Postgraduate Certificate

Virtual, Augmented and Mixed Reality

tech technological university

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Postgraduate Certificate

Virtual, Augmented and Mixed Reality

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

Website: www.techtitute.com/pk/information-technology/postgraduate-certificate/virtual-augmented-mixed-reality

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01

Introduction

Over the last few years, Virtual, Augmented and Mixed Reality have gained strength in the industrial sectors since they allow the preview of architectural projects or various branches of Engineering in a reliable way. As a result, the design and implementation of these technologies is made faster and more efficient, so that computer scientists specialized in the process of creating these technologies are becoming more and more accurate nowadays. Faced with this situation, TECH has created this program, which will enable the student to increase their knowledge in the creation of virtual environments and user experiences focused on the industrial field, 100% online and from home.

Through this program, you will learn the most effective strategies to create a sophisticated virtual environment that is fully useful in the industrial environment"

Virtual, Augmented and Mixed Reality have been gradually incorporated in a large number of sectors and industrial branches to facilitate the tasks performed by their workers. On this level, its incursion into the work areas allows the realization of complex technical explanations of processes in a simple way or the completely realistic observation of the constructive elements to optimize their welding. This results in a significant reduction of working times and possible human errors, with a positive impact on business productivity. Therefore, given the benefits of adopting these technologies and the demand for them, computer scientists specialized in the development of their software enjoy excellent job prospects.

For this reason, TECH has designed this program, with which the student will significantly increase their knowledge of Virtual, Augmented and Mixed Reality to promote their professional growth in this area. Throughout this educational pathway, you will observe the different applications that each of these technologies currently have in different sectors of activity and industrial fields. Furthermore, it will identify the best platforms and strategies to optimize the creation of virtual environments or establish an analysis of the medium- to long-term challenges and opportunities offered by the world of immersive technologies.

Since this program is developed through a 100% online methodology, the computer scientists will be able to acquire a completely effective education by managing their own time. Likewise, you will benefit from excellent teaching materials available in formats such as lectures, video or interactive summary. TECH's main objective is to promote learning adapted to the personal study preferences of each student.

This **Postgraduate Certificate in Virtual, Augmented and Mixed Reality** 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 the application of technological solutions
- 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

Enjoy enjoyable and individualized learning through teaching aids such as explanatory videos or interactive summaries"

This Postgraduate Certificate has a 100% online methodology that will allow you to obtain a completely effective learning from home"

This program provides an exhaustive analysis of all the applications offered today by each of these technologies in different sectors of activity and industrial fields.

Throughout this educational period, you will be able to detect the future opportunities offered by the immersive sector in order to face them with solvency.

The program includes in its teaching staff professionals from the sector who bring to this training the experience of their work, as well as recognized specialists from leading companies 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 educational year. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

02

Objectives

The design of this Postgraduate Certificate has been carried out with the premise of providing the computer scientist with the most relevant and cutting-edge knowledge regarding Virtual, Augmented and Mixed Reality applied in the business environment. During this academic period, you will analyze in detail the similarities and differences between these technologies or delve into the creation of virtual environments. In addition, such learning will be preserved by the following general and specific objectives.

Improve your knowledge in Virtual, Augmented and Mixed Reality and increase your opportunities to be part of the best companies in this sector"

General Objectives

- 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

- Acquire an expert knowledge of the characteristics and fundamentals of Virtual Reality, augmented reality and mixed reality
- Delve into the existing differences between each of these fields
- Use applications of each of these technologies and develop solutions with each of them individually and in an integrated manner
- Efficiently combining all these technologies to achieve immersive experiences

In only 150 hours, TECH will provide you with the necessary tools to grow professionally in the field of Virtual, Augmented and Mixed Reality"

03

Course Management

In order to offer programs of the highest quality to its students, this TECH program is directed and taught by leading specialists in the field of technological solutions. These experts, who have developed their functions in several high-level companies, are responsible for the development of the teaching resources available in this Postgraduate Certificate. Therefore, the contents that the student will receive will preserve a complete professional applicabil ity.

The teaching of this Postgraduate Certificate is the responsibility of active experts in the field of technological solutions, who will provide you with the knowledge that is most in tune with the advances in this sector"

Management

Mr. Segovia Escobar, Pablo

- Chief Executive of the Defense Sector in the Company Tecnobit of the Oesía Group
- Project Manager at Indra
- Master's Degree in Business Administration and Management from the National University of Distance Education
- Postgraduate in Strategic Management Function
- Member of: Spanish Association of People with High Intellectual Quotient

Mr. Diezma López, Pedro

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

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

The syllabus of this program is composed of 1 module with which the student will delve deeply into the most relevant aspects of Virtual, Augmented and Mixed Reality, oriented towards business and industry. The teaching materials you will enjoy during the duration of this program are available in formats such as lectures, video or interactive summary. Thanks to this and through a completely online methodology, you will obtain a learning adapted to your educational and personal requirements.

This program's syllabus, designed by the best experts in technology solutions, will provide you with a range of knowledge that will boost your professional growth"

Module 1. Virtual, Augmented and Mixed Reality

1.1. Market and Tendencies
- 1.1.1. Current Market Situation
- 1.1.2. Reports and Growth by Different Industries

1.2. Differences Between Virtual, Augmented and Mixed Reality
- 1.2.1. Differences Between Immersive Realities
- 1.2.2. Immersive Reality Typology

1.3. Virtual Reality Cases and Uses
- 1.3.1. Origin and Fundamentals of Virtual Reality
- 1.3.2. Cases Applied to Different Sectors and Industries

1.4. Augmented Reality Cases and Uses
- 1.4.1. Origin and Fundamentals of Augmented Reality
- 1.4.2. Cases Applied to Different Sectors and Industries

1.5. Mixed and Holographic Reality
- 1.5.1. Origin, History and Fundamentals of Mixed and Holographic Reality
- 1.5.2. Cases Applied to Different Sectors and Industries

1.6. 360º Photography and Video
- 1.6.1. Camera Typology
- 1.6.2. Uses of 360 Images
- 1.6.3. Creating a Virtual Space in 360 Degrees

1.7. Virtual World Creation
- 1.7.1. Platforms for the Creation of Virtual Environments
- 1.7.2. Strategies for the Creation of Virtual Environments

1.8. User Experience (UX)
- 1.8.1. Components in the User Experience
- 1.8.2. Tools for the Creation of User Experiences

1.9. Devices and Glasses for Immersive Technologies
- 1.9.1. Device Typology on the Market
- 1.9.2. Glasses and Wearables: Operation, Models and Uses
- 1.9.3. Smart Glasses Applications and Evolution

1.10. Future Immersive Technologies
- 1.10.1. Tendencies and Evolution
- 1.10.2. Challenges and Opportunities

Enroll now in this Postgraduate Certificate to enjoy teaching materials available in a wide variety of multimedia and textual formats that will optimize your learning process"

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.

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

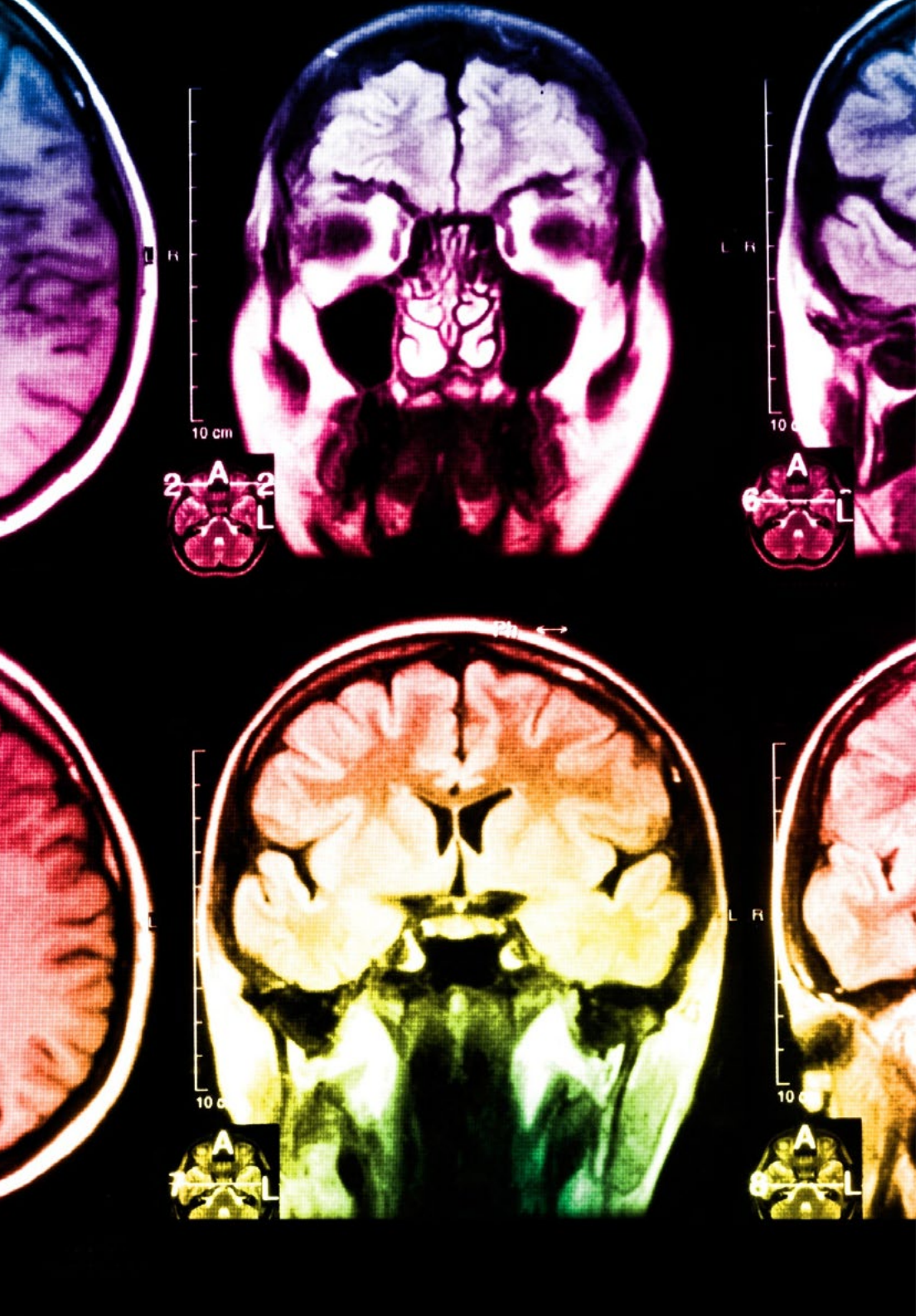
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines different teaching elements in each lesson.

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.

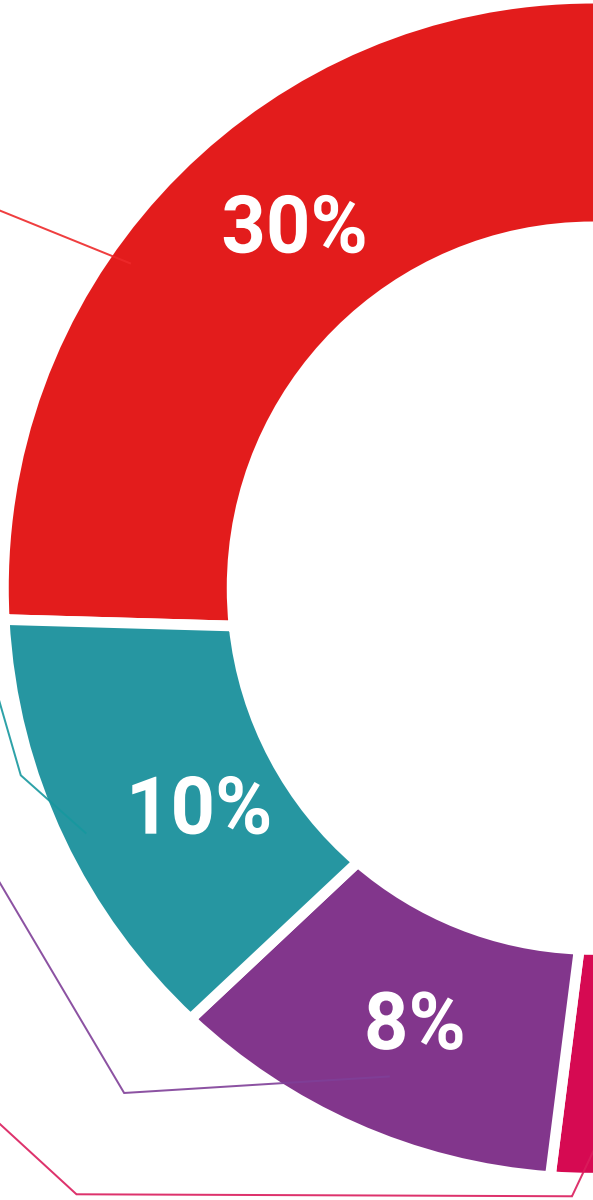
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

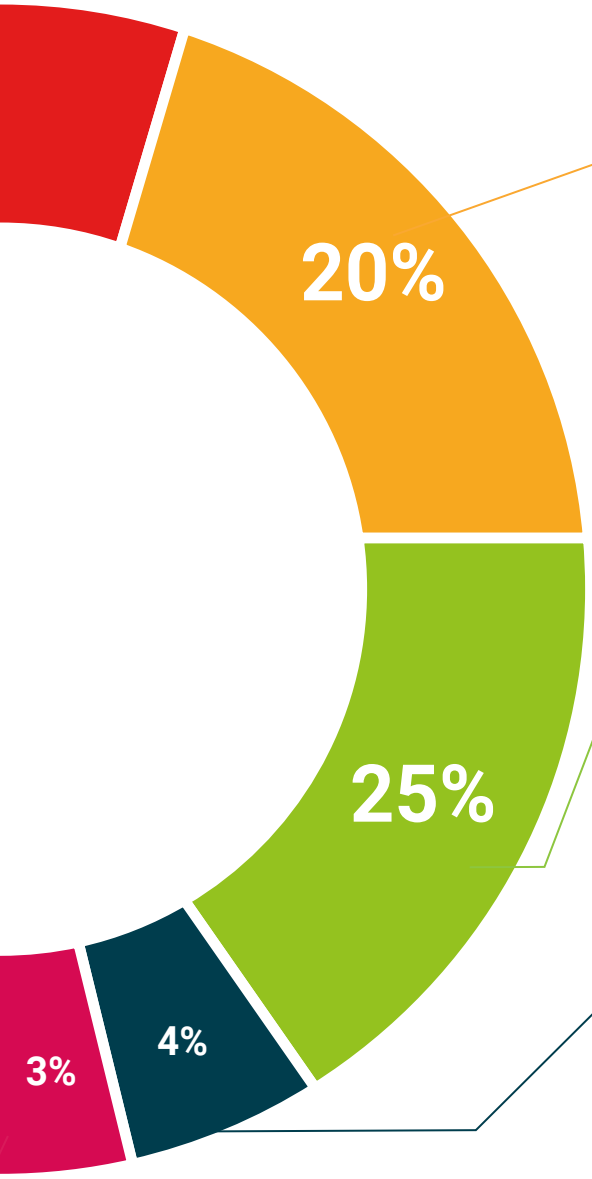
Practising Skills and Abilities

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 Virtual, Augmented and Mixed Reality guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.

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

This **Postgraduate Certificate in Virtual, Augmented and Mixed Reality** 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 Certificate** issued by **TECH Technological University** via tracked delivery*.

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

Title: **Postgraduate Certificate in Virtual, Augmented and Mixed Reality**

Official Nº of Hours: **150 h.**

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Awards the following

CERTIFICATE

to

Mr./Ms. _____, with identification number _____.

For having passed and accredited the following program

POSTGRADUATE CERTIFICATE

in

Virtual, Augmented and Mixed Reality

This is a qualification awarded by this University, equivalent to 150 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro
Dean

Unique TECH Code: AFWORD23S techtitute.com/certificates

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

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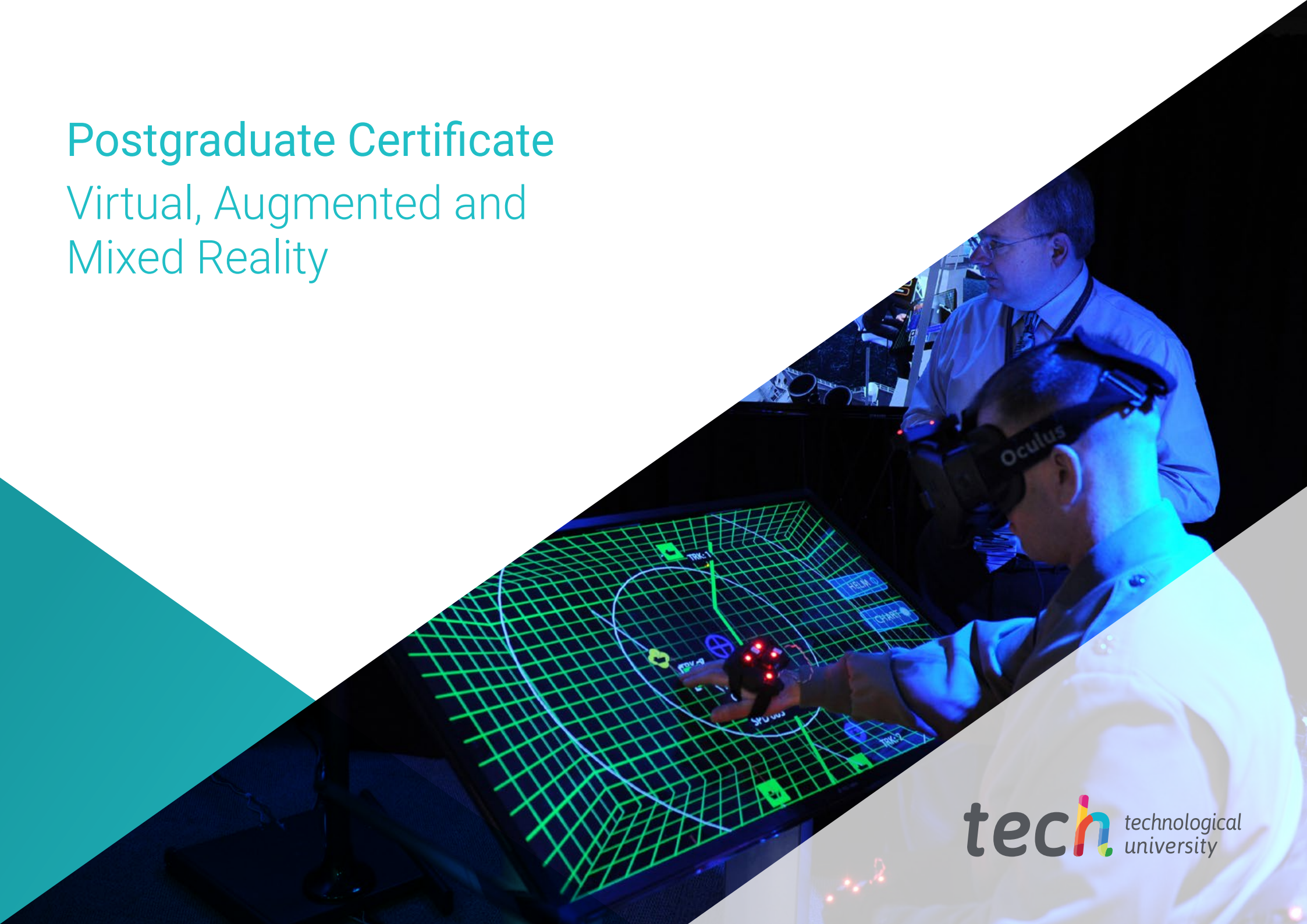

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