

# Postgraduate Certificate Advanced Web Hacking



## Postgraduate Certificate Advanced Web Hacking

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online
- » Target Group: University Graduates who have previously completed any of the degrees in the fields of Social and Legal Sciences, Administrative and Business Sciences

Website: [www.techtitute.com/us/school-of-business/postgraduate-certificate/advanced-web-hacking](http://www.techtitute.com/us/school-of-business/postgraduate-certificate/advanced-web-hacking)

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# 01

# Welcome

Companies today have a responsibility of great interest and that is to protect the data of their customers, as well as confidential information of the same. To this end, cybersecurity has evolved by leaps and bounds, and a series of consumer privacy rules and regulations have been put in place to ensure peace of mind for the company and its users. In accordance with the importance that this field of study has acquired, this program has been developed to offer the business professional exclusive material related to ethical and legal practices in the analysis and development of malware. This will be executed in a 100% online pedagogical format and with a team of teachers specialized in Computer Science.



Postgraduate Certificate in Advanced Web Hacking  
TECH Technological University





“

*Advanced Web Hacking is a current field of research, where TECH will lead you to improve SQLi Blind, Time-Based and Error-Based aspects”*

02

# Why Study at TECH?

TECH is the world's largest 100% online business school. It is an elite business school, with a model based on the highest academic standards. A world-class center for intensive managerial skills education.



“

*TECH is a university at the forefront of technology, and puts all its resources at the student's disposal to help them achieve entrepreneurial success"*

## At TECH Technological University



### Innovation

The university offers an online learning model that balances the latest educational technology with the most rigorous teaching methods. A unique method with the highest international recognition that will provide students with the keys to develop in a rapidly-evolving world, where innovation must be every entrepreneur's focus.

"Microsoft Europe Success Story", for integrating the innovative, interactive multi-video system.



### The Highest Standards

Admissions criteria at TECH are not economic. Students don't need to make a large investment to study at this university. However, in order to obtain a qualification from TECH, the student's intelligence and ability will be tested to their limits. The institution's academic standards are exceptionally high...

**95%** | of TECH students successfully complete their studies



### Networking

Professionals from countries all over the world attend TECH, allowing students to establish a large network of contacts that may prove useful to them in the future.

**+100000**

executives prepared each year

**+200**

different nationalities



### Empowerment

Students will grow hand in hand with the best companies and highly regarded and influential professionals. TECH has developed strategic partnerships and a valuable network of contacts with major economic players in 7 continents.

**+500**

collaborative agreements with leading companies



### Talent

This program is a unique initiative to allow students to showcase their talent in the business world. An opportunity that will allow them to voice their concerns and share their business vision.

After completing this program, TECH helps students show the world their talent.



### Multicultural Context

While studying at TECH, students will enjoy a unique experience. Study in a multicultural context. In a program with a global vision, through which students can learn about the operating methods in different parts of the world, and gather the latest information that best adapts to their business idea.

TECH students represent more than 200 different nationalities.



TECH strives for excellence and, to this end, boasts a series of characteristics that make this university unique:



### Learn with the best

---

In the classroom, TECH's teaching staff discuss how they have achieved success in their companies, working in a real, lively, and dynamic context. Teachers who are fully committed to offering a quality specialization that will allow students to advance in their career and stand out in the business world.

Teachers representing 20 different nationalities.



*At TECH, you will have access to the most rigorous and up-to-date case analyses in academia"*



### Analysis

---

TECH explores the student's critical side, their ability to question things, their problem-solving skills, as well as their interpersonal skills.



### Academic Excellence

---

TECH offers students the best online learning methodology. The university combines the Relearning method (postgraduate learning methodology with the best international valuation) with the Case Study. Tradition and vanguard in a difficult balance, and in the context of the most demanding educational itinerary.



### Economy of Scale

---

TECH is the world's largest online university. It currently boasts a portfolio of more than 10,000 university postgraduate programs. And in today's new economy, **volume + technology = a ground-breaking price**. This way, TECH ensures that studying is not as expensive for students as it would be at another university.



03

# Why Our Program?

Studying this TECH program means increasing the chances of achieving professional success in senior business management.

It is a challenge that demands effort and dedication, but it opens the door to a promising future. Students will learn from the best teaching staff and with the most flexible and innovative educational methodology.





“

*We have highly qualified teachers and the most complete syllabus on the market, which allows us to offer you education of the highest academic level”*

This program will provide you with a multitude of professional and personal advantages, among which we highlight the following:

**01**

### A Strong Boost to Your Career

By studying at TECH, students will be able to take control of their future and develop their full potential. By completing this program, students will acquire the skills required to make a positive change in their career in a short period of time.

*70% of students achieve positive career development in less than 2 years.*

**02**

### Develop a strategic and global vision of the company

TECH offers an in-depth overview of general management to understand how each decision affects each of the company's different functional fields.

*Our global vision of companies will improve your strategic vision.*

**03**

### Consolidate the student's senior management skills

Studying at TECH means opening the doors to a wide range of professional opportunities for students to position themselves as senior executives, with a broad vision of the international environment.

*You will work on more than 100 real senior management cases.*

**04**

### You will take on new responsibilities

The program will cover the latest trends, advances and strategies, so that students can carry out their professional work in a changing environment.

*45% of graduates are promoted internally.*

05

### Access to a powerful network of contacts

TECH connects its students to maximize opportunities. Students with the same concerns and desire to grow. Therefore, partnerships, customers or suppliers can be shared.

*You will find a network of contacts that will be instrumental for professional development.*

06

### Thoroughly develop business projects

Students will acquire a deep strategic vision that will help them develop their own project, taking into account the different fields in companies.

*20% of our students develop their own business idea.*

07

### Improve soft skills and management skills

TECH helps students apply and develop the knowledge they have acquired, while improving their interpersonal skills in order to become leaders who make a difference.

*Improve your communication and leadership skills and enhance your career.*

08

### You will be part of an exclusive community

Students will be part of a community of elite executives, large companies, renowned institutions, and qualified teachers from the most prestigious universities in the world: the TECH Technological University community.

*We give you the opportunity to study with a team of world-renowned teachers.*

# 04 Objectives

This program will provide the graduate with outstanding updates in the area of Advanced Web Hacking, concerning cookies with sensitive and modifiable information. In this way, TECH will provide different innovative tools in the process of the academic program, nurturing knowledge related to web requests with Burp Suite. Thus, at the end of this Postgraduate Certificate, students will have enhanced their skills regarding HTTP methods, the URL and its parts.





“

*TECH's goal is to take you professionally to the pinnacle of your career with a program of high standards of efficiency and quality”*

**TECH makes the goals of their students their own goals too**  
**Working together to achieve them**

The **Postgraduate Certificate in Advanced Web Hacking** qualifies student to:

01

Study and understand the tactics, techniques and procedures used by malicious actors, enabling the identification and simulation of threats

04

Improve communication skills specific to technical environments, facilitating understanding and coordination among team members

02

Apply theoretical knowledge in practical scenarios and simulations, facing real challenges to strengthen Pentesting skills

05

Learn project monitoring and control techniques, identifying deviations and taking corrective actions as necessary

03

Learn how to efficiently allocate resources within a cybersecurity team, considering individual skills and maximizing productivity on projects

06

Develop competencies to evaluate and improve security configurations in Windows systems, ensuring the implementation of effective measures



07

Promote ethical and legal practices in the execution of attacks and tests on Windows systems, considering the ethical principles of cybersecurity

08

Familiarize the graduate with the evaluation of security in APIs and web services, identifying possible points of vulnerability and strengthening security in programming interfaces

09

Foster effective collaboration with security teams, integrating strategies and efforts to protect network infrastructure

10

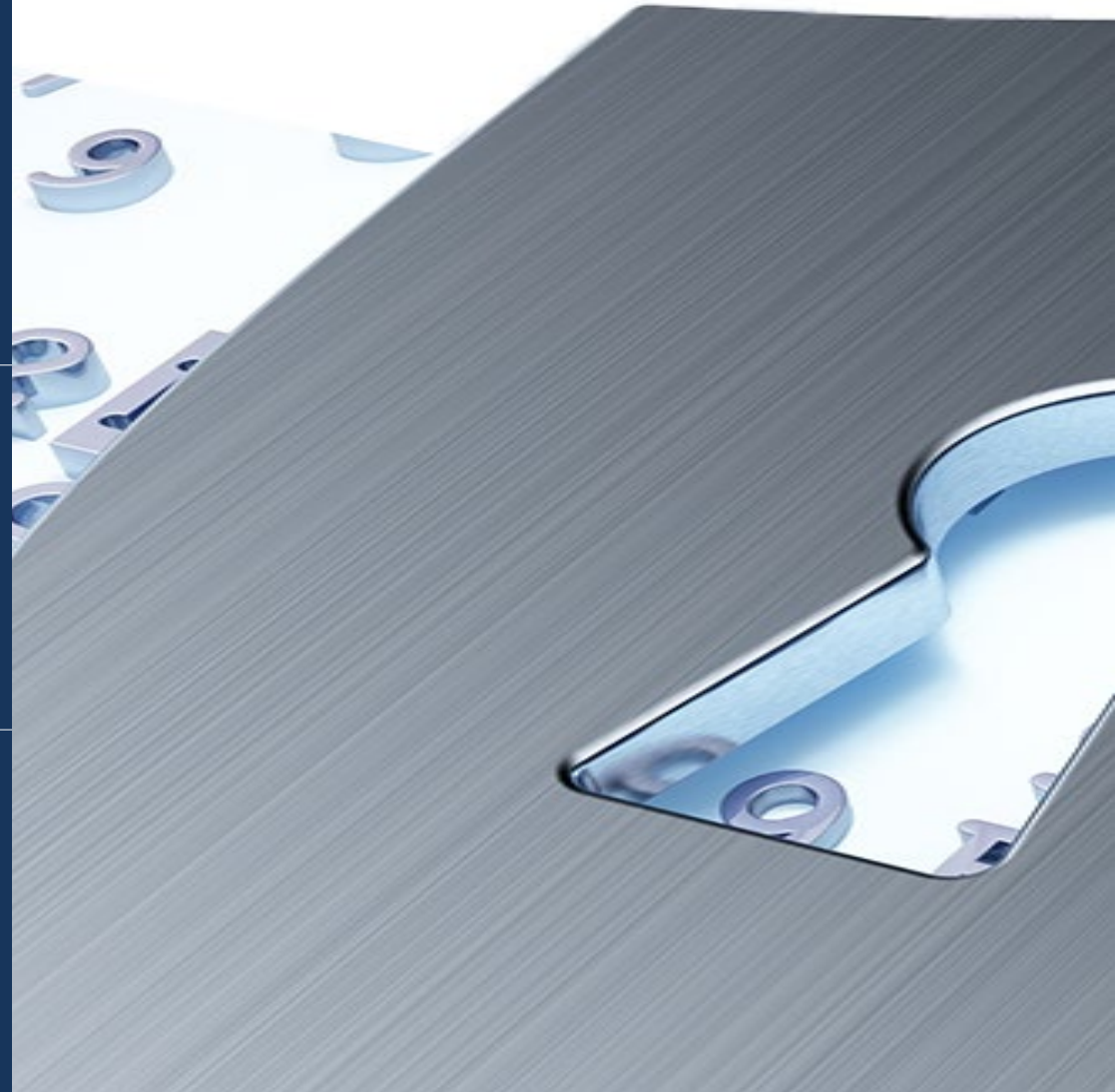
Promote ethical and legal practices in malware analysis and development, ensuring integrity and accountability in all activities

11

Apply theoretical knowledge in simulated environments, participate in hands-on exercises to understand and counter malicious attacks

12

Acquire a solid understanding of the fundamental principles of digital forensic investigation (DFIR) and their application in the resolution of cyber incidents





13

Learn to prepare detailed reports documenting findings, methodologies used and recommendations derived from advanced Red Team exercises

14

Develop skills to formulate actionable and practical recommendations aimed at mitigating vulnerabilities and improving security posture

15

Familiarize the learner with best practices for executive reporting, adapting technical information for non-technical audiences



05

# Structure and Content

The Postgraduate Certificate in Advanced Web Hacking is an academic program that focuses on competencies related to NoSQLi injections. Therefore, this program emphasizes a theoretical-practical structure integrated with the extensive experience and background of a teaching staff widely specialized in the sector.



“

*A curriculum designed by IT industry specialists that will lead you to excel in a highly competitive field of study”*

## Syllabus

This program contains 150 hours of continuous learning, in which TECH, through the highest level of education, will guide the graduate to the top of his or her professional career. It will also deal with the different obstacles that will be encountered in the work environment in the business sector. As such, the program provides a myriad of skills geared towards efficient resource allocation within a cybersecurity team.

Thus, the teaching staff has designed a prestigious curriculum that implements 1 module, with the purpose of reinforcing the graduate's competencies related to the formulation of effective defense strategies to protect web applications against cyber threats.

Therefore, the students of this Postgraduate Certificate will delve into the evasion of security measures and exploitation of sophisticated vulnerabilities. In addition, graduates will become leading experts in advanced web hacking practices with relevant security regulations and standards.

Therefore, flexibility and academic excellence are essential for TECH. That is why this program offers the best innovations in the sector, being a qualification of great flexibility by only needing an electronic device with Internet connection to easily access the virtual platform from the comfort of your home or wherever you are.

### Module 1

### Advanced Web Hacking



### Where, When and How is it Taught?

TECH offers the possibility of developing this Postgraduate Certificate in Advanced Web Hacking completely online. During the 6 weeks of the specialization, the student will be able to access all the contents of this program at any time, which will allow the students to self-manage their study time.

*A unique, key, and decisive educational experience to boost your professional development and make the definitive leap.*

## Module 1. Advanced Web Hacking

### 1.1. Operation of a Website

- 1.1.1. The URL and Its Parts
- 1.1.2. HTTP Methods
- 1.1.3. The Headers
- 1.1.4. How to View Web Requests with Burp Suite

### 1.2. Session

- 1.2.1. Cookies
- 1.2.2. JWT Tokens
- 1.2.3. Session Hijacking Attacks
- 1.2.4. Attacks on JWT

### 1.3. Cross Site Scripting (XSS)

- 1.3.1. What is a XSS
- 1.3.2. Types of XSS
- 1.3.3. Exploiting an XSS
- 1.3.4. Introduction to XSLeaks

### 1.4. Database Injections

- 1.4.1. What Is a SQL Injection
- 1.4.2. Exfiltrating Information with SQLi
- 1.4.3. SQLi Blind, Time-Based and Error-Based
- 1.4.4. NoSQLi Injections

### 1.5. Path Traversal and Local File Inclusion

- 1.5.1. What They Are and Their Differences
- 1.5.2. Common Filters and How to Bypass Them
- 1.5.3. Log Poisoning
- 1.5.4. LFI in PHP

### 1.6. Broken Authentication

- 1.6.1. User Enumeration
- 1.6.2. Password Bruteforce
- 1.6.3. 2FA Bypass
- 1.6.4. Cookies with Sensitive and Modifiable Information

### 1.7. Remote Command Execution

- 1.7.1. Command Injection
- 1.7.2. Blind Command Injection
- 1.7.3. Insecure Deserialization PHP
- 1.7.4. Insecure Deserialization Java

### 1.8. File Uploads

- 1.8.1. RCE through Webshells
- 1.8.2. XSS in File Uploads
- 1.8.3. XML External Entity (XXE) Injection
- 1.8.4. Path traversal in File Uploads

### 1.9. Broken Access Control

- 1.9.1. Unrestricted Access to Panels
- 1.9.2. Insecure Direct Object References (IDOR)
- 1.9.3. Filter Bypass
- 1.9.4. Insufficient Authorization Methods

### 1.10. DOM Vulnerabilities and More Advanced Attacks

- 1.10.1. Regex Denial of Service
- 1.10.2. DOM Clobbering
- 1.10.3. Prototype Pollution
- 1.10.4. HTTP Request Smuggling



“

*Stand out in an industry that currently needs professionals like you, applying effective defense strategies to protect web applications”*

# 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"*

## TECH Business School uses the 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”*



*This program prepares you to face business challenges in uncertain environments and achieve business success.*





## A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch to present executives with challenges and business decisions at the highest level, whether at the national or international level. 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 business reality is taken into account.

“

*You will learn, through collaborative activities and real cases, how to solve complex situations in real business environments”*

The case method has been the most widely used learning system among the world's leading business 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 we face in the case method, an action-oriented learning method. Throughout the program, the studies will be presented with multiple real cases. They must integrate all their knowledge, research, argue and defend their ideas and decisions.

*Our program prepares you to face new challenges in uncertain environments and achieve success in your career.*

## 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.

*Our online system will allow you to organize your time and learning pace, adapting it to your schedule. You will be able to access the contents from any device with an internet connection.*

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 online business school is the only one in the world licensed to incorporate 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.

With this methodology we have 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, markets, and financial 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 specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to 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.



### Management Skills Exercises

They will carry out activities to develop specific executive competencies in each thematic area. Practices and dynamics to acquire and develop the skills and abilities that a high-level manager needs to develop in the context of the globalization we live in.



### 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 senior management 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.



07

# Our Students' Profiles

The Postgraduate Certificate is aimed at University Graduates who have previously completed any of the following degrees in the field of Social and Legal Sciences, Administration and Economics.

This program uses a multidisciplinary approach as the students have a diverse set of academic profiles and represent multiple nationalities.

The Postgraduate Certificate can also be taken by professionals who, being university graduates in any area, have two years of work experience in the field of information technology.





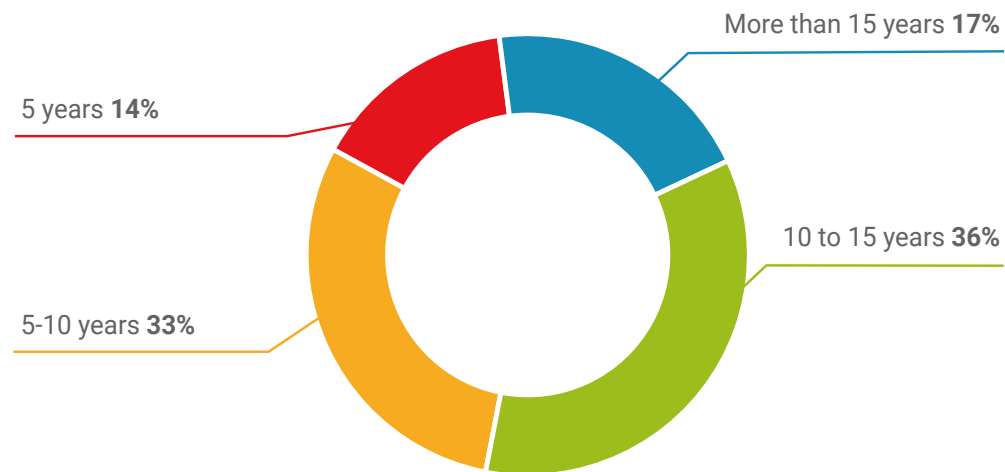
“

*If you have experience in Advanced Web Hacking, and you are looking for an interesting improvement in your career while continuing to work, this is the program for you”*

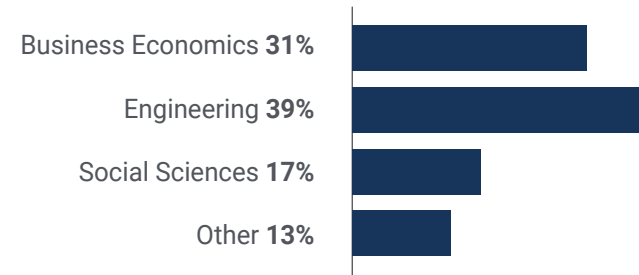
### Average Age

Between **35** and **45** years old

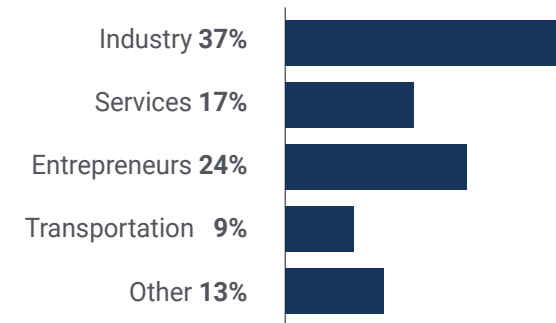
### Years of Experience



### Training



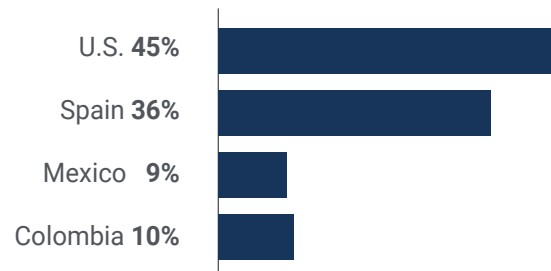
### Academic Profile





## Geographical Distribution

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## Carolina Galvis

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Security Architect

*"Cyber security specializations are of high priority nowadays, so by taking this program I managed to learn ethical hacking exercises to be able to strengthen systems and web applications regarding the threat of cyber attacks"*

08

# Course Management

This university program incorporates a specialized team of professionals who provide important academic and didactic resources to the professional in the development of this program. For this reason, TECH provides a first class education, with experts in Software Engineering and Information Society Technologies and Computer Security. In this way, students are sure to be able to stand out in a sector with high demand, reaching the top of their professional careers.





“

*TECH focuses on offering the most recent updates at the highest level with a faculty of the highest quality”*

## Management



### Mr. Carlos Gómez Pintado

- ♦ Manager of Cybersecurity and Network Team CIPHERBIT in Oesía Group
- ♦ Manager Advisor & Investor at Wesson App
- ♦ Graduate in Software Engineering and Information Society Technologies, Universidad Politécnica de Madrid
- ♦ Collaboration with educational institutions for the development of Higher Level learning Cycles in cybersecurity

## Professors

### Mr. Redondo Castro, Pablo

- ♦ Pentester in Oesía Group
- ♦ Cybersecurity Engineer from Rey Juan Carlos University
- ♦ Extensive experience as a Cybersecurity Evaluator Trainer
- ♦ He has accumulated teaching experience, giving programs related to Capture The Flag tournaments







09

# Impact on Your Career

This academic program has been created with the purpose of providing students with the skills that will lead them to face the most challenging situations in the field of business and IT. Thus, TECH delves into elite education, integrating efficiency and perfection in each of its programs. In this way, it guarantees the graduate a specialized learning in assessing vulnerabilities in web applications, including SQL injections, cross-site scripting (XSS).







“

*Deepen your knowledge and become  
an expert negotiator in Advanced  
Web Hacking in just 6 weeks”*

### Are you ready to take the leap? Excellent professional development awaits you

TECH's Advanced Web Hacking Postgraduate Certificate is an intensive program that prepares you to face challenges and business decisions in the IT field. The main objective is to promote your personal and professional growth. Helping you achieve success.

If you want to improve yourself, make a positive change at a professional level, and network with the best, then this is the place for you.

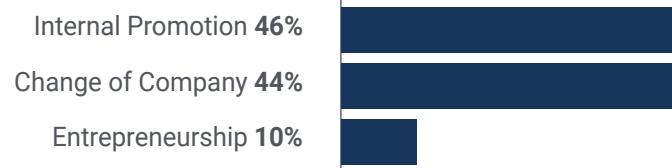
*A Postgraduate Certificate  
by the best, for the best.  
Grow and position  
yourself professionally  
with TECH"*

*You will expand your  
knowledge in modern  
web application security  
testing through 150  
hours of the best  
theoretical, practical  
and additional content"*

#### When the change occurs



#### Type of change



### Salary increase

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This program represents a salary increase of more than **25.55%** for our students



10

# Benefits for Your Company

This program contributes to elevating the organization's talent to its maximum potential through the instruction of high-level leaders.

In addition, participating in this university option is a unique opportunity to access a powerful network of contacts in which to find future professional partners, customers or suppliers.



“

*In the digital era, managers must integrate new processes and strategies that bring about significant changes and organizational development. This is only possible through university specialization and updating"*

Developing and retaining talent in companies is the best long-term investment.

01

### **Growth of talent and intellectual capital**

The professional will introduce the company to new concepts, strategies, and perspectives that can bring about significant changes in the organization.

---

02

### **Retaining high-potential executives to avoid talent drain**

This program strengthens the link between the company and the professional and opens new avenues for professional growth within the company.

03

### **Building agents of change**

You will be able to make decisions in times of uncertainty and crisis, helping the organization overcome obstacles.

---

04

### **Increased international expansion possibilities**

Thanks to this program, the company will come into contact with the main markets in the world economy.





05

### **Project Development**

The professional can work on a real project or develop new projects in the field of R & D or business development of your company.

---

06

### **Increased competitiveness**

This program will equip students with the skills to take on new challenges and drive the organization forward.

11

# Certificate

The Postgraduate Advanced Web Hacking del Programa 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 Advanced Web 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 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 Advanced Web Hacking**

Official N° 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  
virtual classroom



## Postgraduate Certificate Advanced Web Hacking

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