

Postgraduate Certificate Secure Development in Cybersecurity





Postgraduate Certificate Secure Development in Cybersecurity

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

Website: www.techtitude.com/in/school-of-business/postgraduate-certificate/secure-development-cybersecurity

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01 Welcome

Developing quality and secure software code is essential to avoid potential cyber-attacks, since in today's application ecosystem, any vulnerability in the code or system can lead to data loss, exposure or theft, as well as other cyber-attack damage. Professionals working in this field must have a good understanding of the different environments and phases that their code can go through and ensure that it works as efficiently and securely as possible. They must know the needs and dependencies required for their application to run properly, and try to minimize the use of modules and functions, to reduce the attack surface. Understanding the methodologies and the type of tests to perform will therefore decrease the time needed to resolve issues and verify code. All this is what TECH has managed to compile in this program, which will prove a useful guide to follow when performing these tasks.



Postgraduate Certificate in Secure Development in Cybersecurity.
TECH Technological University



“

*Improve your cybersecurity education
and learn secure software development”*

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 centre for intensive managerial skills training.



“

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 combines 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.

100,000+

executives trained 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:



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 (a postgraduate learning methodology with the highest international rating) with the Case Study. A complex balance between tradition and state-of-the-art, within the context of the most demanding academic 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.



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 studies in the academic community"

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 training of the highest academic level"

This program will provide students with a multitude of professional and personal advantages, particularly the following:

01

A significant career boost

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 participants achieve positive career development in less than 2 years.

02

Develop a strategic and global vision of companies

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

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

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 areas 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

Be part of an exclusive community

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

We give you the opportunity to train with a team of world renowned teachers.

04 Objectives

This program includes the best information on the market and the latest teaching resources with the sole purpose of offering students high quality, practical training. TECH intends to offer students theses necessary tools so they can apply them to their daily work and thus stand out among their competitors. Undoubtedly, a unique program that will help students achieve academic and professional excellence.



“

*A program that will be fundamental
to your professional development
in the area of cybersecurity”*

Your goals are our goals.

We work together to help you achieve them.

The **Postgraduate Certificate in Secure Development in Cybersecurity** qualifies students to:

01

Determine the guidelines that a good developer must follow to comply with security requirements

02

Establish an appropriate methodology for developers and the production environment alike

03

Specify the tests to be carried out on the software being developed

04

Establish the requirements for an application to run properly and securely

05

Examine log files to understand error messages



06

Analyze different events and decide what to show users and what to keep in the logs

08

Evaluate the appropriate documentation for each developmental phase

09

Specify server behavior to optimize the system

07

Generate sanitized, easily verifiable, quality code

10

Develop modular, reusable and maintainable code



05

Structure and Content

This TECH Postgraduate Certificate in Secure Development in Cybersecurity has been structured as a high quality academic path to access the most up to date concepts in the field. A program that includes the most complete theoretical information available today alongside a large amount of practical content that will be essential for our students learning. In this way, they will be able to work autonomously, self managing their time and study.



“

It provides a high quality academic tour of the most up to date concepts in the field”

Syllabus

The Postgraduate Certificate in Secure Development in Cybersecurity is an intensive program that prepares students to face challenges and business decisions in computer security. Its content is designed to promote the development of managerial skills that enable more rigorous decision-making in uncertain environments.

Throughout 150 hours of study, you will analyze a multitude of practical cases through individual work, which will allow you to acquire the necessary skills to develop successfully in your daily practice. It is, therefore, an authentic immersion in real business situations.

This program deals with the different areas of a company in depth, and it is designed for managers to understand cybersecurity from a strategic, international and innovative perspective.

A study plan designed especially for students, focused on their professional development, which prepares them to achieve excellence in the field of information security management and administration. A program that understands your needs and those of your company through innovative content based on the latest trends, and supported by the best educational methodology and an exceptional faculty, which will provide you with the competencies to solve critical situations in a creative and efficient way.

The program is carried out in six weeks and is divided into one module:

Module 1

Secure Development



Where, When and How is it Taught?

TECH offers the possibility of developing this Postgraduate Certificate in Secure Development in Cybersecurity Management completely online. Over the course of 6 weeks, you will be able to access all the contents of this program at any time, allowing you to self-manage your study time.

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

Module 1. Secure Development

1.1. Secure Development

- 1.1.1. Quality, Functionality and Security
- 1.1.2. Confidentiality, Integrity and Availability
- 1.1.3. Software Development Life Cycle

1.2. Requirements Phase

- 1.2.1. Authentication Control
- 1.2.2. Roles and Privileges Control
- 1.2.3. Risk-Oriented Requirements
- 1.2.4. Privilege Approvals

1.3. Analysis and Design Phase

- 1.3.1. Component Access and System Administration
- 1.3.2. Audit Trails
- 1.3.3. Session Management
- 1.3.4. Historical Data
- 1.3.5. Adequate Error Handling
- 1.3.6. Separating Functions

1.4. Implementation and Coding Phase

- 1.4.1. Securing Development Environments
- 1.4.2. Preparing Technical Documentation
- 1.4.3. Secure Codification
- 1.4.4. Communications Security

1.5. Best Secure Coding Practices

- 1.5.1. Input Data Validation
- 1.5.2. Output Data Coding
- 1.5.3. Programming Styles
- 1.5.4. Changelog Management
- 1.5.5. Cryptographic Practices
- 1.5.6. Error and Log Management
- 1.5.7. File Management
- 1.5.8. Memory Management
- 1.5.9. Standardization and Reuse of Security Functions

1.6. Server Preparation and Hardening

- 1.6.1. Managing Users, Groups and Roles on Servers
- 1.6.2. Software Installation
- 1.6.3. Server Hardening
- 1.6.4. Robust Configuration of Application Environments

1.7. Preparing Databases and Hardening

- 1.7.1. Database Engine Optimization
- 1.7.2. Creating Personal User Accounts on Applications
- 1.7.3. Assigning Specific User Privileges
- 1.7.4. Database Hardening

1.8. Testing Phase

- 1.8.1. Quality Control in Security Controls
- 1.8.2. Code Inspection by Phases
- 1.8.3. Configuration Management Check
- 1.8.4. Black Box Testing

1.9. Preparing the Transition to Production

- 1.9.1. Change Control
- 1.9.2. Production Changeover Procedure
- 1.9.3. Rollback Procedure
- 1.9.4. Pre-Production Testing

1.10. Maintenance Phase

- 1.10.1. Risk-Based Assurance
- 1.10.2. White Box Safety Maintenance Testing
- 1.10.3. Black Box Safety Maintenance Testing



“

*An excellent academic journey that
will help you specialize in the field”*

06 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.



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

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.

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

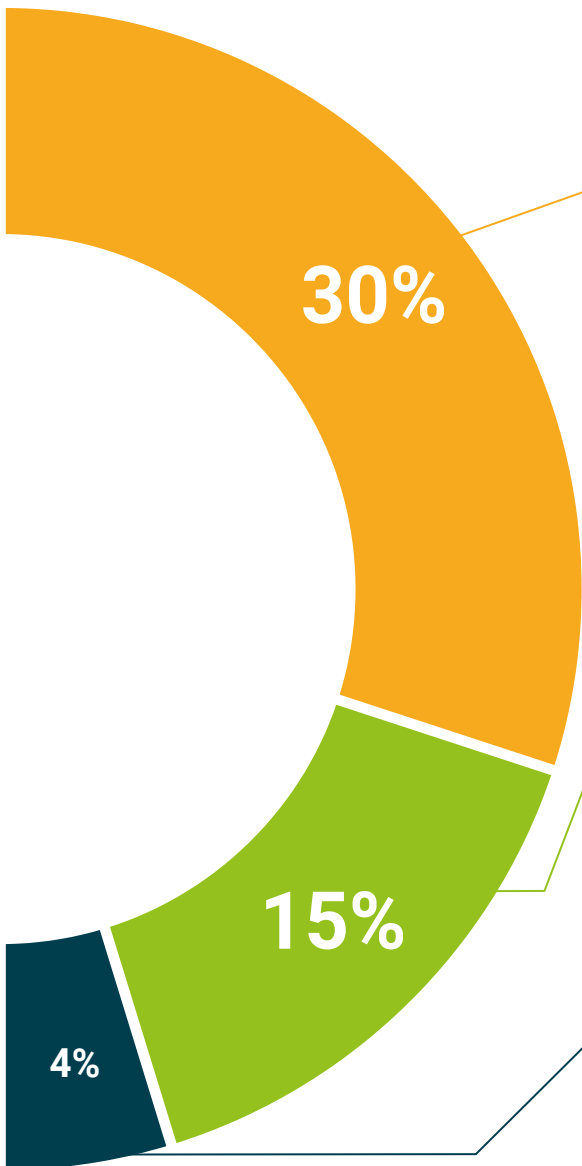
They will carry out activities to develop specific executive competencies in each thematic area. Practices and dynamics to acquire and develop the skills and abilities that a high-level manager needs to develop in the context of the globalization we live in.



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

This TECH Technological University Postgraduate Certificate in Secure Development in Cybersecurity is aimed at students with extensive professional experience that are looking for a way to update their knowledge through a high level academic program. People who understand the need to keep their computer systems protected to prevent any potential IT risk or theft of confidential information. And, thus, they decide to specialize in a field of great interest to cybersecurity.



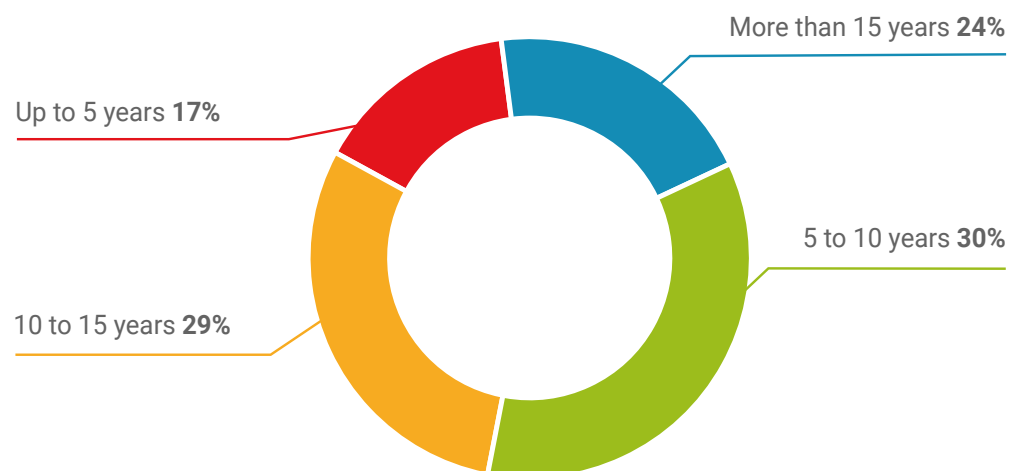
“

*Business professionals will find in this program
a unique opportunity to enhance their training”*

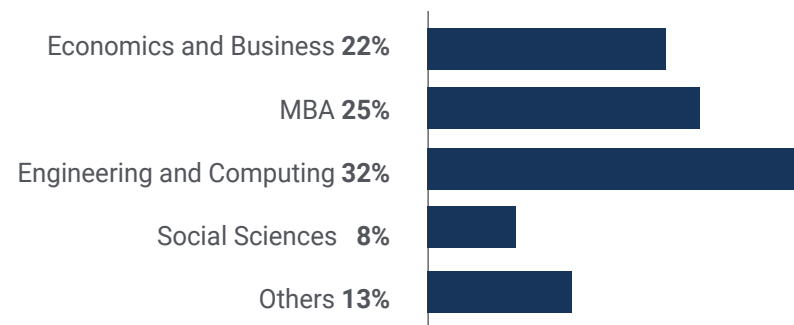
Average Age

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

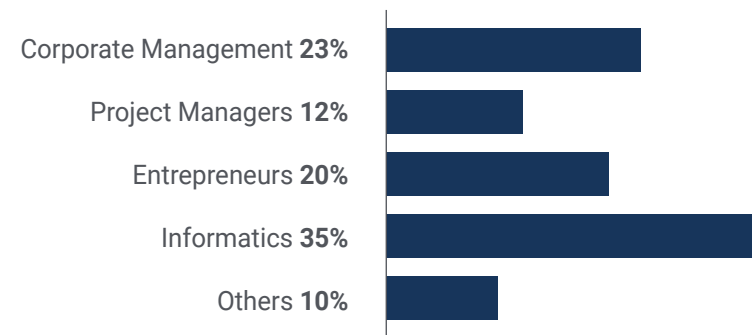
Years of Experience



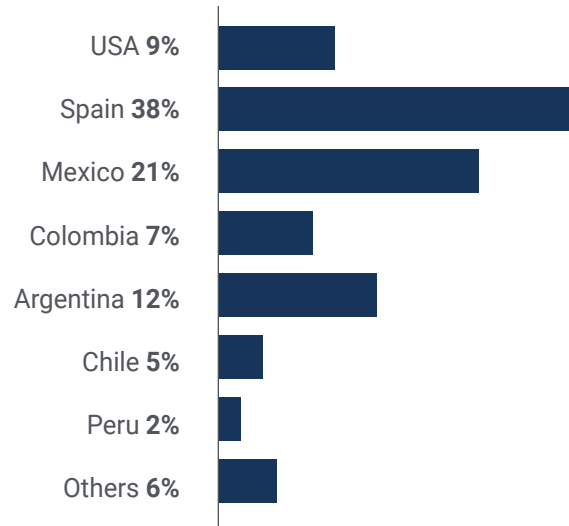
Training



Academic Profile



Geographical Distribution



Jaime Díaz

Chief Revenue Officer

"I looked for a program that would allow me to increase my training in cybersecurity for quite some time, but I never managed to find one as complete as this one, that I could also balance with work. Luckily, TECH gave me the opportunity to improve my knowledge and now I am more confident in my abilities at work"

08

Course Management

This program has been developed by a high level teaching team. Professionals with extensive experience in the field of cybersecurity who have decided to compile the most updated information on Secure Development in Cybersecurity for students to specialize in an area of great relevance, which will allow them to increase the security protection of their computer systems. Undoubtedly, professors who believe in quality teaching through the most advanced teaching methodologies and new technologies applied to education.



“

The best professors are at the best university. Don't miss the opportunity to train under them”

International Guest Director

Dr. Frederic Lemieux is internationally recognized as an innovative expert and inspirational leader in the fields of **Intelligence, National Security, Internal 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 the understanding of today's emerging technologies. During his professional career, he has conceptualized and directed cutting-edge academic programs at various 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 related to **criminal intelligence, policing, 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, counter-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. As such, 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, Georgetown University
- Director of the Master's Degree in Information Technology Management at Georgetown University
- Director of the Master's Degree in Technology Management at Georgetown University
- Director of the Master's Degree in Cybersecurity Risk Management at Georgetown University
- Director of the Master's Degree 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
- Member of, New Program Roundtable Committee, 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 National Reference Center of Getafe in Informatics and Telecommunications Madrid
- ♦ Certified E-Council Instructor Madrid
- ♦ Trainer in the following certifications: EXIN Ethical Hacking Foundation and EXIN Cyber & IT Security Foundation Madrid
- ♦ Accredited Expert Trainer, CAM; 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)
- ♦ External Collaborator CSO/SSA (Chief Security Officer/Senior Security Architect) University of the Balearic Islands
- ♦ IT Engineer Alcalá de Henares University. Madrid
- ♦ Master in DevOps: Docker and Kubernetes Cas-Training Madrid
- ♦ Microsoft Azure Security Technologies E-Council Madrid

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      <div class="afr3">
        <div class="afr4"></div>
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      <p>And we have some question:</p>
      <!-- Add a box here -->
      <label for="subscribe-field">Would you like to recieve the news about our new proposals?</label>
      <input type="submit" value="Send">
    </form>
  </body>
</html>
```

09

Impact on Your Career

Business professionals who wish to expand their knowledge of cybersecurity must be aware of the need of continuing education throughout their working lives, as this is a changing field that requires keeping up with updates and new developments. For this reason, those who enrol in this Postgraduate Certificate will improve their careers and compete with greater confidence and guarantees of success.





“

*A high quality program that will
provide you with the knowledge
you need to succeed in this field"*

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

The TECH Technological University Postgraduate Certificate in Secure Development in Cybersecurity is an intensive and highly valuable program aimed at improving students' professional skills in a fiercely competitive field. Undoubtedly, it is a unique opportunity to improve professionally, but also personally, as it involves effort and dedication.

Those who wish to improve themselves, achieve a positive change at a professional level and interact with the best, will find their place at TECH.

Most TECH students achieve job improvement in a short period of time.

If you are looking to move up in your career, don't think twice and join TECH's educational community.

When the change occurs



Type of change



Salary increase

This program represents a salary increase of more than **25.22%** for our students.



10

Benefits for Your Company

Companies are looking for professionals with extensive experience that can get the job done in an agile and efficient manner; but they also require people who have the necessary qualifications and who are interested in updating their knowledge and improving in their careers. Therefore, the completion of this Postgraduate Certificate will not only be an advantage for students, but also for the companies where they work, as they will be better able to engage in cybersecurity.



“

*Improve your way of working with this
Postgraduate Certificate and bring
significant advantages to your company”*

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

01

Intellectual Capital and Talent Growth

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 executive and opens new avenues for professional growth within the company.

03

Building agents of change

The professional 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

Managers will be able to work on a real project or develop new projects in the R&D or Business Development area of their 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 Certificate in Secure Development in Cybersecurity 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 Secure Development in Cybersecurity** 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 Secure Development in Cybersecurity
Official N° of hours: 150 h.



*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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Postgraduate Certificate

Secure Development in Cybersecurity