

Postgraduate Diploma

Artificial Intelligence Technologies in Education



Postgraduate Diploma Artificial Intelligence Technologies in Education

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: www.techtitude.com/us/education/postgraduate-diploma/postgraduate-diploma-artificial-intelligence-technologies-education

Index

01

Introduction

p. 4

02

Objectives

p. 8

03

Course Management

p. 12

04

Structure and Content

p. 16

05

Methodology

p. 22

06

Certificate

p. 30

01

Introduction

Artificial Intelligence (AI) technologies are playing an increasingly important role in education because of their ability to transform the way education is taught. This system analyzes large sets of educational data to identify patterns and trends in student performance. This helps teachers make informed decisions about pedagogical strategies and syllabus improvement. Also, the development of resources such as chatbots enable students to understand difficult concepts, thereby providing additional materials. Therefore, TECH is developing a program for educators to set up AI projects in the classroom. In addition, it is delivered in a 100% online format that fits the schedule of busy professionals.



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TECH provides you with a 100% online methodology, based on free access to content and teaching customization"

Augmented Reality can be applied in educational environments to enrich the learning experience of students. For example, this tool provides students with fully immersive learning trials, allowing them to explore situations that would otherwise be inaccessible. Learners can interact with the content and participate more actively in the teaching process. This implies an improvement in the retention of information and understanding of complex concepts.

In this context, TECH launches a Postgraduate Diploma that will focus on AI as an educational support and resource for interactive learning. The syllabus will delve into the use of facial and emotional recognition technologies, aimed at monitoring the participation and well-being of students. At the same time, the syllabus will delve into the integration of proposals in specific subjects such as Mathematics, Languages and History. In this way, educators will be nourished with innovative resources that will improve their teaching practice and provide dynamic learning processes. The program will also emphasize the challenges in the protection of privacy and confidentiality of student data.

All this will be presented through a high-impact informative compendium, enriched with audiovisual materials, complementary readings and practical exercises developed with the *Relearning* methodology. In this way, professionals will be confronted with real cases and simulations that will allow them to test their new knowledge, while at the same time learning about the requirements of the professional field. In addition, the program has a 100% online format, easily accessible from any device with an Internet connection and without pre-established schedules. Therefore, experts will find it easier to combine their daily routine and care work with the updating of their knowledge.

This **Postgraduate Diploma in Artificial Intelligence Technologies in Education** contains the most complete and up-to-date educational program on the market.

The most important features include:

- ♦ The development of case studies presented by experts in Artificial Intelligence Technologies in Education
- ♦ The graphic, schematic and practical contents of the book provide theoretical and practical information on those disciplines that are essential for professional practice
- ♦ Practical exercises where self-assessment can be used 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 learn through real cases
and by solving complex situations in
simulated learning environments”*

“

You will ensure the privacy of sensitive data in the educational environment, ensuring the safety of your students."

You will develop advanced methods for student assistance, such as the implementation of chatbots and virtual assistants.

Relearning will allow you to learn with less effort and more performance, getting more involved in your professional specialization.

The program's teaching staff includes professionals from the sector 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 academic year. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.



02 Objectives

Thanks to this 450-hour program, graduates will be specialized in the design and implementation of AI projects in educational environments. Teachers will experience a leap in quality in their careers by mastering the most innovative tools to transform educational platforms and provide solutions to learning difficulties. Similarly, these experts will be fully aware of the social and cultural impact of AI in education. Therefore, they will acquire a deep understanding of current legislation and their practices will be safe.



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You will have access to the most complete and updated syllabus in the academic market, guaranteeing you a leap towards the highest teaching quality"



General Objectives

- ♦ Understand the fundamental ethical principles related to the application of Artificial Intelligence (AI) in educational settings
- ♦ Analyze the current legislative framework and the challenges associated with the implementation of AI in educational settings
- ♦ Develop critical skills to evaluate the ethical and social impact of AI in education
- ♦ Encourage the responsible design and use of AI solutions in educational contexts, considering cultural diversity and gender equity
- ♦ Train in the design and implementation of AI projects in the educational environment
- ♦ Provide an in-depth understanding of the theoretical foundations of AI, including machine learning, neural networks, and natural language processing
- ♦ Develop skills to integrate AI projects effectively and ethically into the educational syllabus
- ♦ Understand the applications and impact of AI in teaching and learning, critically assessing its current and potential uses
- ♦ Apply generative AI to personalize and enrich teaching practice, creating adaptive educational materials
- ♦ Identify, evaluate, and apply the latest trends and emerging technologies in AI relevant to education, reflecting on their challenges and opportunities





Specific Objectives

Module 1. Development of Artificial Intelligence Projects in the Classroom

- ♦ Plan and design educational projects that effectively integrate AI in educational environments, mastering specific tools for its development
- ♦ Design effective strategies to implement AI projects in learning environments, integrating them in specific subjects to enrich and improve the educational process
- ♦ Develop educational projects applying machine learning to improve the learning experience, integrating AI in the design of educational games in playful learning
- ♦ Create educational chatbots to assist students in their learning processes and resolution of doubts, including intelligent agents in educational platforms to improve interaction and teaching
- ♦ Perform continuous analysis of AI in Education projects to identify areas for improvement and optimization

Module 2. Innovations and Emerging Trends in AI for Education

- ♦ Master emerging AI tools and technologies applied to education for their effective use in learning environments
- ♦ Integrate Augmented and Virtual Reality in Education to enrich and enhance the learning experience
- ♦ Apply conversational AI to facilitate educational support and foster interactive learning among students
- ♦ Implement facial and emotional recognition technologies to monitor student engagement and well-being in the classroom
- ♦ Explore the integration of Blockchain and AI in Education to transform educational administration and validate certifications

Module 3. Ethics and legislation of Artificial Intelligence in Education

- ♦ Identify and apply ethical practices in the handling of sensitive data within the educational context, prioritizing responsibility and respect
- ♦ Analyze the social and cultural impact of AI in Education, assessing its influence on educational communities
- ♦ Understand legislation and policies related to the use of data in educational settings involving AI
- ♦ Define the intersection between AI, cultural diversity, and gender equity in the educational context
- ♦ Evaluate the impact of AI on educational accessibility, ensuring equity in access to knowledge



No rigid schedules or evaluation chronograms. That's what this TECH program is like!"

03

Course Management

In line with its philosophy of offering the highest educational excellence, TECH has a prestigious teaching staff. These specialists have a wide working background, having been part of renowned academic centers. Thanks to this, they are defined by having a deep knowledge of the most innovative techniques for measuring ionizing radiation. In addition, they are up to date with all the advances that have been made in AI technologies in education. Therefore, graduates will have the guarantees they demand to be updated in a profession that is advancing by leaps and bounds.



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You will have the support of a teaching staff made up of distinguished professionals in AI technology in education"

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
- ♦ Ph.D. in Psychology from the University of Castilla - La Mancha
- ♦ Ph.D. in Economics, Business and Finance from the Camilo José Cela University
- ♦ Ph.D. in Psychology from University of Castilla – La Mancha
- ♦ Professional Master's Degree in Executive MBA by the Isabel I University
- ♦ Professional Master's Degree in Sales and Marketing Management, Isabel I University
- ♦ Expert Master's Degree in Big Data by Hadoop Training
- ♦ Professional Master's Degree in Advanced Information Technologies from the University of Castilla - La Mancha
- ♦ Member of: SMILE Research Group



Mr. Nájera Puente, Juan Felipe

- ♦ Data Analyst and Data Scientist
- ♦ Director of Studies and Research at the Council for Quality Assurance in Higher Education
- ♦ Production Programmer at Confiteca C.A
- ♦ Processes Consultant at Esefex Consulting
- ♦ Academic Planning Analyst at San Francisco de Quito University
- ♦ Professional Master's Degree in *Big Data* and Data Science at the International University of Valencia
- ♦ Industrial Engineer from San Francisco de Quito University

Professors

Ms. Martínez Cerrato, Yésica

- ♦ Education, Business and Marketing Specialist
- ♦ Responsible for Technical Training at Securitas Seguridad España
- ♦ *Product Manager* in Electronic Security at Securitas Seguridad España
- ♦ Business Intelligence Analyst at Ricopia Technologies
- ♦ Computer Technician and Head of OTEC Computer Classrooms at the University of Alcalá de Henares
- ♦ Collaborator in the ASALUMA Association
- ♦ Degree in Electronic Communications Engineering at the Polytechnic School, University of Alcalá de Henares, Madrid

04

Structure and Content

With a theoretical-practical approach, this program will focus on Machine Learning Technologies in the educational field. Designed by experts in the field, the syllabus will include concepts such as neural networks or natural language processing. At the same time, the syllabus will provide students with a wide range of technological resources, among which augmented reality and predictive analytics stand out. In this way, teachers will optimize their educational projects to improve the students' experience. They will also gain an ethical awareness of data policy and legislations for the responsible use of AI.



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You will effectively employ the most advanced Machine Learning technologies and foster interactive teachings"

Module 1. Development of Artificial Intelligence Projects in the Classroom

- 1.1. Planning and Design of AI Projects in Education with Algor Education
 - 1.1.1. First Steps to Plan the Project
 - 1.1.2. Knowledge Bases
 - 1.1.3. Design of AI Projects in Education
- 1.2. Tools for the Development of Educational Projects with AI
 - 1.2.1. Tools for Developing Educational Projects: TensorFlow Playground
 - 1.2.2. Tools for Educational Projects in History
 - 1.2.3. Tools for Educational Projects in Mathematics; Wolfram Alpha
 - 1.2.4. Tools for Educational Projects in English: Grammarly
- 1.3. Strategies for Implementing AI Projects in the Classroom
 - 1.3.1. When to Implement an AI Project
 - 1.3.2. Why Implement an AI Project
 - 1.3.3. Strategies to Be Implemented
- 1.4. Integration of AI Projects in Specific Subjects
 - 1.4.1. Mathematics and AI: Thinkster Math
 - 1.4.2. History and AI
 - 1.4.3. Languages and AI: Deep L
 - 1.4.4. Other Subjects: Watson Studio
- 1.5. Project 1: Developing Educational Projects Using Machine Learning with Khan Academy
 - 1.5.1. First Steps
 - 1.5.2. Requirements
 - 1.5.3. Tools to Be Used
 - 1.5.4. Project Definition
- 1.6. Project 2: Integration of AI in the Development of Educational Games
 - 1.6.1. First Steps
 - 1.6.2. Requirements
 - 1.6.3. Tools to Be Used
 - 1.6.4. Project Definition



- 1.7. Project 3: Development of Educational Chatbots for Student Assistance
 - 1.7.1. First Steps
 - 1.7.2. Requirements
 - 1.7.3. Tools to Be Used
 - 1.7.4. Project Definition
- 1.8. Project 4: Integrating Intelligent Agents into Educational Platforms with Knewton
 - 1.8.1. First Steps
 - 1.8.2. Requirements
 - 1.8.3. Tools to Be Used
 - 1.8.4. Project Definition
- 1.9. Evaluating and Measuring the Impact of AI Projects in Education with Qualtrics
 - 1.9.1. Benefits of Working with AI in the Classroom
 - 1.9.2. Actual Data
 - 1.9.3. AI in the Classroom
 - 1.9.4. AI Statistics in Education
- 1.10. Analysis and Continuous Improvement of AI in Education with Edmodo Insights
 - 1.10.1. Current Projects
 - 1.10.2. Commissioning
 - 1.10.3. What the Future Holds
 - 1.10.4. Transforming the Classroom 360

Module 2. Innovations and Emerging Trends in AI for Education

- 2.1. Emerging AI Tools and Technologies in Education
 - 2.1.1. Obsolete AI Tools
 - 2.1.2. Current Tools: ClassDojo and Seesaw
 - 2.1.3. Future Tools
- 2.2. Augmented and Virtual Reality in Education
 - 2.2.1. Augmented Reality Tools
 - 2.2.2. Virtual Reality Tools
 - 2.2.3. Application of Tools and their Uses
 - 2.2.4. Advantages and Disadvantages
- 2.3. Conversational AI for Educational Support and Interactive Learning with Wysdom AI and SnatchBot
 - 2.3.1. Conversational AI, Why Now?
 - 2.3.2. AI in Learning
 - 2.3.3. Advantages and Disadvantages
 - 2.3.4. Applications of AI in Learning
- 2.4. Application of AI for Improving Knowledge Retention
 - 2.4.1. AI as a Support Tool
 - 2.4.2. Guidelines to Follow
 - 2.4.3. AI Performance in Knowledge Retention
 - 2.4.4. AI and Support Tools
- 2.5. Facial and Emotional Recognition Technologies for Tracking Learner Engagement and Well-Being
 - 2.5.1. Facial and Emotional Recognition Technologies on the Market Today
 - 2.5.2. Uses
 - 2.5.3. Applications
 - 2.5.4. Margin of Error
 - 2.5.5. Advantages and Disadvantages
- 2.6. Blockchain and AI in Education to Transform Educational Administration and Certification
 - 2.6.1. What Is Blockchain?
 - 2.6.2. Blockchain and Its Applications
 - 2.6.3. Blockchain as a Transformative Element

- 2.6.4. Educational Administration and Blockchain
- 2.7. Emerging AI Tools to Enhance the Learning Experience with Squirrel AI Learning
 - 2.7.1. Current Projects
 - 2.7.2. Commissioning
 - 2.7.3. What the Future Holds
 - 2.7.4. Transforming the Classroom 360
- 2.8. Strategies for Developing Pilots with Emerging AI
 - 2.8.1. Advantages and Disadvantages
 - 2.8.2. Strategies to be Developed
 - 2.8.3. Key Points
 - 2.8.4. Pilot Projects
- 2.9. Analysis of Successful AI Innovation Cases
 - 2.9.1. Innovative Projects
 - 2.9.2. Application of AI and its Benefits
 - 2.9.3. AI in the Classroom, Successful Cases
- 2.10. Future of AI in Education
 - 2.10.1. AI History in Education
 - 2.10.2. Where is AI going in the Classroom?
 - 2.10.3. Future Projects

Module 3. Ethics and Legislation of Artificial Intelligence in Education

- 3.1. Identification and Ethical Treatment of Sensitive Data in the Educational Context
 - 3.1.1. Principles and Practices for the Ethical Handling of Sensitive Data in Education
 - 3.1.2. Challenges in Protecting the Privacy and Confidentiality of Student Data
 - 3.1.3. Strategies for Ensuring Transparency and Informed Consent in Data Collection
- 3.2. Social and Cultural Impact of AI in Education
 - 3.2.1. Analysis of the Effect of AI on Social and Cultural Dynamics in Educational Environments
 - 3.2.2. Exploration of how AI can Perpetuate or Mitigate Social Biases and Inequalities
 - 3.2.3. Assessing the Social Responsibility of Developers and Educators in the implementation of AI

- 3.3. AI Legislation and Data Policy in Educational Settings
 - 3.3.1. Review of Current Data and Privacy Laws and Regulations Applicable to AI in Education
 - 3.3.2. Exploring How Microsoft AI for Accessibility Can Perpetuate or Mitigate Social Biases and Inequalities
 - 3.3.3. Developing Institutional Policies for the Ethical Use of AI in Education with AI Ethics Lab
- 3.4. Assessing the Ethical Impact of AI
 - 3.4.1. Methods for Assessing the Ethical Implications of AI Applications in Education
 - 3.4.2. Challenges in Measuring the Social and Ethical Impact of AI
 - 3.4.3. Creating Ethical Frameworks to Guide the Development and Use of AI in Education
- 3.5. Challenges and Opportunities of AI in Education
 - 3.5.1. Identification of Major Ethical and Legal Challenges in the Use of AI in Education
 - 3.5.2. Exploring Opportunities to Improve Teaching and Learning through Squirrel AI Learning
 - 3.5.3. Balancing Technological Innovation and Ethical Considerations in Education
- 3.6. Ethical Application of AI Solutions in the Educational Environment
 - 3.6.1. Principles for Ethical Design and Deployment of AI Solutions in Education
 - 3.6.2. Case Studies on Ethical Applications of AI in Different Educational Contexts
 - 3.6.3. Strategies for Involving All *Stakeholders* in Ethical AI Decision-Making
- 3.7. AI, Cultural Diversity and Gender Equity
 - 3.7.1. Analysis of the Impact of AI on the Promotion of Cultural Diversity and Gender Equity in Education
 - 3.7.2. Strategies for Developing Inclusive and Diversity-Sensitive AI Systems with Teachable Machine by Google
 - 3.7.3. Assessment of how AI can Influence the Representation and Treatment of Different Cultural and Gender Groups
- 3.8. Ethical Considerations for the use of AI Tools in Education
 - 3.8.1. Ethical Guidelines for the Development and Use of AI Tools in the Classroom
 - 3.8.2. Discussion on the Balance between Automation and Human Intervention in Education
 - 3.8.3. Analysis of Cases where the use of AI in Education has Raised Significant Ethical Issues



- 3.9. Impact of AI on Educational Accessibility
 - 3.9.1. Exploration of how AI can Enhance or Limit Accessibility in Education
 - 3.9.2. Analysis of AI Solutions Designed to Increase Inclusion and Access to Education for All with Google Read Along
 - 3.9.3. Ethical Challenges in Implementing AI Technologies to Improve Accessibility
- 3.10. Global Case Studies in AI and Education
 - 3.10.1. Analysis of International Case Studies on the Use of AI in Education
 - 3.10.2. Comparison of Ethical and Legal Approaches in Different Educational Cultural Contexts
 - 3.10.3. Lessons Learned and Best Practices from Global Cases in AI and Education.

“*You are looking at a flexible university program that is compatible with your most demanding daily responsibilities. Enroll now!*”

05

Methodology

This training program offers 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"

At TECH Education School we use the Case Method

In a given situation, what should a professional do? Throughout the program students will be presented with multiple simulated cases based on real situations, where they have to investigate, establish hypotheses and, finally, resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method.

With TECH, educators can experience a learning methodology that is shaking the foundations of traditional universities around the world.



It is a technique that develops critical skills and prepares educators to make decisions, defend their arguments, and contrast opinions.

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Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method”

The effectiveness of the method is justified by four fundamental achievements:

1. Educators who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
2. The learning process is solidly focused on practical skills that allow educators to better integrate the knowledge into daily practice.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life teaching.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.



Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

Our University is the first in the world to combine case studies with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, which represent a real revolution with respect to simply studying and analyzing cases.

Educators will learn through real cases and by solving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.



At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology we have trained more than 85,000 educators with unprecedented success in all specialties. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

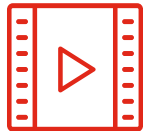
*Relearning will allow you to learn with less effort
and better performance, involving you more in
your specialization, developing a critical mindset,
defending arguments, and contrasting opinions:
a direct equation to success.*

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.

The overall score obtained by our learning system is 8.01, according to the highest international standards.



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



Study Material

All teaching material is produced by the specialist educators who teach the course, specifically for the course, so that the teaching content is really 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.



Educational Techniques and Procedures on Video

TECH introduces students to the latest techniques, with the latest educational advances, and to the forefront of Education. All this, first-hand, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



Interactive Summaries

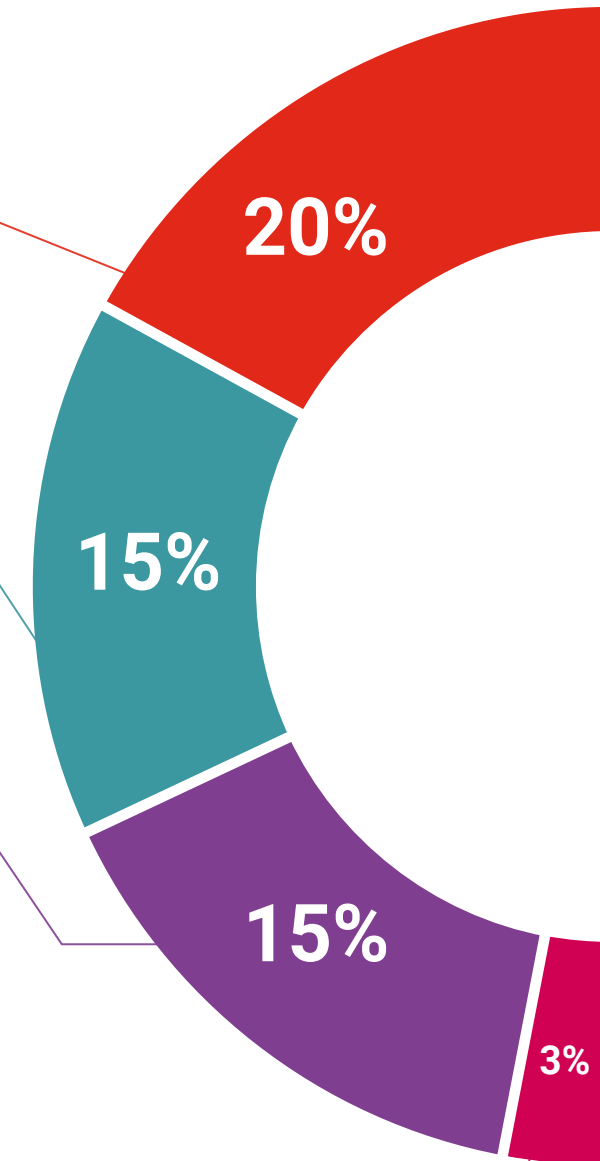
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

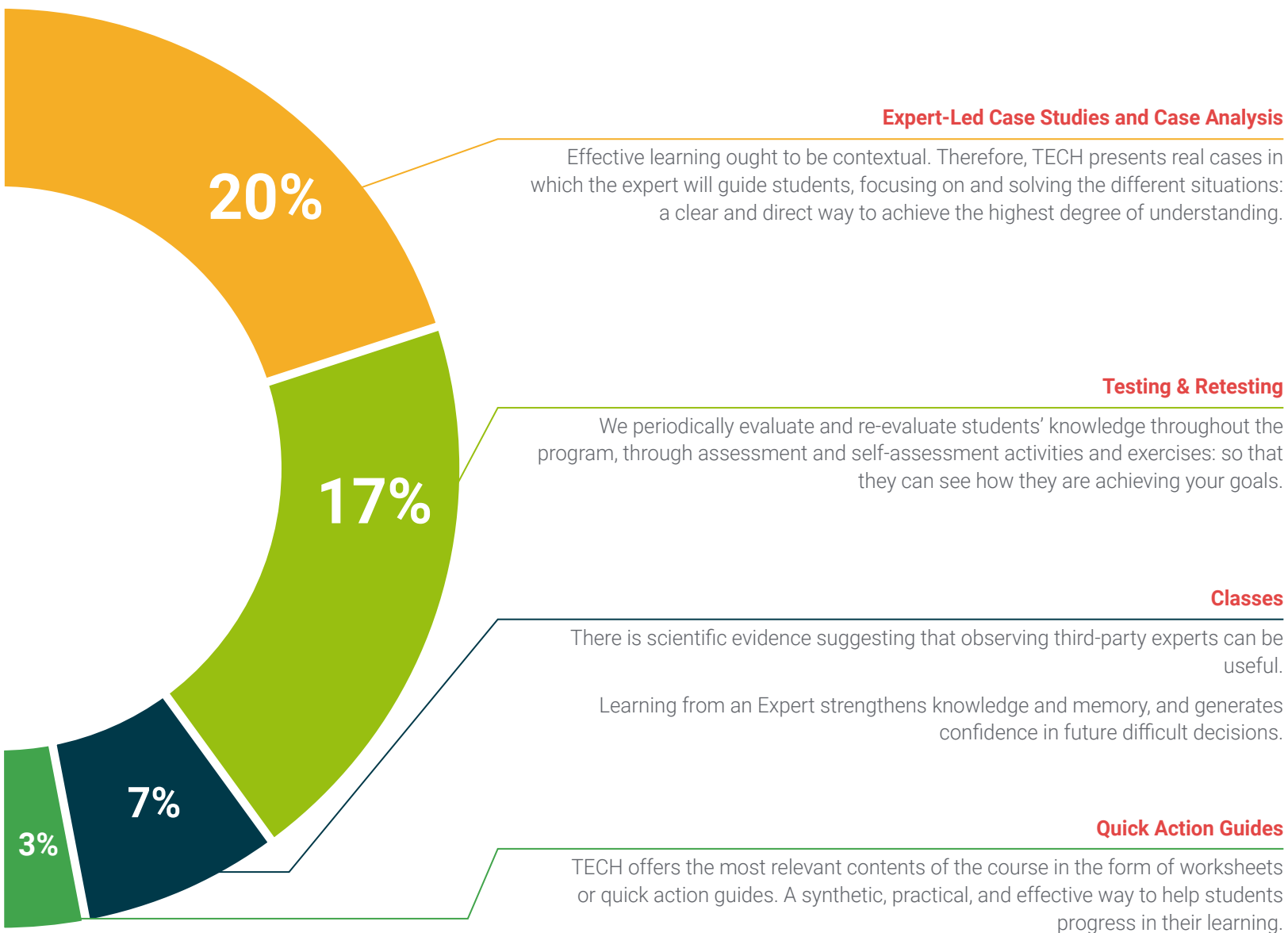
This exclusive multimedia content presentation training Exclusive system was awarded by Microsoft as a "European Success Story".



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.





06

Certificate

The Postgraduate Diploma in Artificial Intelligence Technologies in Education guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Technological University.



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

This **Postgraduate Diploma in Artificial Intelligence Technologies in Education** contains the most complete and up-to-date program on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Diploma** issued by **TECH Technological University** via tracked delivery*.

The diploma issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Diploma, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Postgraduate Diploma in Artificial Intelligence Technologies in Education**

Official N° of Hours: **450 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.



Postgraduate Diploma
Artificial Intelligence
Technologies in Education

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Postgraduate Diploma

Artificial Intelligence Technologies in Education