Postgraduate Diploma
Advanced Web Hacking

tech technological university

Postgraduate Diploma
Advanced Web Hacking

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

Website: **www.techtitute.com/us/information-technology/postgraduate-diploma/postgraduate-diploma-advanced-web-hacking**

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01

Introduction

As institutions expand digitally, they are increasingly using technology to store sensitive data. Thus, Advanced Hacking becomes a serious threat to institutions. If hackers gain access to your websites, the consequences can be dire, ranging from identity theft to financial fraud and blackmail. Therefore, it is important for companies to have experts in advanced security measures, for the implementation of measures such as firewalls. In response to this, TECH is launching an innovative program to help students master the most effective cybersecurity techniques. In addition, it is based on a 100% online modality, guaranteeing convenience and time flexibility.

You will transform any company into a secure environment, free of cyber threats, thanks to this Postgraduate Diploma"

IT specialists are a valuable intangible asset for today's organizations. One of the main reasons is that regular audits help to identify and address potential vulnerabilities in advance. In this way, they stay ahead of crimes that hackers may commit, while turning online environments into secure zones.

In this way, users are guaranteed to be able to safely and freely navigate their network and purchase both goods and services. However, in view of the increase in these practices, computer scientists face the challenge of constantly updating their knowledge, implementing the most revolutionary techniques to deal with them.

In this context, TECH has developed the most complete Postgraduate Diploma in Advanced Web Hacking in the academic market. Through this program, graduates will be at the forefront of cybersecurity and will have a wide range of tactics to protect restricted information. In addition, strategies for exploiting sophisticated vulnerabilities will be discussed in depth.

The professional will also focus on implementing effective security measures, such as intrusion detection systems. Emphasis will also be placed on switching to interconnect equipment from all sections of the organization chart on the same network. Likewise, the keys to writing technical and executive reports will be provided. In this regard, we will delve into how to expose sensitive data, focusing the report on customers. Finally, various methodologies for measuring actual operational safety will be explored.

To consolidate the mastery of the contents, this training applies the innovative Relearning system, which promotes the assimilation of complex concepts through the natural and progressive reiteration of the same. The program is also supported by materials in various formats, such as infographics and explanatory videos. All this in a convenient 100% online modality, which allows each person to adjust his or her schedule to his or her responsibilities.

This **Postgraduate Diploma in Advanced Web 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 experts in Advanced Web Hacking
- The graphic, schematic and eminently practical content of the system provides complete and practical information on those 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

You will crack passwords that have been stored on computers and anticipate hacker attacks"

You will delve into DOM vulnerabilities and prevent advanced attacks with the most effective strategies.

" You will explore the OSI model and understand the communication processes in network systems. And in just 6 months!"

Forget about memorizing! With the Relearning methodology you will integrate the concepts in a natural and progressive way.

The program's teaching staff includes professionals from the field who contribute their work experience to this educational 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 during the academic year For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

02
Objectives

This curriculum will delve into advanced hacking techniques targeting web services, enabling professionals to implement the most effective strategies before computer attacks occur. To achieve this, the fundamental principles of network design will be analyzed and common weaknesses will be identified. In this way, graduates will offer the most innovative solutions and stand out in a digital sector that is advancing by leaps and bounds. solutions and stand out in a digital sector that is advancing by leaps and bounds.

"Do you want to secure the network and the data transmitted on it? Dominates switching with the world's best digital university, according to Forbes"

General Objectives

- Acquire advanced skills in penetration testing and Red Team simulations, addressing the identification and exploitation of vulnerabilities in systems and networks
- Develop leadership skills to coordinate teams specialized in offensive cybersecurity, optimizing the execution of Pentesting and Red Team projects
- Develop skills in the analysis and development of malware, understanding its functionality and applying defensive and educational strategies
- Refine communication skills by preparing detailed technical and executive reports, presenting findings effectively to technical and executive audiences
- Promote an ethical and responsible practice in the field of cybersecurity, considering ethical and legal principles in all activities
- Keep students up-to-date with emerging trends and technologies in cybersecurity

Specific Objectives

Module 1. Advanced Web Hacking

- Develop skills to identify and assess vulnerabilities in web applications, including SQL injections, Cross-Site Scripting (XSS) and other common attack vectors
- Learn how to perform security testing on modern web applications
- Acquire skills in advanced web hacking techniques, exploring strategies for evading security measures and exploiting sophisticated vulnerabilities
- Familiarize the graduate with the evaluation of security in APIs and web services, identifying possible points of vulnerability and strengthening security in programming interfaces
- Develop skills to implement effective mitigation measures in web applications, reducing exposure to attacks and strengthening security
- Participate in hands-on simulations to assess security in complex web environments, applying knowledge to real-world scenarios
- Develop competencies in the formulation of effective defense strategies to protect web applications against cyber threats
- Learn how to align advanced web hacking practices with relevant security regulations and standards, ensuring adherence to legal and ethical frameworks
- Foster effective collaboration between development and security teams

You will apply the most effective security measures and avoid vulnerabilities such as Broken Authentication. Enroll now!"

Module 2. Network Architecture and Security

- Acquire advanced knowledge of network architecture, including topologies, protocols and key components

- Develop skills to identify and assess specific vulnerabilities in network infrastructures, considering potential threats

- Learn how to implement effective network security measures, including firewalls, intrusion detection systems (IDS) and network segmentation

- Familiarize the student with emerging networking technologies, such as software-defined networking (SDN), and understand their impact on security

- Develop skills to secure network communications, including protection against threats such as sniffing and man-in-the-middle attacks

- Learn how to evaluate and improve security configurations in enterprise network environments, ensuring adequate protection

- Develop skills to implement effective mitigation measures against threats in enterprise networks, from internal attacks to external threats

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

- Promote ethical and legal practices in the implementation of network security measures, ensuring adherence to ethical principles in all activities

Module 3. Technical and Executive Report

- Develop skills to prepare detailed technical reports, presenting clearly and completely the findings, methodologies used and recommendations

- Learn to communicate effectively with technical audiences, using precise and appropriate language to convey complex technical information

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

- Learn to assess the potential impact of identified vulnerabilities, considering technical, operational and strategic aspects

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

- Develop competencies to align findings and recommendations with the strategic and operational objectives of the organization

- Learn how to use data visualization tools to graphically represent the information contained in the reports, facilitating comprehension

- Promote the inclusion of relevant information on compliance with regulations and standards in reports, ensuring adherence to legal requirements

- Foster effective collaboration between technical and executive teams, ensuring understanding and support for the improvement actions proposed in the report

03
Course Management

With the aim of offering educational excellence, TECH has assembled a teaching team with a broad professional background in cybersecurity. With more than 13 years of experience, these specialists will offer the most comprehensive approach and the latest tools to develop secure online environments. In this way, students will have the guarantees they need to specialize in a digital sector that offers multiple opportunities.

" You will delve into the limits of the Pentester with the support of the best teaching staff. Your activities will be 100% legal!"

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 Training Cycles in cybersecurity

Professors

Mr. Marcelino Siles Rubia

- Cibersecurity Engineer
- Cybersecurity Engineering at the Rey Juan Carlos University
- Knowledge: Competitive Programming, Web Hacking, Active Directory, and Malware Development
- AdaByron Contest Winner

Mr. Pablo Redondo Castro

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

04
Structure and Content

This program comprises 3 complete modules: Advanced Web Hacking; Network Architecture and Security; and Technical and Executive Reporting. With the support of veteran faculty, advanced tactics for securing enterprise networks through the implementation of firewalls will be addressed. Intrusion detection, including HHTP Request Smuggling, will also be further developed. The importance of having VLANs to separate data traffic in the same online environment will also be discussed, and the reporting process will be explored in order to present accurate and detailed reports.

"
You will access a learning system based on repetition, with a natural and progressive teaching throughout the entire syllabus"

Module 1. Advanced Web Hacking

Module 2. Network Architecture and Security

Module 3. Technical and Executive Report

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.

01 learning from evidence

02 relearning from evidence

03 testing

04 learning from an expert

05 neurocognitive context dependent learning

06 Von-Restorff effect

07 case based learning through storytelling

08 competencies testing (retesting)

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.

30%

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.

10%

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.

8%

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.

20%

25%

4%

3%
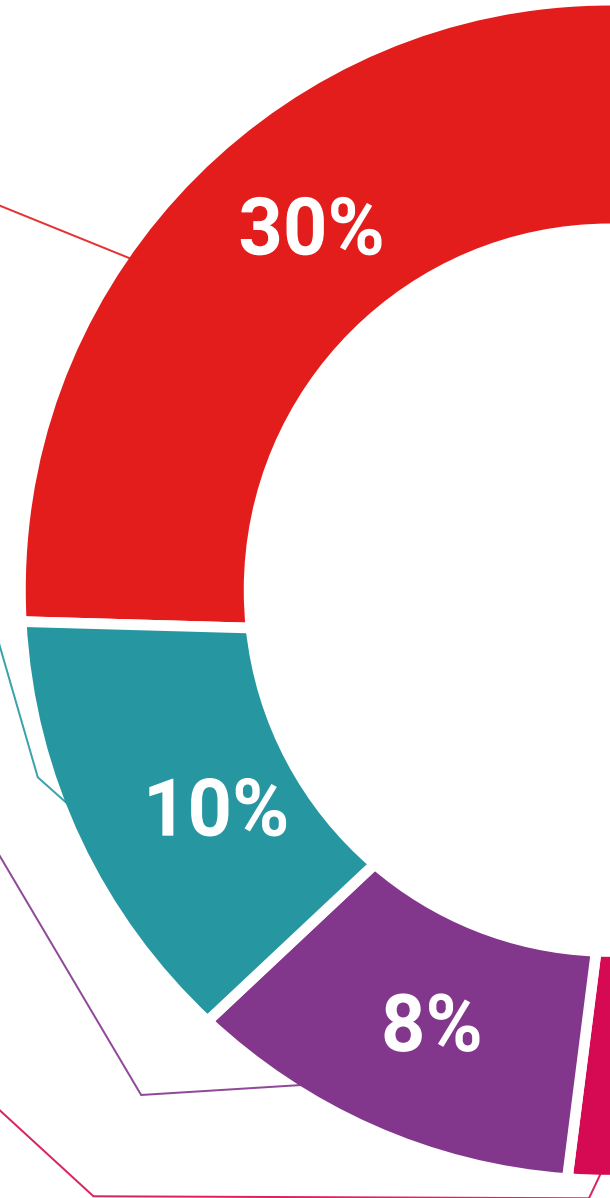
Case Studies

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.

Certificate

The Postgraduate Diploma in Advanced Web Hacking guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma 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 Diploma in Advanced Web Hacking** contains the most complete and up-to-date Postgraduate Certificate in the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Diploma** issued by **TECH Technological University** via tracked delivery*.

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

Title: **Postgraduate Diploma in Advanced Web Hacking**

Official Nº of hours: **450 h.**

tech technological university

Awards the following

DIPLOMA

to

Mr./Ms. _____, with identification number _____.
For having passed and accredited the following program

POSTGRADUATE DIPLOMA

in

Advanced Web Hacking

This is a qualification awarded by this University, equivalent to 450 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 diploma issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

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