

# Postgraduate Diploma

## Simulation, Optimization and Preservation of Spaces Using Artificial Intelligence



## Postgraduate Diploma Simulation, Optimization and Preservation of Spaces Using Artificial Intelligence

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Accreditation: 18 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtitute.com/us/engineering/postgraduate-diploma/postgraduate-diploma-simulation-optimization-preservation-spaces-using-artificial-intelligence](http://www.techtitute.com/us/engineering/postgraduate-diploma/postgraduate-diploma-simulation-optimization-preservation-spaces-using-artificial-intelligence)

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# 01

# Introduction

The field of architecture faces the challenge of creating spaces that are not only functional or aesthetically pleasing, but also respect cultural heritage. In this context, Artificial Intelligence has become a powerful tool to address these issues. Among its benefits is its ability to perform data-driven analysis and simulate the behavior of buildings. and simulate the behavior of buildings under different circumstances (such as loads, environmental conditions or energy consumption). In the face of this, it is essential for professionals to handle state-of-the-art software both to guarantee the consistency of their architectural works and to ensure the integrity of historic environments. For this reason, TECH presents a revolutionary university program focused on state-of-the-art predictive modeling. modeling.





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*Through this 100% online Postgraduate Diploma, you will master the most innovative Artificial Intelligence techniques to maximize the efficient use of space and design more functional architectural projects.”*

According to a recent report by the International Association of Building Sciences, the implementation of Artificial Intelligence-based Simulation technologies has been shown to improve efficiency in architectural design by 40%. The company also highlights that its tools lead to a 28% reduction in Heritage Preservation costs by enabling more effective predictive modeling. Faced with this reality, architects need to develop advanced skills to carry out more comprehensive simulations in order to significantly optimize the quality of their infrastructures.

In this framework, TECH is launching a pioneering program in Simulation, Optimization and Preservation of Spaces using Artificial Intelligence. The academic itinerary will focus on issues such as spatial optimization using Autodesk Revit, the realization of energy performance metrics with SketchUp and bioclimatic design. In this way, students will develop advanced skills to maximize efficiency in the use of space, resulting in more functional and sustainable designs. In tune with this, the didactic materials will analyze the application of Machine Learning algorithms; which will allow graduates to design highly innovative constructions.

On the other hand, regarding the methodology of the university program, TECH offers a fully online learning environment that gives architects the flexibility to adapt to their schedules. In addition, it employs its revolutionary Relearning system, based on the repetition of key concepts to fix the knowledge and guarantee long-lasting learning. The only thing students will need is an electronic device with Internet access to access the Virtual Campus. On this platform they will find a variety of multimedia resources such as explanatory videos, case studies or specialized readings. Undoubtedly, an immersive experience that will help architects improve their job prospects considerably.

This **Postgraduate Diploma in Simulation, Optimization and Preservation of Spaces Using Artificial Intelligence** contains the most complete and up-to-date program on the market. The most important features include:

- ♦ Development of practical cases presented by experts in Artificial Intelligence
- ♦ The graphic, schematic and practical contents with which it is conceived provide complete 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 have the support of the largest online academic institution in the world, TECH, with the latest educational technology at your disposal"*

“Are you looking to apply the latest photogrammetry and laser scanning techniques in documentation to preserve historical authenticity? Get it with this university program”

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 experts in the field of educational coaching with extensive experience.

*With TECH's disruptive Relearning methodology you will be able to consolidate the most complex concepts quickly and effectively, without the need to invest long hours of study.*

*You will delve into the simulation of construction processes with CityEngine to create detailed three-dimensional urban models.*



# 02 Objectives

Thanks to this Postgraduate Diploma, professionals will be highly qualified to implement the most modern Artificial Intelligence tools to model and predict the behavior of architectural spaces in different scenarios. Along the same lines, students will acquire advanced skills to handle specialized software such as TensorFlow, MATLAB or COMSOL Multiphysics. In this way, graduates will be able to evaluate multiple variables and conditions in order to ensure that buildings are both efficient and comfortable for residents. In addition, architects will excel at implementing sustainable practices that minimize environmental impact and promote the circular economy.







“

*You will handle specialized software such as SketchUp to develop energy performance metrics and allocate architectural project resources efficiently.”*



## General Objectives

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- ◆ Understand the theoretical foundations of Artificial Intelligence
- ◆ Study the different types of data and understand the data lifecycle
- ◆ Evaluate the crucial role of data in the development and implementation of AI solutions
- ◆ Delve into algorithms and complexity to solve specific problems
- ◆ Explore the theoretical basis of neural networks for Deep Learning development
- ◆ Explore bio-inspired computing and its relevance in the development of intelligent systems
- ◆ Manage advanced Artificial Intelligence tools to optimize architectural processes such as parametric design.
- ◆ Apply Generative Modeling techniques to maximize efficiency in infrastructure planning and improve the energy performance of buildings



*Specialized readings will allow you to extensive the thorough information provided in this academic proposal."*





## Specific Objectives

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### **Module 1. Space Optimization and Energy Efficiency with Artificial Intelligence**

- ◆ Implement bioclimatic design strategies and Artificial Intelligence-assisted technologies to improve the energy efficiency of architectural initiatives
- ◆ Acquire skills in the use of simulation tools to improve energy efficiency in urban planning and architecture

### **Module 2. Simulation and Predictive Modeling with Artificial Intelligence**

- ◆ Employ programs such as TensorFlow, MATLAB or ANSYS to perform simulations that anticipate structural and environmental behavior in architectural projects
- ◆ Implement predictive modeling techniques to optimize urban planning and space management, using AI to improve accuracy and efficiency in strategic decision making

### **Module 3. Heritage Preservation and Restoration with Artificial Intelligence**

- ◆ Master the use of photogrammetry and laser scanning for both documentation and conservation of architectural heritage
- ◆ Develop skills to manage cultural heritage preservation projects, considering the ethical implications and responsible use of Artificial Intelligence

# 03

# Course Management

For the design and delivery of this Postgraduate Diploma, TECH has enlisted the services of true references in the field of Simulation, Optimization and Preservation of Spaces. As a result, they have developed a myriad of didactic contents that stand out both for their excellence and for taking into account the requirements of the current labor market. In this way, graduates will enter a highly intense experience that will allow them to experience a significant leap in quality in their professional careers as architects.





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*You will enjoy the personalized advice of the teaching team, made up of prestigious specialists in Artificial Intelligence and Space Preservation.”*

## Management



### Dr. Peralta Martín-Palomino, Arturo

- ♦ CEO and CTO at Prometheus Global Solutions
- ♦ CTO at Korporate Technologies
- ♦ CTO at AI Shepherds 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
- ♦ Master's Degree in Executive MBA from the Isabel I University
- ♦ 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



## Professors

### Ms. Martínez Cerrato, Yésica

- ◆ Responsible for Technical Training at Securitas Seguridad España
- ◆ Education, Business and Marketing Specialist
- ◆ Product Manager B C in Electronic Security at Securitas Seguridad España
- ◆ Business Intelligence Analyst at Ricopia Technologies
- ◆ Computer Technician and Responsible for 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

### Mr. Peralta Vide, Javier

- ◆ Technological Coordinator and Content Developer at Aranzadi Laley Formación
- ◆ Collaborator at CanalCreativo
- ◆ Collaborator at Dentsu
- ◆ Collaborator at Ai2
- ◆ Collaborator at BoaMistura
- ◆ Freelance Architect at Editorial Nivola, Biogen Technologies, Releaf, etc
- ◆ Specialization by Revit Architecture Metropa School
- ◆ Graduate in Architecture and Urbanism from the University of Alcalá

# 04

# Structure and Content

This program has been developed by recognized experts in Simulation, Optimization and Preservation of Spaces through Artificial Intelligence. Therefore, the syllabus will go in depth on issues ranging from the optimization of spaces with Autodesk Revit or the use of Trimble to obtain detailed energy analysis to the most effective bioclimatic design strategies to make the most of natural resources. In this way, students will obtain advanced skills to model the behavior of infrastructures in different conditions and scenarios. In addition, the syllabus will provide the keys to implement algorithms to make data-driven decisions and create efficient designs.







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*You will develop the most effective strategies for the restoration of Historical and Cultural Spaces through comprehensive simulations”*

## Module 1. Space Optimization and Energy Efficiency with Artificial Intelligence

- 1.1. Optimizing Spaces with Autodesk Revit And Artificial Intelligence
  - 1.1.1. Using Autodesk Revit And Artificial Intelligence for Spatial Optimization and Energy Efficiency
  - 1.1.2. Advanced Techniques for Improving Energy Efficiency in Architectural Designs
  - 1.1.3. Case Studies of Successful Projects Combining Autodesk Revit with AI
- 1.2. Analysis of Energy Efficiency Metrics and Data with SketchUp and Trimble
  - 1.2.1. Applying SketchUp and Trimble Tools for Detailed Energy Analysis
  - 1.2.2. Developing Energy Efficiency Metrics Using Artificial Intelligence
  - 1.2.3. Strategies for Setting Energy Efficiency Goals for Architectural Projects
- 1.3. Bioclimatic Design and Artificial Intelligence-Optimized Solar Orientation
  - 1.3.1. Artificial Intelligence-Assisted Bioclimatic Design Strategies for Maximizing Energy Efficiency
  - 1.3.2. Examples of Buildings Using Artificial Intelligence-Guided Design to Optimize Thermal Comfort
  - 1.3.3. Practical Applications of Artificial Intelligence in Solar Orientation and Passive Design
- 1.4. AI-Assisted Sustainable Materials and Technologies with Cityzenit
  - 1.4.1. Innovation in Sustainable Materials Supported by Artificial Intelligence Analysis
  - 1.4.2. Using AI to Develop and Apply Recycled and Low-Environmental-Impact Materials
  - 1.4.3. Study of Projects Using Renewable Energy Systems Integrated with Artificial Intelligence
- 1.5. Urban Planning and Energy Efficiency with WattPredictor and AI
  - 1.5.1. AI Strategies for Energy Efficiency in Urban Design
  - 1.5.2. Implementing WattPredictor to Optimize Energy Use in Public Spaces
  - 1.5.3. Successful Cases of Cities Using AI to Improve Urban Sustainability
- 1.6. Intelligent Energy Management with Google DeepMind's Energy
  - 1.6.1. Applications of DeepMind Technologies for Energy Management
  - 1.6.2. Implementing Artificial Intelligence for Energy Consumption Optimization
  - 1.6.3. Assessment of Cases Where Artificial Intelligence Has Transformed Energy Management in Communities and Buildings



- 1.7. Artificial Intelligence-Assisted Energy Efficiency Certifications and Regulations
  - 1.7.1. Using Artificial Intelligence to Ensure Compliance with Energy Efficiency Standards (LEED, BREEAM)
  - 1.7.2. AI Tools for Energy Audit and Certification of Projects
  - 1.7.3. Impact of Regulations on Artificial Intelligence-Supported Sustainable Architecture
- 1.8. Life Cycle Assessment and Environmental Footprint with Enernoc
  - 1.8.1. Artificial Intelligence Integration for Life Cycle Analysis of Building Materials
  - 1.8.2. Using Enernoc to Assess Carbon Footprint and Sustainability
  - 1.8.3. Model Projects Using AI for Advanced Environmental Assessments
- 1.9. Energy Efficiency Education and Awareness with Verdigris
  - 1.9.1. Role of Artificial Intelligence in Energy Efficiency Education and Awareness
  - 1.9.2. Using Verdigris to Teach Sustainable Practices to Architects and Designers
  - 1.9.3. Initiatives and Educational Programs Using AI to Promote a Cultural Change Toward Sustainability
- 1.10. Future of Space Optimization and Energy Efficiency with ENBALA
  - 1.10.1. Exploration of Future Challenges and the Evolution of Energy Efficiency Technologies
  - 1.10.2. Emerging Trends in Artificial Intelligence for Spatial and Energy Optimization
  - 1.10.3. Perspectives on How Artificial Intelligence Will Continue to Transform Architecture and Urban Design
- 2.3. Modeling Space Use and Human Dynamics with AnyLogic
  - 2.3.1. Using AnyLogic to Model the Dynamics of Space Use and Human Mobility
  - 2.3.2. Applying AI to Predict and Improve the Efficiency of Space Use in Urban and Architectural Environments
  - 2.3.3. Case Studies Showing How Simulation Influences Urban and Architectural Planning
- 2.4. Predictive Modeling with TensorFlow in Urban Planning
  - 2.4.1. Implementing TensorFlow for Modeling Urban Dynamics and Structural Behavior
  - 2.4.2. Using AI to Predict Future Outcomes in City Design
  - 2.4.3. Examples of How Predictive Modeling Influences Urban Planning and Design
- 2.5. Predictive Modeling and Generative Design with GenerativeComponents
  - 2.5.1. Using GenerativeComponents to Merge Predictive Modeling and Generative Design
  - 2.5.2. Applying Machine Learning Algorithms to Create Innovative and Efficient Designs
  - 2.5.3. Examples of Architectural Projects that Have Optimized Their Design Using These Advanced Technologies
- 2.6. Simulation of Environmental Impact and Sustainability with COMSOL
  - 2.6.1. Applying COMSOL for Environmental Simulations in Large-Scale Projects
  - 2.6.2. Using AI to Analyze and Improve the Environmental Impact of Buildings
  - 2.6.3. Projects that Show How Simulation Contributes to Sustainability
- 2.7. Simulation of Environmental Performance with COMSOL
  - 2.7.1. Applying COMSOL Multiphysics for Environmental and Thermal Performance Simulations
  - 2.7.2. Using Artificial Intelligence to Optimize Design Based on Daylighting and Acoustics Simulations
  - 2.7.3. Examples of Successful Implementations That Have Improved Sustainability and Comfort
- 2.8. Innovation in Simulation and Predictive Modeling
  - 2.8.1. Exploration of Emerging Technologies and Their Impact on Simulation and Modeling
  - 2.8.2. Discussion of How Artificial Intelligence Is Changing Simulation Capabilities in Architecture
  - 2.8.3. Evaluation of Future Tools and Their Potential Applications in Architectural Design

## Module 2. Simulation and Predictive Modeling with Artificial Intelligence

- 2.1. Advanced Simulation Techniques with MATLAB in Architecture
  - 2.1.1. Using MATLAB for Advanced Architectural Simulations
  - 2.1.2. Integrating Predictive Modeling and Big Data Analytics
  - 2.1.3. Case Studies Where MATLAB Has Been Fundamental in Architectural Simulation
- 2.2. Advanced Structural Analysis with ANSYS
  - 2.2.1. Implementing ANSYS for Advanced Structural Simulations in Architectural Projects
  - 2.2.2. Integrating Predictive Models to Evaluate Structural Safety and Durability
  - 2.2.3. Projects Highlighting the Use of Structural Simulations in High Performance Architecture

- 2.9. Simulation of Construction Processes with CityEngine
  - 2.9.1. Applying CityEngine to Simulate Construction Sequences and Optimize On-Site Workflows
  - 2.9.2. AI Integration for Modeling Construction Logistics and Coordinating Activities in Real-Time
  - 2.9.3. Case Studies Showing Improved Construction Efficiency and Safety through Advanced Simulations
- 2.10. Challenges and Future of Simulation and Predictive Modeling
  - 2.10.1. Assessment of Current Challenges in Simulation and Predictive Modeling in Architecture
  - 2.10.2. Emerging Trends and the Future of These Technologies in Architectural Practice
  - 2.10.3. Discussion on the Impact of Continued Innovation in Simulation and Predictive Modeling in Architecture and Construction

### Module 3. Heritage Preservation and Restoration with Artificial Intelligence

- 3.1. Artificial Intelligence Technologies in Heritage Restoration with Photogrammetry
  - 3.1.1. Using Photogrammetry And Artificial Intelligence for Accurate Heritage Documentation and Restoration
  - 3.1.2. Practical Applications in the Restoration of Historic Buildings
  - 3.1.3. Outstanding Projects Combining Advanced Techniques and Respect for Authenticity
- 3.2. Predictive Analysis for Conservation with Laser Scanning
  - 3.2.1. Implementing Laser Scanning and Predictive Analytics in Heritage Conservation
  - 3.2.2. Using Artificial Intelligence to Detect and Prevent Deterioration in Historic Structures
  - 3.2.3. Examples of How These Technologies Have Improved Accuracy and Efficiency in Conservation
- 3.3. Cultural Heritage Management with Virtual Reconstruction
  - 3.3.1. Applying Artificial Intelligence-Assisted Virtual Reconstruction Techniques
  - 3.3.2. Strategies for Digital Heritage Management and Preservation
  - 3.3.3. Success Stories in the Use of Virtual Re-Enactment for Education and Preservation
- 3.4. Preventive Conservation and Artificial Intelligence-Assisted Maintenance
  - 3.4.1. Using Artificial Intelligence Technologies to Develop Strategies for Preventive Conservation and Maintenance of Historic Buildings
  - 3.4.2. Implementing Artificial Intelligence-Based Monitoring Systems for Early Detection of Structural Problems
  - 3.4.3. Examples of How Artificial Intelligence Contributes to the Long-Term Conservation of Cultural Heritage
- 3.5. Digital Documentation and BIM in Heritage Preservation
  - 3.5.1. Applying Advanced Digital Documentation Techniques, including BIM and Augmented Reality, Assisted by Artificial Intelligence
  - 3.5.2. Using BIM Models for Efficient Heritage Management and Restoration
  - 3.5.3. Case Studies on the Integration of Digital Documentation in Restoration Projects
- 3.6. Artificial Intelligence-Assisted Preservation Policies and Management
  - 3.6.1. Using Artificial Intelligence-Based Tools for Management and Policy Making in Heritage Preservation
  - 3.6.2. Strategies for Integrating Artificial Intelligence into Conservation-Related Decision-Making
  - 3.6.3. Discussion of How AI Can Improve Collaboration Among Institutions for Heritage Preservation
- 3.7. Ethics and Responsibility in Artificial Intelligence Restoration and Preservation
  - 3.7.1. Ethical Considerations in the Application of Artificial Intelligence in Heritage Restoration
  - 3.7.2. Debate on the Balance between Technological Innovation and Respect for Historical Authenticity
  - 3.7.3. Examples of How Artificial Intelligence Can Be Used Responsibly in Heritage Restoration
- 3.8. Innovation and the Future of Heritage Preservation with Artificial Intelligence
  - 3.8.1. Perspectives on Emerging Artificial Intelligence Technologies and Their Application in Heritage Preservation
  - 3.8.2. Assessing the Potential of Artificial Intelligence to Transform Restoration and Conservation
  - 3.8.3. Discussion on the Future of Heritage Preservation in an Era of Rapid Technological Innovation



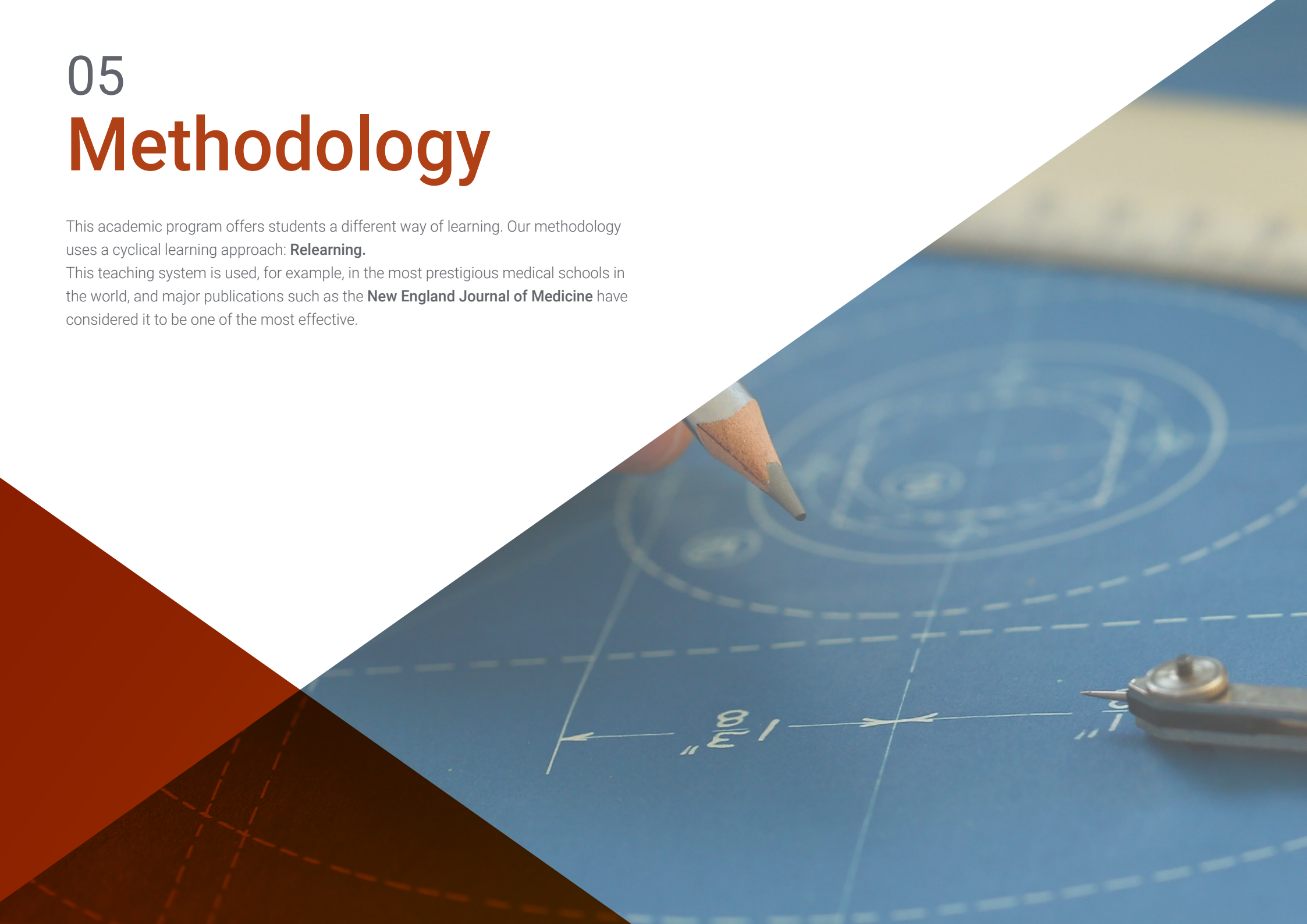
- 3.9. Cultural Heritage Education and Awareness with GIS
  - 3.9.1. Importance of Public Education and Awareness in Cultural Heritage Preservation with GIS
  - 3.9.2. Using Geographical Information Systems (GIS) to Promote the Valuation and Knowledge of Cultural Heritage
  - 3.9.3. Successful Education and Outreach Initiatives Using Technology to Teach about Cultural Heritage
- 3.10. Challenges and the Future of Heritage Preservation and Restoration
  - 3.10.1. Identification of Current Challenges in Cultural Heritage Preservation
  - 3.10.2. Role of Technological Innovation and Artificial Intelligence in Future Conservation and Restoration Practices
  - 3.10.3. Perspectives on How Technology Will Transform Heritage Preservation in the Coming Decades

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.





*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.*





*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 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 that you are presented with 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.

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 Diploma in Simulation, Optimization and Preservation of Spaces Using Artificial Intelligence guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma 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 Diploma in Simulation, Optimization and Preservation of Spaces Using 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 Diploma in Simulation, Optimization and Preservation of Spaces Using Artificial Intelligence**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**



\*Apostille Convention. In the event that the student wishes to have their paper diploma 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  
online training  
development language  
classroom



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