Postgraduate Certificate

Security and Auditing of Applications and Web Services

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Postgraduate Certificate
Security and Auditing of Applications and Web Services

- Modality: **online**
- Duration: **2 months**
- Certificate: **TECH Technological University**
- Schedule: **at your own pace**
- Exams: **online**

Website: www.techtitute.com/information-technology/postgraduate-certificate/security-auditing-applications-web-services

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01

Introduction

Nowadays, security in web applications and services is of vital importance, for this reason, the knowledge required for a correct execution of the process is becoming more and more demanding and rigorous. That is why, through studying this course, IT professionals will be able to perform system and network audits to protect web applications.

This Postgraduate Certificate is the best investment you can make when selecting a refresher program in the field of Security and Auditing of Applications and Web Services. We offer you quality and free access to content"

This comprehensive program in Security and Auditing of Applications and Web Services will allow professionals in the IT industry to deepen their understanding and learn about the processes of management and monitoring of quality and secure software that meets the predefined requirements.

Throughout the months of this course, students will learn risk mitigation measures, as well as the methodologies for the implementation of an Information Security Management System and the norms and standards to be used. In addition, students will acquire the knowledge to implement development techniques for online applications.

With this program, the student will have access to the most advanced teaching resources and will have the opportunity to study a program that brings together the most in-depth knowledge in the field. A group of highly scientifically qualified professors with extensive international experience will provide students with the most complete and up-to-date information on the latest advances and techniques in Software and Computer Systems Engineering.

The syllabus covers the main current topics in Software and Computer Systems Engineering in such a way that whoever masters them will be prepared to work in this field. Therefore, it is not just another diploma in your backpack, but a real learning tool to approach the topics of the specialty in a modern, objective way and with the ability to make a judgment based on today's most cutting-edge information.

It should be noted that since this is a 100% online Postgraduate Certificate, the student is not conditioned by fixed schedules or the need to move to another physical location, but can access the contents at any time of the day, balancing their work or personal life with their academic life.

This **Postgraduate Certificate in Security and Auditing of Applications and Web Services** contains the most complete and up-to-date educational program on the market. The most important features include:

- The development of case studies presented by experts in Security and Auditing of Applications and Web Services
- 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 self-assessment can be used to improve learning
- Special emphasis on innovative methodologies in Security and Auditing of Applications and Web Services
- 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

Learn to design, evaluate and manage software engineering projects thanks to this high-quality program”

Specialize in computer systems with the help of professionals with extensive experience in the sector"

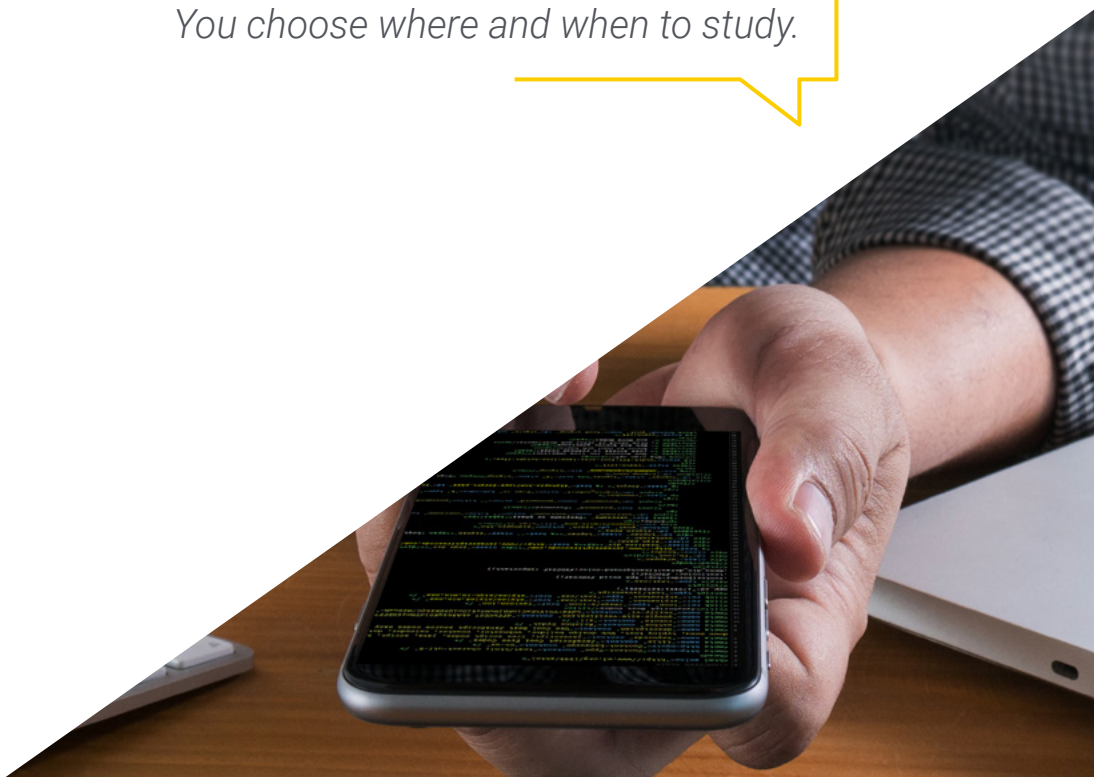
This program comes with the best educational material, providing you with a contextual approach that will facilitate your learning.

This 100% online Postgraduate Certificate will allow you to combine your studies with your professional work. You choose where and when to study.

The program includes in its teaching staff professionals from the field of Security and Auditing of Applications and Web Services, who contribute the experience of their work 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 learning programmed to study 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. For this purpose, the professional will be assisted by an innovative interactive video system developed by renowned and experienced experts in Security and Auditing of Applications and Web Services.



02

Objectives

The Postgraduate Certificate in Security and Auditing of Applications and Web Services is oriented to facilitate the performance of the professionals so that they acquire knowledge of the main developments in this field, which will allow them to practice their profession with the highest quality and professionalism.

Our goal is for you to become the best professional in your sector and for this we have the best methodology and content"

General Objectives

- Acquire new knowledge in Software and Computer Systems Engineering
- Acquire new skills in terms of new technologies and the latest software developments
- Process the data generated in Software and Computer Systems Engineering activities

Join us and we will help you achieve professional excellence"

Specific Objectives

- Acquire the knowledge required for the correct execution of the audit process and internal computer control
- Understand the processes to carry out for the security audit in systems and networks
- Understand the different support tools, methodologies and subsequent analysis during internet and mobile device security auditing
- Learn the properties and influencing factors that condition business risks and determine the correct implementation of appropriate risk management
- Know the risk mitigation measures, as well as the methodologies for the implementation of an Information Security Management System and the norms and standards to be used
- Understand the procedures for conducting the security audit, its traceability and presentation of results
- Acquire the knowledge required to evaluate and detect the vulnerabilities of online applications
- Understand the security policies and standards to be applied to online applications
- Know the procedures to use during the development of web applications and their subsequent evaluation through analysis and security tests
- Learn the security measures for the deployment and production of web applications
- Understand the concepts, functions and technologies to be applied in the security of web services, as well as security tests and protective measures
- Assimilate the procedures for ethical *hacking*, *malware* analysis and forensics
- Know the mitigation and containment measures for incidents on web services
- Acquire the knowledge to implement development techniques for online applications

03

Course Management

This academic program includes the most specialized teaching staff in the current educational market. They are specialists selected by TECH to develop the whole syllabus. In this way, starting from their own existence and the latest evidence, they have designed the most up-to-date content that provides a guarantee of quality in such a relevant subject.

TECH offers the most specialized teaching staff in the field of study. Enroll now and enjoy the quality you deserve"

International Guest Director

Darren Pulsipher is a highly experienced software architect, an innovator with an outstanding international track record in software and firmware development. In fact, he possesses highly developed communication, project management and business skills, which have enabled him to lead major global initiatives.

He has also held senior positions of great responsibility throughout his career, such as Chief Solution Architect for the Public Sector at Intel Corporation, where he has promoted modern business, processes and technologies for customers, partners and users in the public sector. In addition, he founded Yoly Inc. where he has also served as CEO, working to develop a social network aggregation and diagnostic tool based on Software as a Service (SaaS), using Big Data and Web 2.0 technologies.

Additionally, he has served in other companies, as Senior Director of Engineering, at Dell Technologies, where he led the Big Data in the Cloud Business Unit, leading teams in the United States and China for the management of large projects and the restructuring of business divisions for their successful integration. He has also worked as Chief Information Officer at XanGo, where he managed projects such as Help Desk support, production support and solution development.

Among the many specialties in which he is an expert, Edge to Cloud technology, cybersecurity, Generative Artificial Intelligence, software development, networking technology, cloud-native development and the container ecosystem stand out. Knowledge he has shared through the "Embracing Digital Transformation" podcast and weekly newsletter, which he produced and hosted, helping organizations successfully navigate digital transformation by leveraging people, processes and technology.

Dr. Pulsipher, Darren

- Chief Solution Architect for Public Sector at Intel, California, United States
- Presenter and Producer of "Embracing Digital Transformation", California
- Founder and CEO at Yoly Inc., Arkansas
- Senior Director of Engineering at Dell Technologies, Arkansas
- Chief Information Technology Officer, XanGo, Utah
- Senior Architect at Cadence Design Systems, California
- Senior Project Process Manager at Lucent Technologies, California
- Software Engineer at Cemax-Icon, California
- Software Engineer at ISG Technologies, Canada
- MBA in Technology Management from the University of Phoenix, Phoenix, California
- B.S. in Computer Science and Electrical Engineering from Brigham Young University

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

04

Structure and Content

The structure of the contents has been designed by the best professionals in the sector, with extensive experience and recognized prestige in the profession, and aware of the benefits that the latest educational technology can bring to higher education.

We have the most complete and up-to-date program on the market. We strive for excellence and for you to achieve it too"

Module 1. Security Audit

1.1. Introduction to Information Systems in the Company
- 1.1.1. Introduction to Information Systems in the Company and the Role of IT Auditing
- 1.1.2. Definitions of "IT Audit" and "IT Internal Control"
- 1.1.3. Functions and Objectives of IT Auditing
- 1.1.4. Differences between Internal Control and IT Auditing

1.2. Internal Controls of Information Systems
- 1.2.1. Functional Flowchart of a Data Processing Center
- 1.2.2. Classification of Information Systems Controls
- 1.2.3. The Golden Rule

1.3. The Process and Phases of the Information Systems Audit
- 1.3.1. Risk Assessment and Other IT Auditing Methodologies
- 1.3.2. Execution of an Information Systems Audit. Phases of the Audit
- 1.3.3. Fundamental Skills of the Auditor of an IT System

1.4. Technical Audit of Security in Systems and Networks
- 1.4.1. Technical Security Audits. Intrusion Test. Previous Concepts
- 1.4.2. Security Audits in Systems. Support Tools
- 1.4.3. Security Audits in Networks. Support Tools

1.5. Technical Audit of Security on the Internet and in Mobile Devices
- 1.5.1. Internet Security Audit. Support Tools
- 1.5.2. Mobile Devices Security Audit. Support Tools
- 1.5.3. Annex 1. Structure of an Executive Report and Technical Report
- 1.5.4. Annex 2. Tools Inventory
- 1.5.5. Annex 3. Methods

1.6. Information Security Management System
- 1.6.1. Security of IS: Properties and Influential Factors
- 1.6.2. Business Risks and Risk Management: Implementing Controls
- 1.6.3. Information Security Management System (ISMS): Concept and Critical Success Factors
- 1.6.4. ISMS-PDCA Model
- 1.6.5. ISMS ISO-IEC 27001: Organizational Context
- 1.6.6. Annex 4. Context of the Organization
- 1.6.7. Annex 5. Leadership
- 1.6.8. Annex 6. Planning
- 1.6.9. Annex 7. Support
- 1.6.10. Annex 8. Operation
- 1.6.11. Annex 9. Performance Evaluation
- 1.6.12. Annex 10. Improvement
- 1.6.13. Annex to ISO 27001/ISO-IEC 27002: Objectives and Controls
- 1.6.14. ISMS Audit

1.7. Carrying Out the Audit
- 1.7.1. Procedures
- 1.7.2. Techniques

1.8. Traceability
- 1.8.1. Methods
- 1.8.2. Analysis

1.9. Copyright
- 1.9.1. Techniques
- 1.9.2. Results

1.10. Reports and Presenting Proof
- 1.10.1. Types of Reports
- 1.10.2. Data Analysis
- 1.10.3. Presenting Proof

Module 2. Online Application Security

2.1. Vulnerabilities and Security Issues in Online Applications
- 2.1.1. Introduction to Online Application Security
- 2.1.2. Security Vulnerabilities in the Design of Web Applications
- 2.1.3. Security Vulnerabilities in the Implementation of Web Applications
- 2.1.4. Security Vulnerabilities in the Deployment of Web Applications
- 2.1.5. Official Lists of Security Vulnerabilities

2.2. Policies and Standards for Online Application Security
- 2.2.1. Pillars for the Security of Online Applications
- 2.2.2. Security Policy
- 2.2.3. Information Security Management System
- 2.2.4. Secure Software Development Life Cycle
- 2.2.5. Standards for Application Security

2.3. Security in the Design of Web Applications
- 2.3.1. Introduction to Web Application Security
- 2.3.2. Security in the Design of Web Applications

2.4. Testing the Online Safety and Security of Web Applications
- 2.4.1. Web Application Security Testing and Analysis
- 2.4.2. Web Application Deployment and Production Security

2.5. Web Services Security
- 2.5.1. Introduction to Web Services Security
- 2.5.2. Web Services Security Functions and Technologies

2.6. Testing the Online Safety and Security of Web Services
- 2.6.1. Evaluation of Web Services Security
- 2.6.2. Online Protection. Firewalls and XML Gateways

2.7. Ethical Hacking, Malware and Forensics
- 2.7.1. Ethical Hacking
- 2.7.2. Malware Analysis
- 2.7.3. Forensic Analysis

2.8. Incident Resolution on Web Services
- 2.8.1. Monitoring
- 2.8.2. Performance Measurement Tools
- 2.8.3. Containment Measures
- 2.8.4. Root Cause Analysis
- 2.8.5. Proactive Problem Management

2.9. Best Practices to ensure Application Security
- 2.9.1. Handbook of Best Practices in the Development of Online Applications
- 2.9.2. Handbook of Good Practices in the Implementation of Online Applications

2.10. Common Errors that Undermine Application Security
- 2.10.1. Common Errors in Development
- 2.10.2. Common Errors in Hosting
- 2.10.3. Common Production Errors

A comprehensive and multidisciplinary program that will allow you to excel in your career, following the latest advances in the field of Security and Auditing of Applications and Web Services"

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

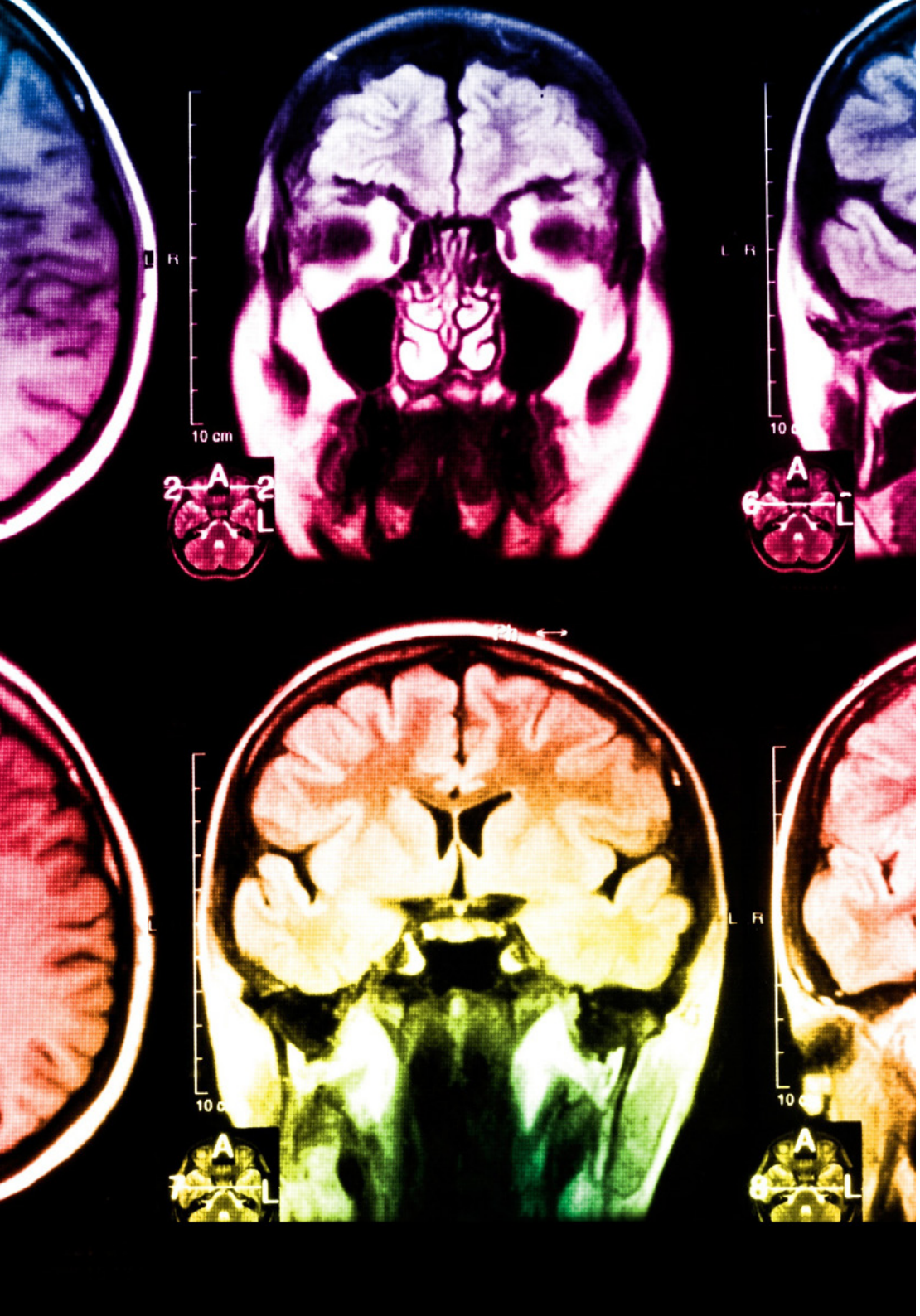
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines different teaching elements in each lesson.

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 adapted in 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.

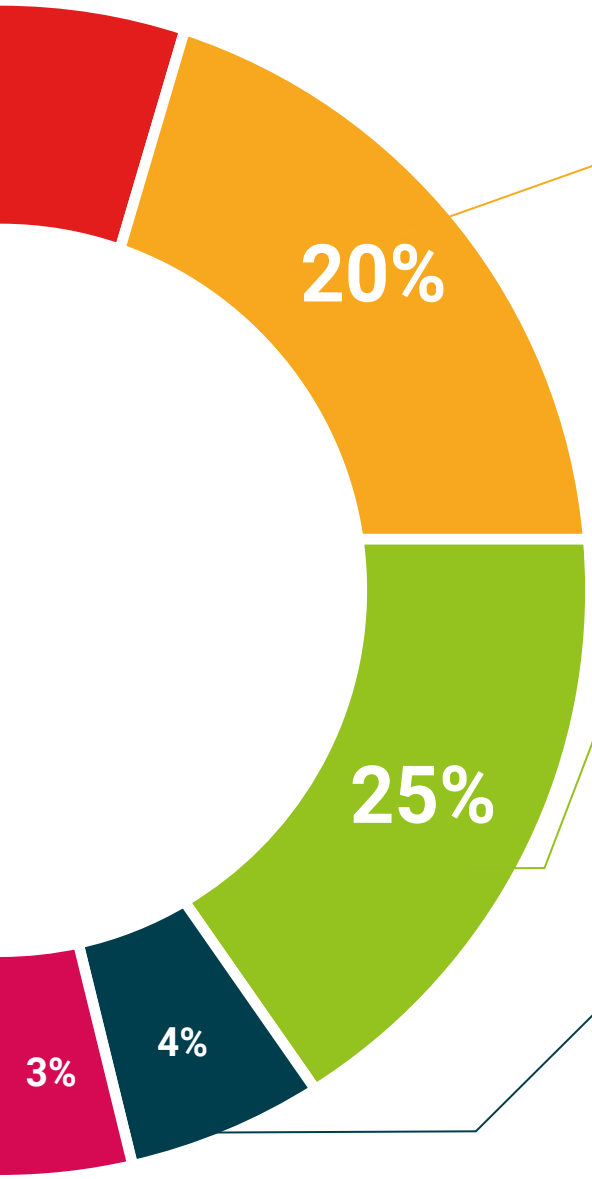
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

Practising Skills and Abilities

They will carry out activities to develop specific competencies and skills in each thematic 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 Security and Auditing of Applications and Web Services 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 Security and Auditing of Applications and Web Services** contains the most complete and up-to-date educational 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 Security and Auditing of Applications and Web Services**

Official Nº of Hours: **300 h.**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Awards the following

DIPLOMA

to

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

For having passed and accredited the following program

POSTGRADUATE CERTIFICATE

in

Security and Auditing of Applications and Web Services

This is a qualification awarded by this University, equivalent to 300 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

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country.

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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