Postgraduate Certificate

Ethical Hacking

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Postgraduate Certificate
Ethical Hacking

- 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/ethical-hacking

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01

Introduction

Cyber protection has become a priority for individuals and companies. The more innovative and developed the functionalities of the devices are, the more sophisticated and dangerous are the threats that affect them and, consequently, the data of their users. Generating tools that adapt to changes in the threat involves the use of technologies, *hacking* and approaches that provide adequate security coverage. This program is the most comprehensive and best option in the online teaching market to get the most extensive education in this field.

Learn how to detect vulnerabilities in a system by performing pre-emptive attacks that demonstrate breaches and gain invaluable cybersecurity data"

Nowadays, no company is exempt from suffering a cyber-attack and, therefore, from the different consequences it entails. Regardless of the size of the company, it is exposed to information theft, blackmail, sabotage, etc.

It is necessary to carry out a vulnerability study and determine the attack surface, so periodic vulnerability and risk studies are increasingly being carried out. Each company will have to check whether it complies with the regulations and legislation of the country where it is located and be aware of the damages caused, both monetary and non-monetary, e.g. reputational.

This module presents the different tools and methodologies to address this need and therefore provides an extensive set of expertise to carry out this work.

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

- The development of case studies presented by cybersecurity experts
- The graphic, schematic, and 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
- Content that is accessible from any fixed or portable device with an Internet connection

The most innovative and efficient ways to create protection systems that ensure cybersecurity on devices"

Study through a practice-focused Postgraduate Certificate to boost your skills to the level of a specialist"

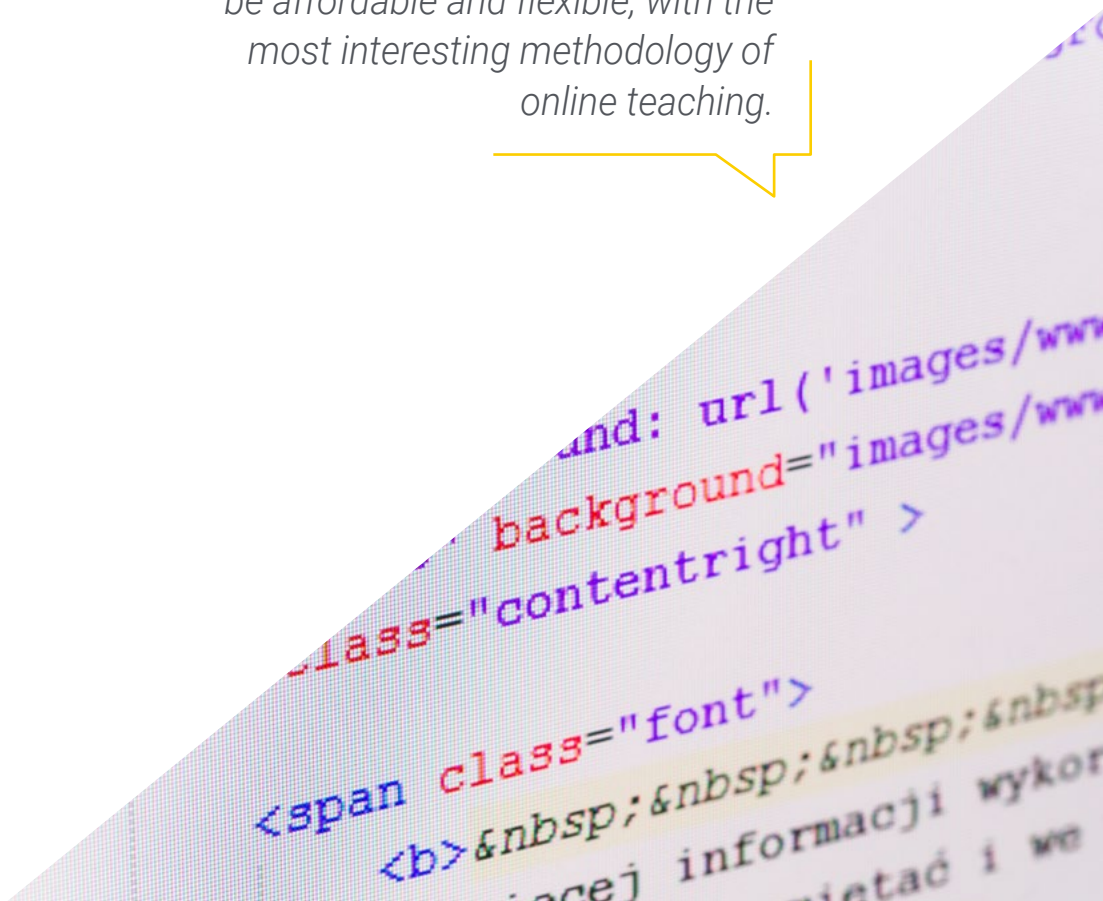
Learn in depth about the main threats and the most innovative and up-to-date tools in the fight against cyber-attacks through this exceptional program.

A high education process created to be affordable and flexible, with the most interesting methodology of online teaching.

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 throughout the program. This will be done with the help of an innovative system of interactive videos made by renowned experts.



02

Objectives

The Postgraduate Certificate in Ethical Hacking provides students with the ability to work in this field quickly and easily. With realistic and highly relevant objectives, this course of study is designed to progressively lead students to the acquisition of the theoretical and practical knowledge necessary to intervene with excellence and to develop transversal competencies that will allow them to face complex situations by developing appropriate and precise responses.

The most complete learning about ethical hacking as a vulnerability detection tool, in a very high-quality process"

General Objectives

- Analyze the different existing systems
- Evaluate the information obtained and develop prevention and *Hacking* mechanisms
- Establish priorities in the study and resolution of vulnerabilities
- Demonstrate that a system is vulnerable, attack it for preventive purposes and solve such problems

Specific Objectives

- Examine IOSINT methods
- Compile the information available in public media
- Scan networks for active mode information

With the student in mind, this Postgraduate Certificate puts in place the most interesting study support systems currently available"

03

Course Management

The teachers who teach this program have been selected for their exceptional competence in this field. They combine technical and practical experience with teaching experience, offering students first-class support in achieving their goals. Through them, the Postgraduate Certificate offers the most direct and immediate vision of the real characteristics of the intervention in this field, achieving a contextual vision of maximum interest.

Expert professors in Ethical Hacking will provide you with the broad and contextual vision you need to work with precision in cybersecurity"

International Guest Director

Frederic Lemieux, Ph.D. is internationally recognized as an innovative expert and inspirational leader in the fields of **Intelligence, Homeland Security, Homeland Security, Cybersecurity** and **Disruptive Technologies.** His constant dedication and relevant contributions in research and education position him as a key figure in the promotion of security and understanding of today's emerging technologies. During his professional career, he has conceptualized and directed cutting-edge academic programs at several renowned institutions, such as **the University of Montreal, George Washington University** and **Georgetown University**.

Throughout his extensive background, he has published multiple books of great relevance, all of them related to **criminal intelligence, policing, cyber threats, and cyber threats and international security.** He has also contributed significantly to the field of Cybersecurity with the publication of numerous articles in academic journals, which examine crime control during major disasters, the fight against terrorism, intelligence agencies and police cooperation. In addition, he has been a panelist and keynote speaker at various national and international conferences, establishing himself as a reference in the academic and professional arena.

Dr. Lemieux has held editorial and evaluative roles in different academic, private and governmental organizations, reflecting his influence and commitment to excellence in his field of expertise. In this way, his prestigious academic career has led him to serve as Professor of Practice and Faculty Director of the MPS **programs in Applied Intelligence, Cybersecurity Risk Management, Technology Management and Information Technology Management** at **Georgetown University.**

Dr. Lemieux, Frederic

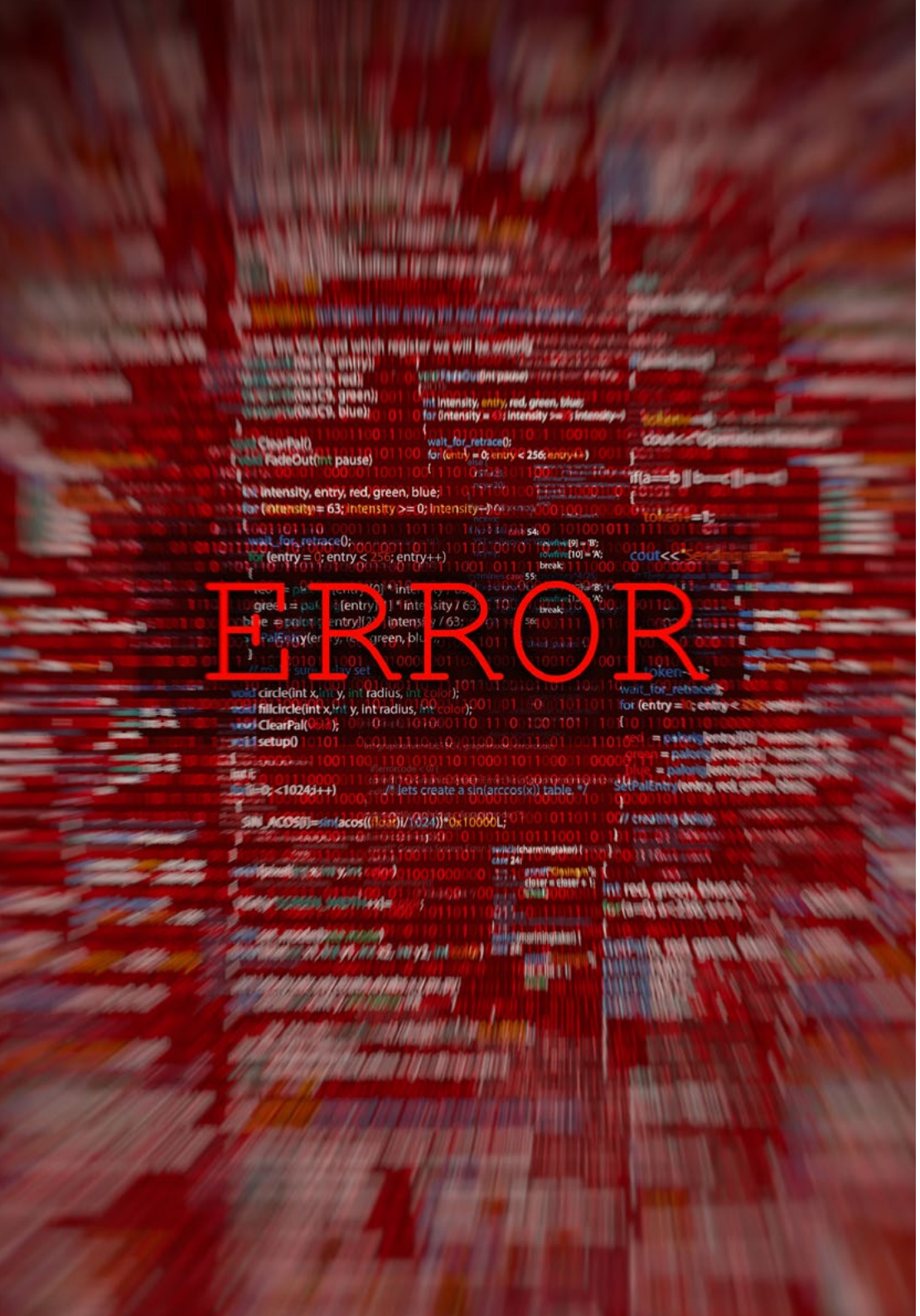
- Researcher in Intelligence, Cybersecurity and Disruptive Technologies at Georgetown University
- Director of the Master's Program in Information Technology Management at Georgetown University
- Director of the Master in Technology Management at Georgetown University
- Director of the Master in Cybersecurity Risk Management at Georgetown University
- Director of the Master's Program in Applied Intelligence at Georgetown University
- Professor of Internship at Georgetown University
- PhD in Criminology from the School of Criminology, University of Montreal
- B.A. in Sociology, Minor Degree in Psychology, University of Laval, France
- Member of: New Program Roundtable Committee, by Georgetown University

Thanks to TECH you will be able to learn with the best professionals in the world"

Management

Ms. Fernández Sapena, Sonia

- Computer Security and Ethical Hacking Trainer. Getafe National Reference Center for Informatics and Telecommunications. Madrid
- Certified E-Council instructor. Madrid
- Trainer in the following certifications: EXIN Ethical Hacking Foundation y EXIN Cyber & IT Security Foundation. Madrid
- Accredited expert trainer by the CAM of the following certificates of professionalism: Computer Security (IFCT0190), Voice and Data Network Management (IFCM0310), Departmental Network Administration (IFCT0410), Alarm Management in Telecommunications Networks (IFCM0410), Voice and Data Network Operator (IFCM0110), and Internet Services Administration (IFCT0509)
- Colaboradora externa CSO/SSA (Chief Security Officer/Senior Security Architect). University of the Balearic Islands
- Computer Engineer. Alcalá de Henares University. Madrid
- Master's Degree in DevOps: Docker and Kubernetes. Cas Training. Madrid
- Microsoft Azure Security Technologies. E-Council. Madrid



Expand your studies with the best specialists in the field”

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Structure and Content

Throughout the development of the different units of this Postgraduate Certificate the student will be able to acquire all the knowledge that the ethical hacker needs to be used as a tool. To this end, it has been structured with a view to the efficient acquisition of complementary learning, which will promote the acquisition of hands-on content and consolidate what has been studied, providing students with the capacity to intervene as quickly as possible. A high-intensity, high-quality course created to educate the best in the industry.

A Postgraduate Certificate developed in a structured way through a study approach focused on efficiency"

Module 1. Ethical Hacking

1.1. Work Environment
- 1.1.1. Linux Distributions
  - 1.1.1.1. Kali Linux - Offensive Security
  - 1.1.1.2. Parrot OS
  - 1.1.1.3. Ubuntu
- 1.1.2. Virtualization Systems
- 1.1.3. Sandbox
- 1.1.4. Deployment of Laboratories

1.2. Methods
- 1.2.1. OSSTMM
- 1.2.2. OWASP
- 1.2.3. NIST
- 1.2.4. PTES
- 1.2.5. ISSAF

1.3. Footprinting
- 1.3.1. Open-Source Intelligence (OSINT)
- 1.3.2. Search for Data Breaches and Vulnerabilities
- 1.3.3. Use of Passive Tools

1.4. Network Scanning
- 1.4.1. Scanning Tools
  - 1.4.1.1. Nmap
  - 1.4.1.2. Hping3
  - 1.4.1.3. Other Scanning Tools
- 1.4.2. Scanning Techniques
- 1.4.3. Firewalland IDS Evasion Techniques
- 1.4.4. Banner Grabbing
- 1.4.5. Network Diagrams

1.5. Enumeration
- 1.5.1. SMTP Enumeration
- 1.5.2. DNS Enumeration
- 1.5.3. NetBIOS and Samba Enumeration
- 1.5.4. LDAP Enumeration
- 1.5.5. SNMP Enumeration
- 1.5.6. Other Enumeration Techniques

1.6. Vulnerability Analysis
- 1.6.1. Vulnerability Scanning Solutions
  - 1.6.1.1. Qualys
  - 1.6.1.2. Nessus
  - 1.6.1.3. CFI LanGuard
- 1.6.2. Vulnerability Scoring Systems
  - 1.6.2.1. CVSS
  - 1.6.2.2. CVE
  - 1.6.2.3. NVD

1.7. Attacks on Wireless Networks
- 1.7.1. Methodology of Hacking in Wireless Networks
  - 1.7.1.1. Wi-Fi Discovery
  - 1.7.1.2. Traffic Analysis
  - 1.7.1.3. Aircrack Attacks
    - 1.7.1.3.1. WEP Attacks
    - 1.7.1.3.2. WPA/WPA2 Attacks
  - 1.7.1.4. Evil Twin Attacks
  - 1.7.1.5. Attacks on WPS
  - 1.7.1.6. Jamming
- 1.7.2. Tools for Wireless Security

1.8. Hacking of Web Servers
- 1.8.1. Cross Site Scripting
- 1.8.2. CSRF
- 1.8.3. Session Hijacking
- 1.8.4. SQL Injection

1.9. Exploiting Vulnerabilities
- 1.9.1. Use of Known Exploits
- 1.9.2. Use of Metasploit
- 1.9.3. Use of Malware
  - 1.9.3.1. Definition and Scope
  - 1.9.3.2. Malware Generation
  - 1.9.3.3. Bypass of Antivirus Solutions

1.10. Persistence
- 1.10.1. Rootkits Installation
- 1.10.2. Use of Ncat
- 1.10.3. Use of Scheduled Tasks for Backdoors
- 1.10.4. User Creation
- 1.10.5. HIDS Detection

Everything the cybersecurity professional needs to know is organized into a comprehensive curriculum that will progressively and steadily boost your skills to the highest level"

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

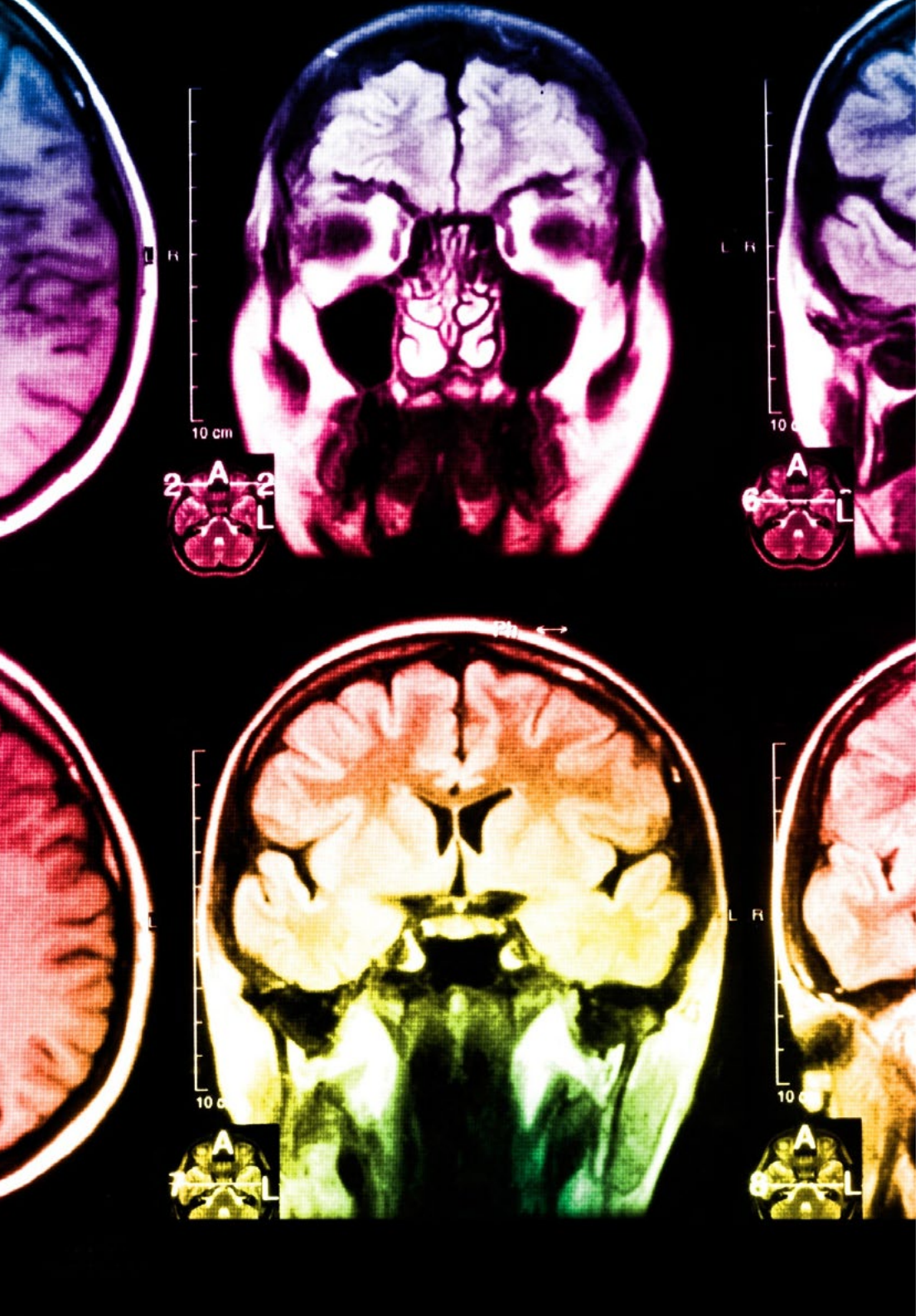
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines different teaching elements in each lesson.

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.

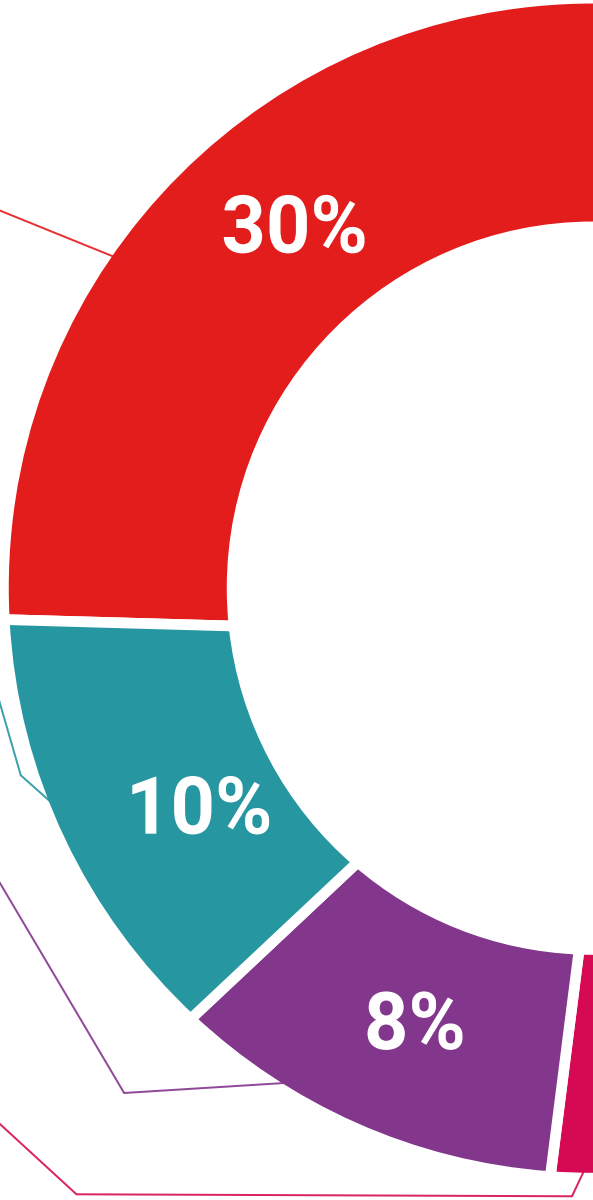
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

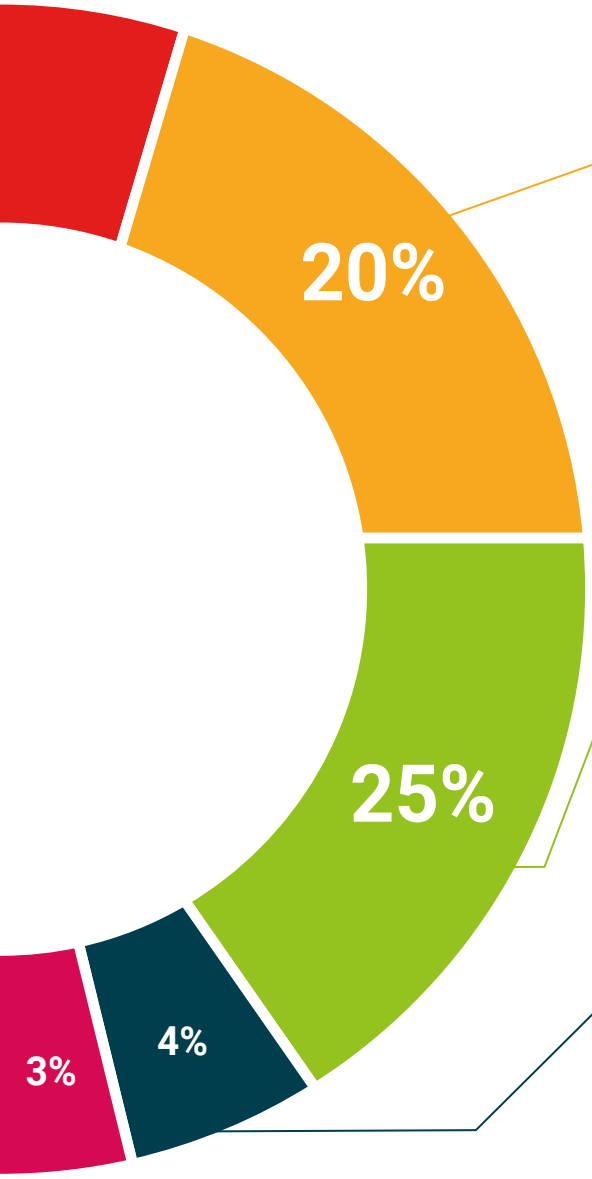
Practising Skills and Abilities

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 Ethical Hacking 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 Ethical Hacking** 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 Ethical Hacking**

Official Nº of Hours: **150 h.**


tech technological university

Awards the following

CERTIFICATE

to

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

For having passed and accredited the following program

POSTGRADUATE CERTIFICATE

in

Ethical Hacking

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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