



## Postgraduate Certificate Advanced Operating Systems

» Modality: online» Duration: 2 months

» Certificate: TECH Global University

» Credits: 6 ECTS

» Schedule: at your own pace

» Exams: online

We bsite: www.techtitute.com/us/information-technology/postgraduate-certificate/advanced-operating-systems

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## 01 Introduction

Gain in-depth knowledge about operating systems, their functions, process management and memory, with this high-level online program. You will learn the latest techniques and developments in Operating Systems from professionals in the sector.

```
od use z = False
       peration == "MIRROR Z":
    irror mod.use x = False
    mirror mod.use y = False
    mirror mod.use z = True
    #selection at the end -add back the des
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modifier_ob.select=1
bpy.context.scene.objects.active = modifier
print("Selected" + str(modifier_ob)) # modi
      irror_ob.select = 0
```



## tech 06 | Introduction

This program is aimed at those interested in attaining a higher level of knowledge in Operating Systems. The main objective is to specialize students to apply the knowledge acquired in this Postgraduate Certificate in the real world, in a work environment that reproduces the conditions they may encounter in their future, in a rigorous and realistic manner.

This Postgraduate Certificate will provide you with a transversal and versatile education adapted to new technologies and innovations in this field, preparing you for the professional practice of computer engineering. You will obtain extensive knowledge in Operating Systems, from the hand of professionals in the sector.

Make the most of this opportunity and take this program in a 100% online format, without having to give up your obligations.

This **Postgraduate Certificate in Advanced Operating Systems** contains the most complete and up-to-date program on the market. The most important features include:

- Development of 100 simulated scenarios presented by experts in Operating Systems
- Its graphic, schematic and eminently practical contents, with which they are conceived, gather scientific and practical information on Operating Systems
- The latest developments in Operating Systems
- It contains practical exercises where the self-evaluation process can be carried out to improve learning
- Interactive learning system based on the case method and its application to real practice
- All this will be complemented by 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





It includes in its teaching staff professionals belonging to the field of Computer Engineering, who bring to this program their work experience, as well as recognized specialists belonging to reference societies and prestigious universities.

Thanks to its multimedia content developed with the latest educational technology, they will allow the professional a situated and contextual learning, that is to say, a simulated environment that will provide an immersive learning programmed to prepare in real situations.

The program design is based on Problem-Based Learning, through which teachers must try to solve the different professional practice situations that arise throughout the course. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned experts in Operating Systems with extensive teaching experience.

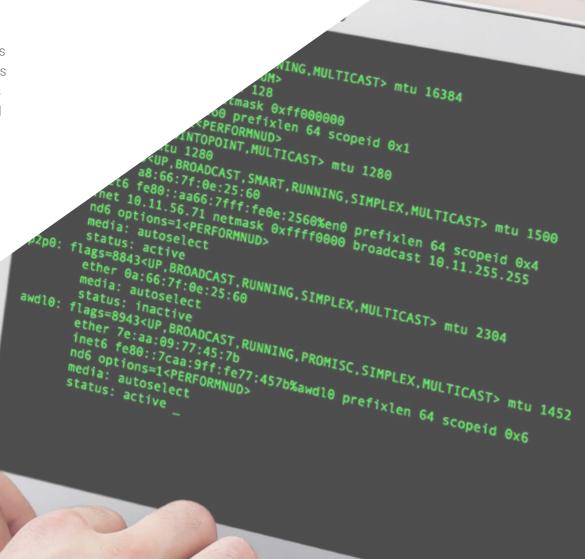
Take advantage of the latest educational technology to get up to date in Advanced Operating Systems from the comfort of your own home.

Learn about the latest techniques in Advanced Operating Systems from experts in the field.



# 02 Objectives

The objective of this program is to provide IT professionals with the knowledge and skills necessary to carry out their activity using the most advanced protocols and techniques of the moment. Through a work approach that is fully adaptable to the student, this Postgraduate Certificate will progressively lead you to acquire the skills that will propel you to a higher professional level.





## tech 10 | Objectives

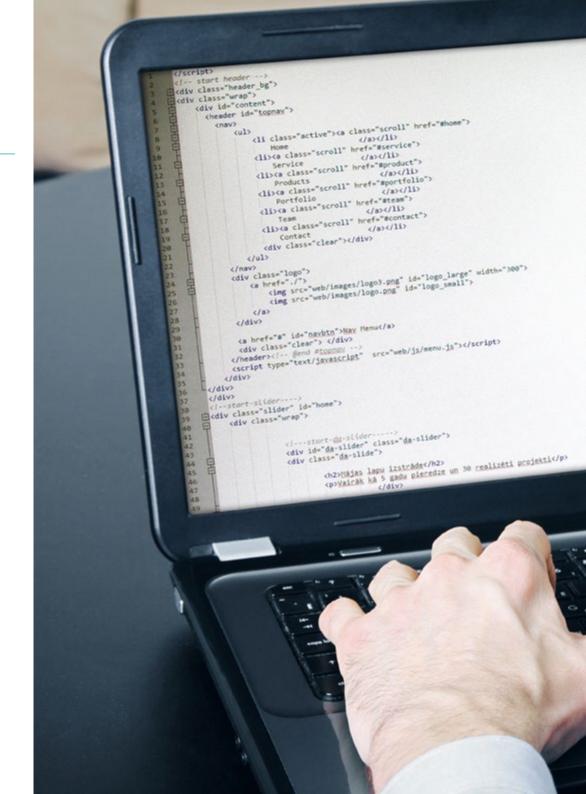


### **General Objectives**

- Provide scientific and technological education, as well as prepare for professional practice in multi-agent systems and computational management, all with a transversal and versatile education adapted to new technologies and innovations in this field
- Obtain extensive knowledge in the field of computing, the structure of computers and in Advanced Operating Systems, including the mathematical and physical basis essential in engineering



Achieve professional success as a computer engineer with this intensive program, developed by professionals with extensive experience in the sector"







## **Specific Objectives**

- Delve into the knowledge of operating systems, their functions, the management of processes, memory, directories and files, as well as the keys to their security and design objectives
- Know the step-by-step of the different stages of the history of operating systems
- Understand the structure of the main operating systems in existence
- Learn about the structure of the two main operating systems, as well as the use of their terminals
- Learn the basics of shell scripting and the main tools for programming in C
- Understand the operation of system calls, either on files or processes







## tech 14 | Structure and Content

#### **Module 1.** Advanced Operating Systems

- 1.1. Introduction to Software Engineering and Modeling
  - 1.1.1. The Nature of Software
  - 1.1.2. The Unique Nature of Webapps
  - 1.1.3. Software Engineering
  - 1.1.4. The Software Process
  - 1.1.5. Software Engineering Practice
  - 1.1.6. Software Myths
  - 1.1.7. How It All Begins
  - 1.1.8. Object-Oriented Concepts
  - 1.1.9. Introduction to UML
- 1.2. The Software Process
  - 1.2.1. A General Process Model
  - 1.2.2. Prescriptive Process Models
  - 1.2.3. Specialized Process Models
  - 1.2.4. The Unified Process
  - 1.2.5. Personal and Team Process Models
  - 1.2.6. What is Agility?
  - 1.2.7. What is an Agile Process?
  - 1.2.8. Scrum
  - 1.2.9. Agile Process Toolkit
- 1.3. Principles Guiding Software Engineering Practice
  - 1.3.1. Principles Guiding the Process
  - 1.3.2. Principles Guiding the Practice
  - 1.3.3. Principles of Communication
  - 1.3.4. Planning Principles
  - 1.3.5. Modeling Principles
  - 1.3.6. Construction Principles
  - 1.3.7. Deployment Principles

- 1.4. Understanding the Requirements
  - 1.4.1. Requirements Engineering
  - 1.4.2. Establish the Basis
  - 1.4.3. Inquiry of Requirements
  - 1.4.4. Development of Cases Studies
  - 1.4.5. Elaboration of the Requirements Model
  - 1.4.6. Negotiation of Requirements
  - 1.4.7. Validation of Requirements
- 1.5. Requirements Modeling: Scenarios, Information and Analysis Classes
  - 1.5.1. Analysis of Requirements
  - 1.5.2. Scenario-Based Modeling
  - 1.5.3. UML Models that provide the Case Study
  - 1.5.4. Data Modeling Concepts
  - 1.5.5. Class-Based Modeling
  - 1.5.6. Class Diagrams
- 1.6. Requirements Modeling: Flow, Behavior and Patterns
  - 1.6.1. Requirements that Shape Strategies
  - 1.6.2. Flow-Oriented Modeling
  - 1.6.3. Status Diagrams
  - 1.6.4. Creation of a Behavioral Model
  - 1.6.5. Sequence Diagrams
  - 1.6.6. Communication Diagrams
  - 1.6.7. Patterns for Requirements Modeling
- 1.7. Design Concepts
  - 1.7.1. Design in the Software Engineering Context
  - 1.7.2. The Design Process
  - 1.7.3. Design Concepts
  - 1.7.4. Object-Oriented Design Concepts
  - 1.7.5. Model of the Design

#### 1.8. Designing the Architecture

- 1.8.1. Software Architecture
- 1.8.2. Architectural Genres
- 1.8.3. Architectural Styles
- 1.8.4. Architectural Design
- 1.8.5. Evolution of Alternative Designs for Architecture
- 1.8.6. Mapping the Architecture Using the Data Flow

#### 1.9. Component-Level and Pattern-Based Design

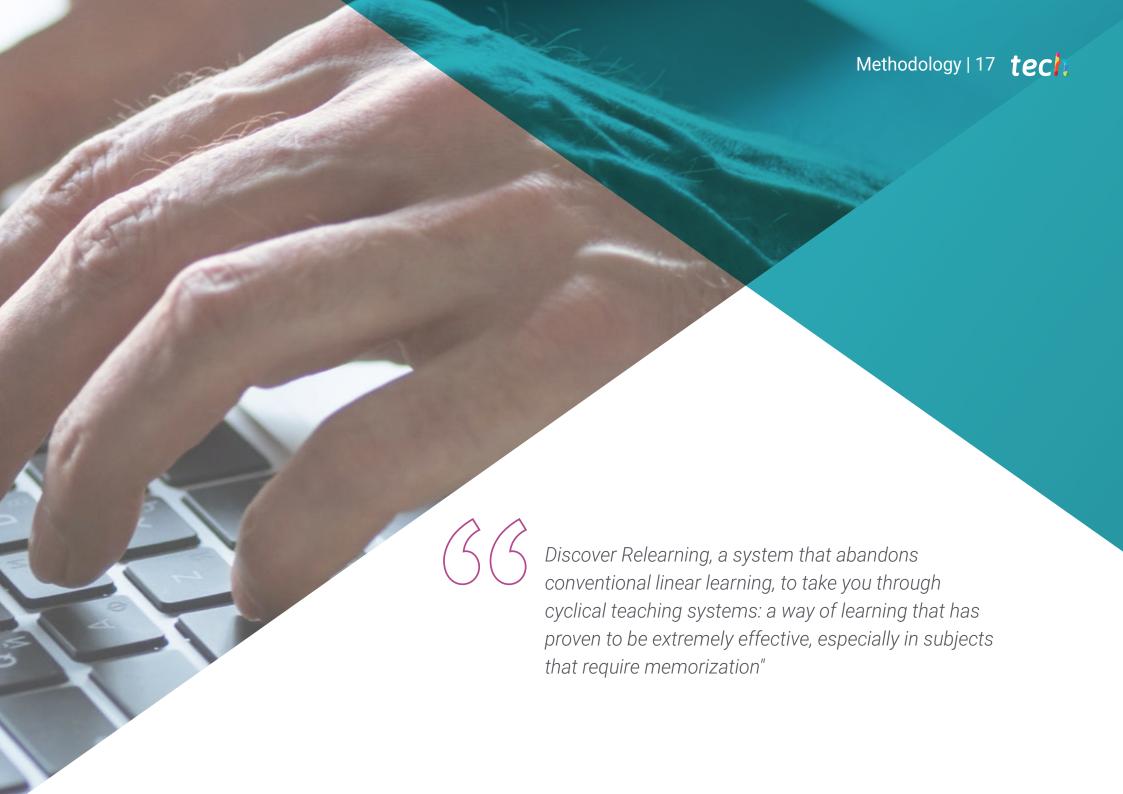
- 1.9.1. What is a Component?
- 1.9.2. Class-Based Component Design
- 1.9.3. Realization of the Design at the Component Level
- 1.9.4. Design of Traditional Components
- 1.9.5. Component-Based Development
- 19.6. Design Patterns
- 1.9.7. Pattern-Based Software Design
- 1.9.8. Architectural Patterns
- 1.9.9. Design Patterns at the Component Level
- 1.9.10 User Interface Design Patterns

#### 1.10. Software Quality and Project Management

- 1.10.1. Quality
- 1.10.1. Software Quality
- 1.10.2. The Software Quality Dilemma
- 1.10.3. Achieving Software Quality
- 1.10.4. Software Quality Assurance
- 1.10.5. The Administrative Spectrum
- 1.10.6. The Staff
- 1.10.7. The product
- 1.10.8. The Process
- 1.10.9. The Project
- 1.10.10. Principles and Practices

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if($ COOKIE['lang'] =='rus'){
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## tech 18 | Methodology

#### 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.



### Methodology | 21 tech

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.





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**

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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.



20%





## tech 26 | Certificate

This program will allow you to obtain your **Postgraduate Certificate in Advanced Operating Systems** 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** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: Postgraduate Certificate in Advanced Operating Systems

Modality: online

Duration: 2 months

Accreditation: 6 ECTS



#### Postgraduate Certificate in Advanced Operating Systems

This is a program of 180 hours of duration equivalent to 6 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024



health confidence people

leducation information tutors
guarantee accreditation teaching
institutions technology learning



# Postgraduate Certificate Advanced Operating Systems

- » Modality: online
- » Duration: 2 months
- » Certificate: TECH Global University
- » Credits: 6 ECTS
- » Schedule: at your own pace
- » Exams: online

# Postgraduate Certificate

Advanced Operating Systems

