

# Postgraduate Certificate Multiplayer Networks and Systems





## Postgraduate Certificate Multiplayer Networks and Systems

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

Website: [www.techtute.com/us/information-technology/postgraduate-certificate/multiplayer-networks-systems](http://www.techtute.com/us/information-technology/postgraduate-certificate/multiplayer-networks-systems)

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# 01

# Introduction

Today, the online arena is absolutely fundamental in the video game world. Millions of people play various games online every day. As such, this type of product has been commonplace and very popular for some years now, making it fundamental in the industry. Large companies in the field are therefore looking for experts in networks and multiplayer systems that can respond to the current challenges in this area, and this course offers students all the necessary tools to become true specialists who will be able to immediately appeal to large video game companies thanks to what they have learned here at TECH.



“

*The popularity of Multiplayer and networked games has been growing steadily over the last few years. If you are looking for an area of specialization to succeed professionally, this Postgraduate Certificate is what you need”*

Fortnite, Apex Legends, Overwatch, League of Legends, so on and so forth.

These titles bring together millions of players around the world and, although they are very different from each other, they share a basic feature: they are online Multiplayer Video Games. The most popular games in the world today are thus enjoyed online and with multiple players, since shared experiences are highly valued today.

Just a decade ago the situation was very different. Internet connections were slower and poorer, consoles and computers were less powerful, and the idea of collective participation in video games today was not so widespread then. In recent years, though, the industry has undergone a transformation, making companies adapt to the new circumstances and need new specialized personnel in these areas.

This Postgraduate Certificate in Networks and Multiplayer Systems is the answer for all those who wish to become experts in these matters, allowing them to access important positions in the field thanks to the knowledge and skills they will acquire in the course.

This **Postgraduate Certificate in Multiplayer Networks and Systems** contains the most complete and up-to-date scientific program on the market. Its most notable features are:

- ◆ Practical cases presented by experts in multiplayer systems and networks
- ◆ The graphic, schematic, and eminently practical contents with which they are created, provide scientific and 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
- ◆ Access to content from any fixed or portable device with an Internet connection



*The best companies in the sector will want to count on you once you complete this excellent program”*

“ *Multiplayer Video Games are popular all over the world. Specializing can give you access to numerous career opportunities*”

*This Postgraduate Certificate is what you need to stand out in the Video Game Industry.*

*Design successful Multiplayer Video Games like Fortnite or League of Legends thanks to this course.*

The program's teaching staff includes professionals from sector who contribute their work experience to this training 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 training programmed to train in real situations.

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



# 02

## Objectives

The main objective of this Postgraduate Certificate in Multiplayer Networks and Systems is to give students the opportunity to attract the attention of the major companies in the Video Game Sector. It offers high-level specialized knowledge that is completely focused on professional practice, so students can apply it directly at work once they have completed the course, thus achieving immediate success in their careers.







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*This Postgraduate Certificate in Multiplayer Networks and Systems will bring you closer to your goal of becoming a specialist valued by the world's major Video Game Companies”*



## General Objectives

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- ◆ Apply knowledge of Software Engineering and Specialized Programming to Video Games
- ◆ Understand the role of Programming in Video Game Development
- ◆ Know the different existing Consoles and Platforms
- ◆ Develop Web and Multiplayer Video Games





## Specific Objectives

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- ◆ Describe the Transmission Control Protocol/Internet Protocol (TCP/IP) Architecture and the Basic Operation of Wireless Networks
- ◆ Analyze Video Games Security
- ◆ Develop Multiplayer Online Games

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*Specialize in Multiplayer Networks and Systems and improve your position as a Video Game professional”*

# 03

## Structure and Content

The syllabus of this Postgraduate Certificate in Multiplayer Networks and Systems has been created to offer students the most useful and specialized content. They will be able to use everything they have learned in their work environments, which will mean a significant advance in their careers. Students will be able to learn about issues such as Business Models in Multiplayer Environments, OSI Models, different Types of Networks and the use of Servers for this type of Games.

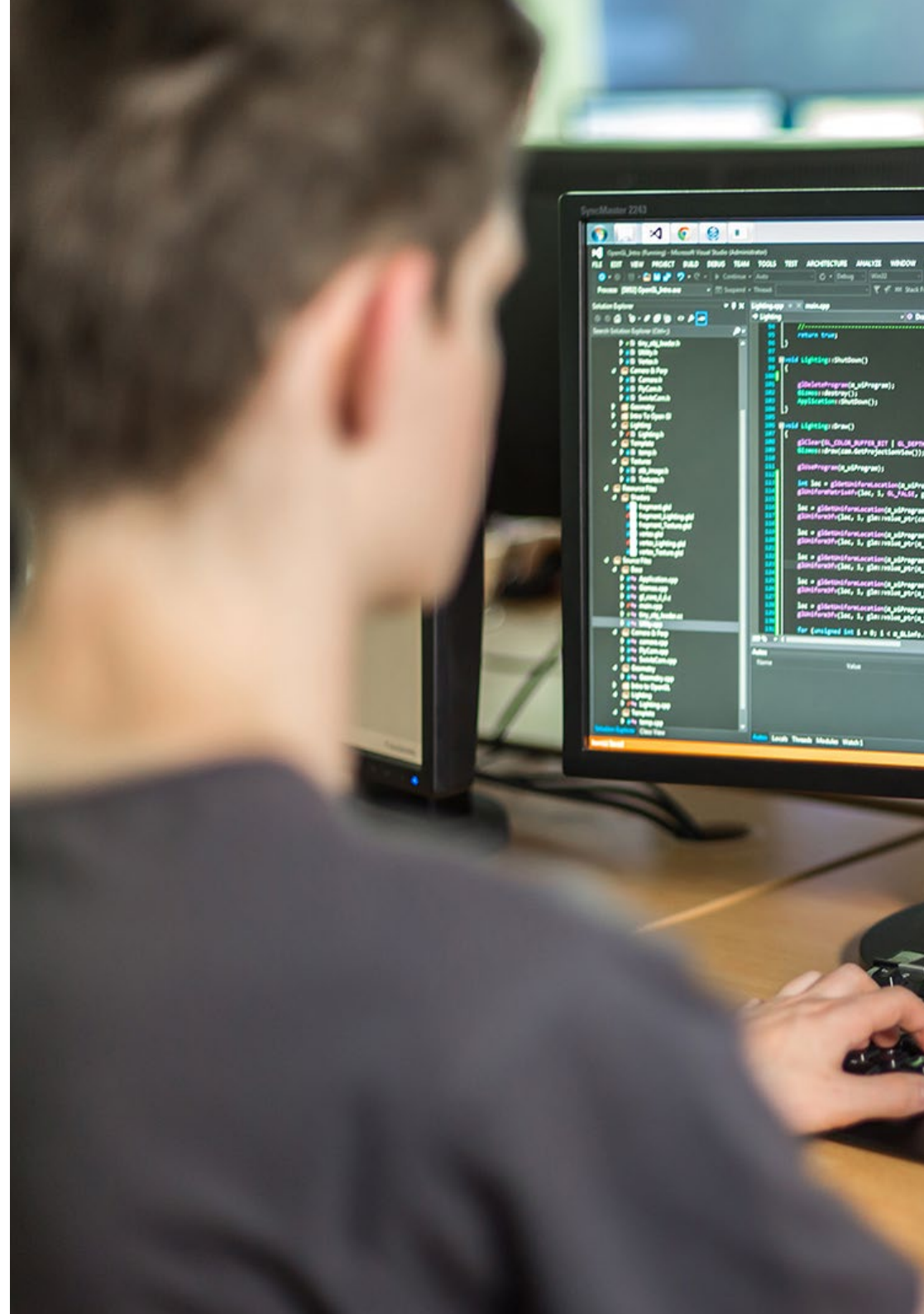


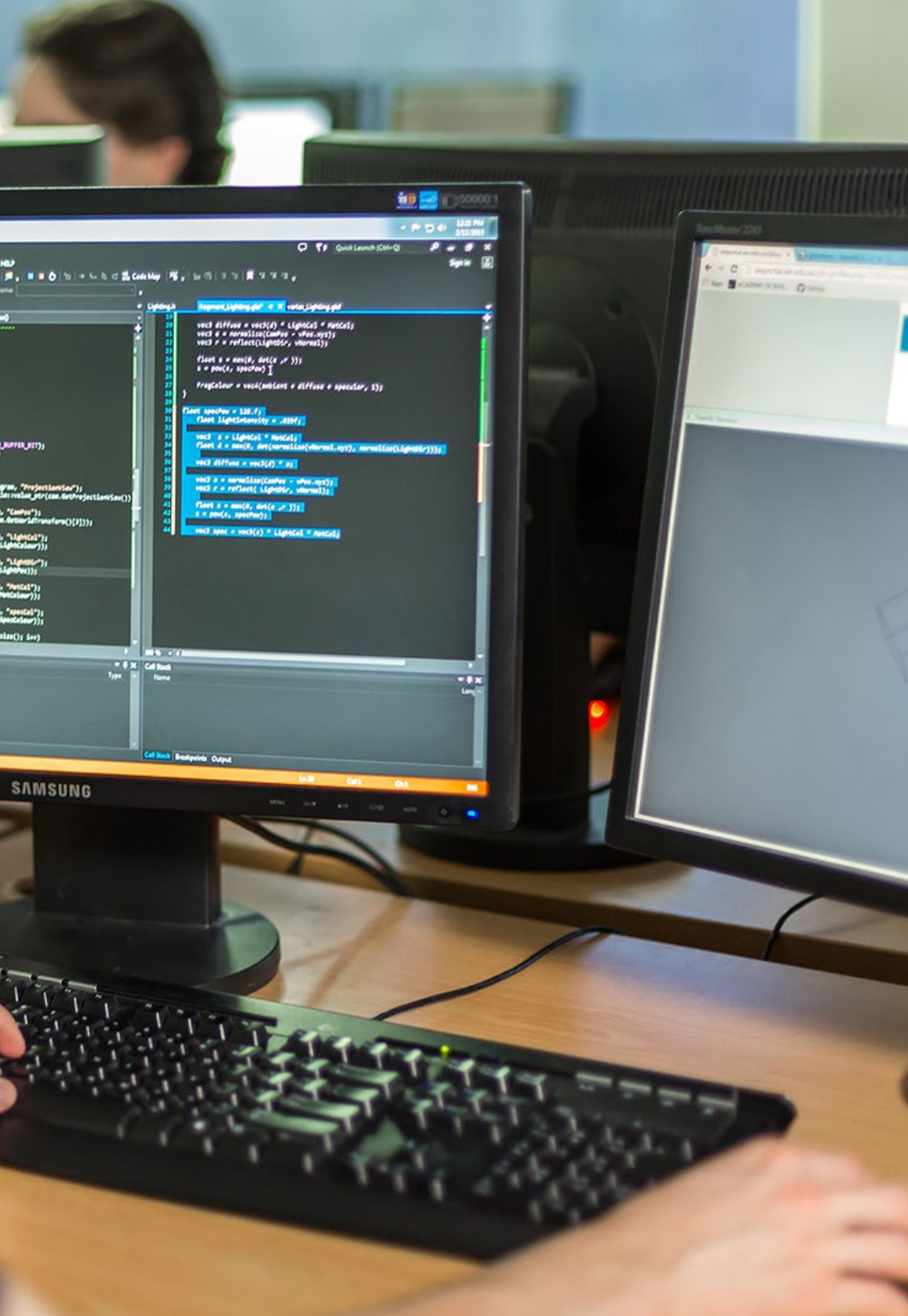
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*The content you've been  
looking for to advance your  
career is here at TECH”*

## Module 1. Multiplayer Networks and Systems

- 1.1. History and Evolution of Multiplayer Video Games
  - 1.1.1. The 1970s: First Multiplayer Games
  - 1.1.2. The 90s: Duke Nukem, Doom and Quake
  - 1.1.3. Rise of Multiplayer Video Games
  - 1.1.4. Local or Online Multiplayer
  - 1.1.5. Party Games
- 1.2. Multiplayer Business Models
  - 1.2.1. Origin and Function of Emerging Business Models
  - 1.2.2. Online Sales Services
  - 1.2.3. Free to Play
  - 1.2.4. Micropayments
  - 1.2.5. Advertising
  - 1.2.6. Monthly Payment Subscription
  - 1.2.7. Pay to Play
  - 1.2.8. Try Before You Buy
- 1.3. Local and Network Games
  - 1.3.1. Local Games: Beginnings
  - 1.3.2. Party Games: Nintendo and Family Union
  - 1.3.3. Network Games: Beginnings
  - 1.3.4. Network Games Evolution
- 1.4. OSI Model: Layers I
  - 1.4.1. OSI Model: Introduction
  - 1.4.2. Physical Layer
  - 1.4.3. Data Link Layer
  - 1.4.4. Network Layer
- 1.5. OSI Model: Layers II
  - 1.5.1. Transport Layer
  - 1.5.2. Session Layer
  - 1.5.3. Presentation Layer
  - 1.5.4. Application Layer





- 1.6. Computer Networks and the Internet
  - 1.6.1. What Are Computer Networks?
  - 1.6.2. Software
  - 1.6.3. Hardware
  - 1.6.4. Servers
  - 1.6.5. Network Storage
  - 1.6.6. Network Protocols
- 1.7. Mobile and Wireless Networks
  - 1.7.1. Mobile Networks
  - 1.7.2. Wireless Networks
  - 1.7.3. How Mobile Networks Work
  - 1.7.4. Digital Technology
- 1.8. Security
  - 1.8.1. Personal Security
  - 1.8.2. Video Game Hacks and Cheats
  - 1.8.3. Anti-Cheating Security
  - 1.8.4. Anti-Cheating Security Systems Analysis
- 1.9. Multiplayer Systems: Servers
  - 1.9.1. Server Hosting
  - 1.9.2. Massively Multiplayer Online (MMO) Video Games
  - 1.9.3. Dedicated Video Game Servers
  - 1.9.4. Local Area Network (LAN) Parties
- 1.10. Multiplayer Video Game Design and Programming
  - 1.10.1. Multiplayer Video Game Design Basics in Unreal
  - 1.10.2. Multiplayer Video Game Design Basics in Unity
  - 1.10.3. How to Make a Multiplayer Game Fun
  - 1.10.4. Beyond a Controller: Multiplayer Controller Innovation

04

# 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 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.



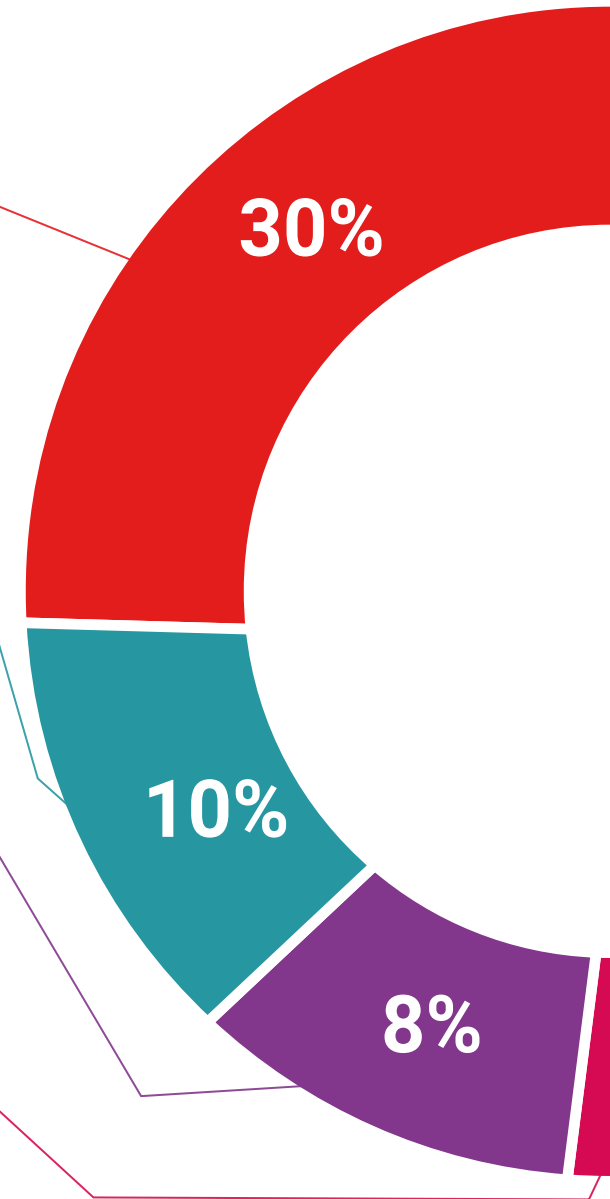
### Practising Skills and Abilities

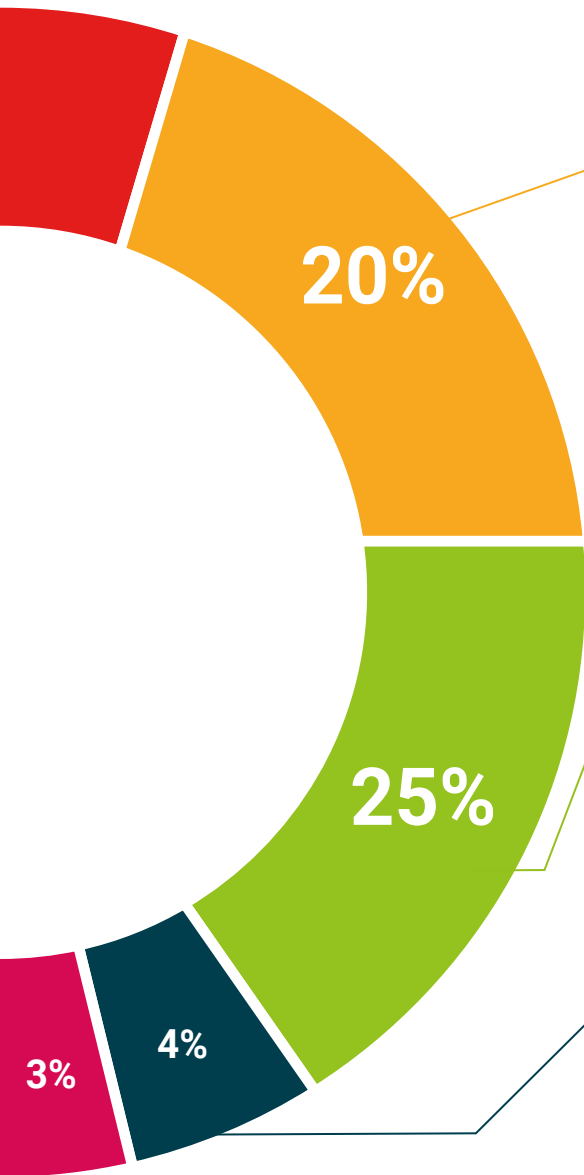
They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



### 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.



# 05 Certificate

The Postgraduate Certificate in Multiplayer Networks and Systems guarantees, in addition to the most rigorous and up-to-date training, access to a qualification issued by TECH Technological University.





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*Successfully complete this training program  
and receive your diploma without travel or  
laborious paperwork”*

This **Postgraduate Certificate in Multiplayer Networks and Systems** contains the most complete and up-to-date scientific program 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 diploma 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 Multiplayer Networks and Systems**

Official Number of Hours: **150 h.**



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

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



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