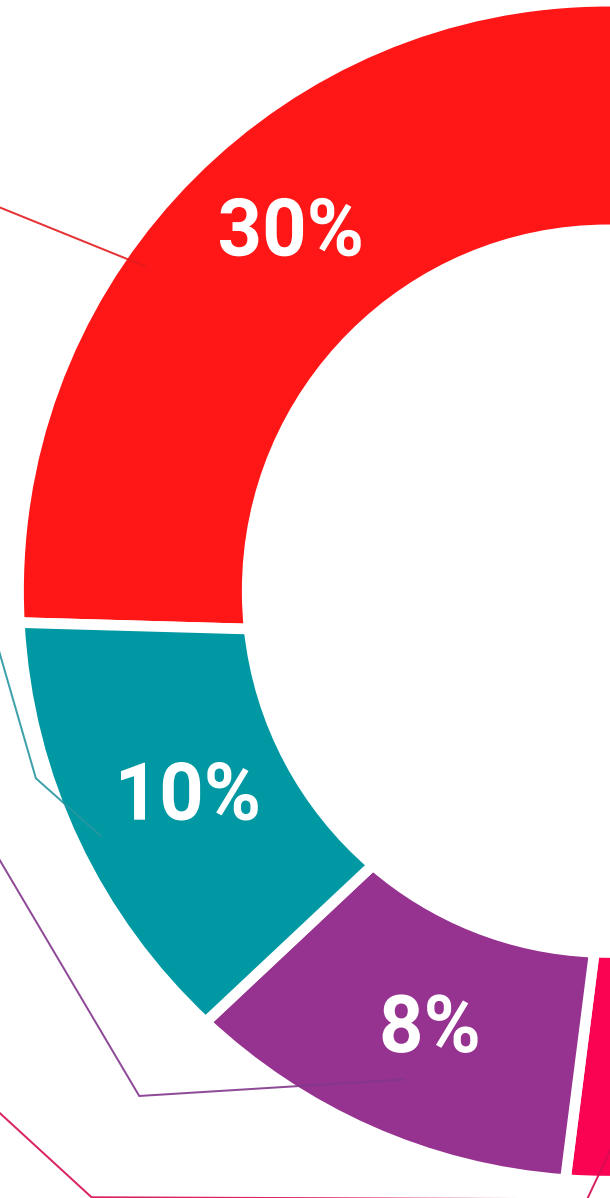
### Practising Skills and Abilities

They will carry out activities to develop specific competencies and skills in each thematic 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.

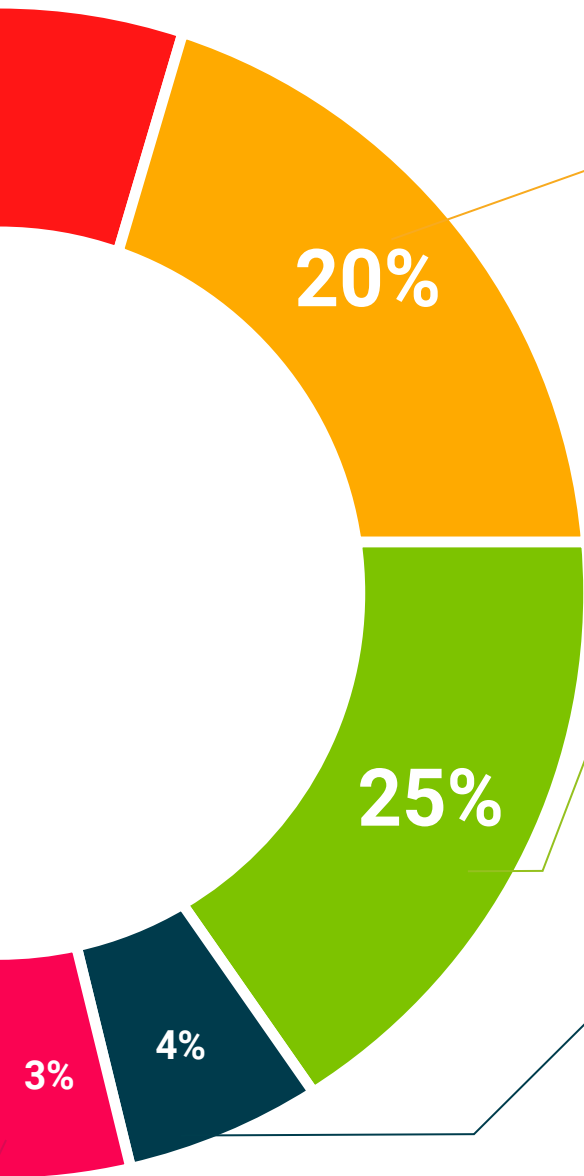


### Additional Reading

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 Applied Design Technologies and Artificial Intelligence 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 private qualification will allow you to obtain a **Postgraduate Certificate in Applied Design Technologies and Artificial Intelligence** 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: **Postgraduate Certificate in Applied Design Technologies and Artificial Intelligence**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



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

**tech** global  
university

**Postgraduate Certificate**  
Applied Design Technologies  
and Artificial Intelligence

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

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