



Implementation of IT **Security Policies**

» Modality: online

» Duration: 6 months

» Certificate: TECH Global University

» Credits: 24 ECTS

» Schedule: at your own pace

» Exams: online

» Target Group: University Graduates, Postgraduate Diplomas and Bachelor's Degree Holders who have previously completed any of the qualifications in the fields of Engineering, Computer Science, Administrative and Business Administration.

Website: www.techtitute.com/us/school-of-business/postgraduate-diploma/postgraduate-diploma-implementation-it-security-policies

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01 **Welcome**

Undoubtedly, the rapid progress of digitization and technological advancements has presented significant growth opportunities for companies. However, this development has also brought challenges in effectively ensuring the security of the information and data stored on computing devices or in cloud-based systems. A cyber-attack has the potential to inflict substantial losses and severely damage the reputation of any firm or institution. Indeed, this program aims to equip managers to effectively manage an IT attack in accordance with a pre-established plan, taking into consideration the unique characteristics and available resources of their company. Achieving all of this is made possible through comprehensive theoretical content delivered entirely online. This approach enables you to access the course materials at any time, without the limitations of fixed session schedules. It allows you to pursue high-quality learning while effectively balancing your professional responsibilities. The teaching team of this program comprises highly experienced professionals in the field of cybersecurity. Their expertise allows them to guide professionals, facilitating optimal learning.









tech 08 | Why Study at TECH?

At TECH Global 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

+200

executives prepared each year

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* methodology (the most internationally recognized postgraduate learning methodology) with Harvard Business School case studies. A complex balance of traditional and state-of-the-art methods, within the most demanding academic framework.



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 analyses in academia"





tech 12 | Why Our Program?

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



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.



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.



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.



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.



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.



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.



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.

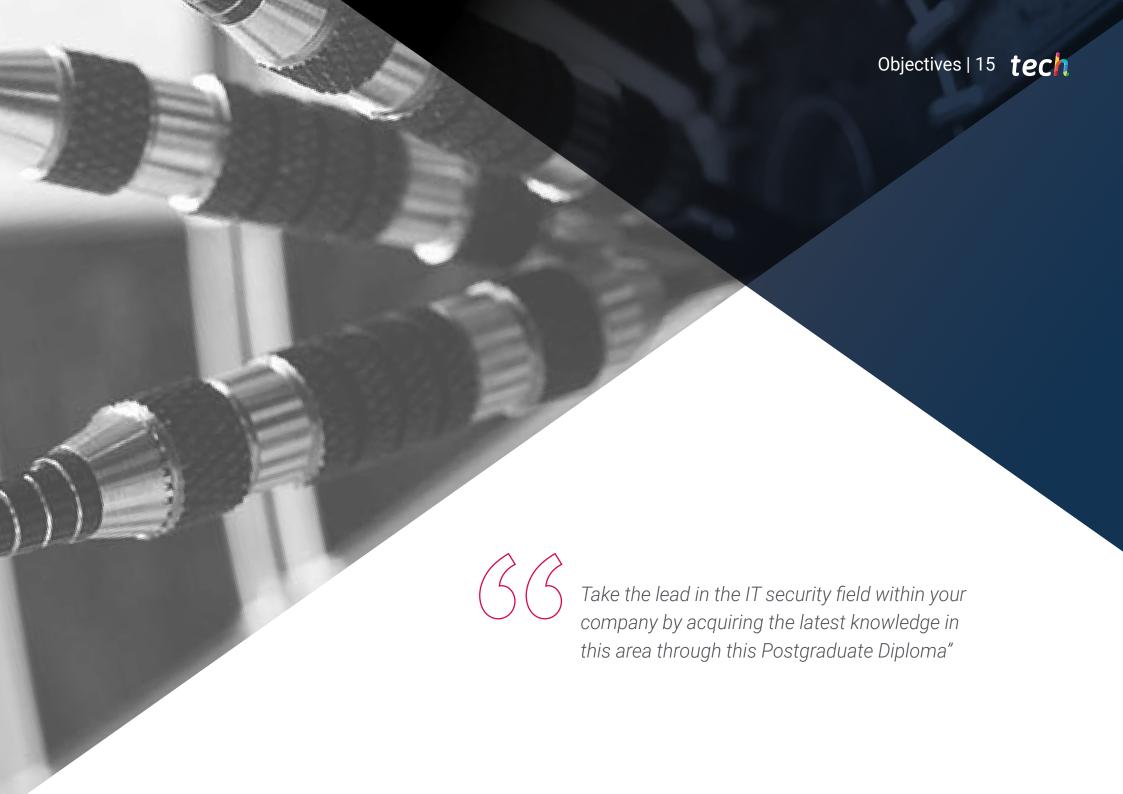


You will be part of an exclusive community

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 Global University community.

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





tech 16 | Objectives

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

This Postgraduate Diploma in Implementation of IT Security Policies will enable the students to:



Implement measures of identification and authorization in systems and software



Identify the Active Directory systems and various parallel authentication systems



Analyze the various existing technologies for identification and authorization

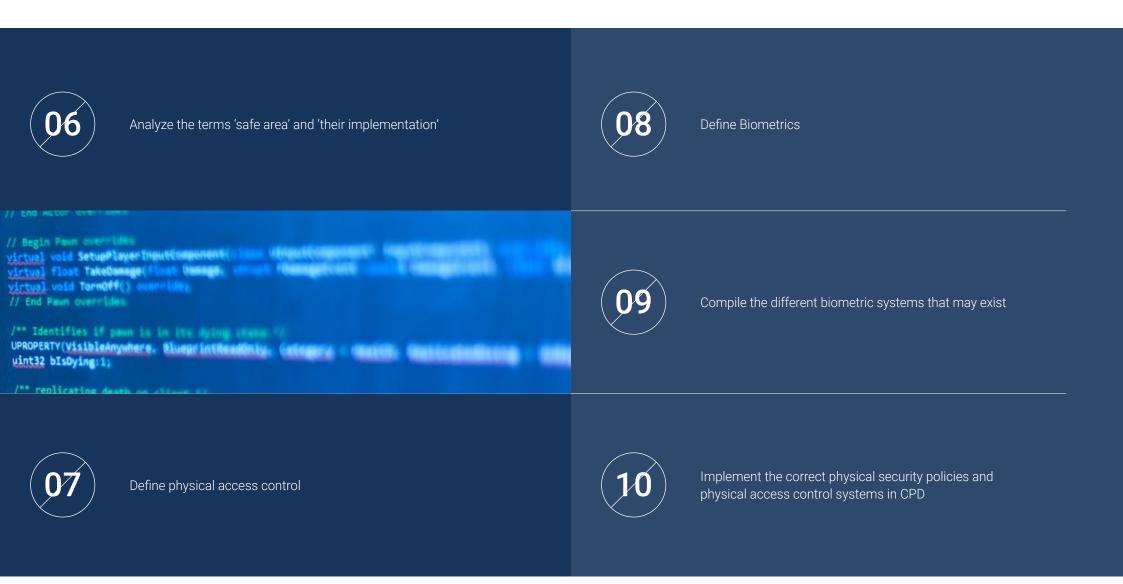




Implement an effective access control policy for networks and services



Implement CIS controls and policies for hardware and software security, including measures for controlling malicious codes





Develop regulations on physical security and secure areas



Implementing a secure network infrastructure



Define cryptography and explore different types of cryptography







Analyze the cryptographic algorithms utilized in communication networks

15

Design various secure communication protocols

16

Analyze the operation of TLS 1.3

tech 20 | Objectives



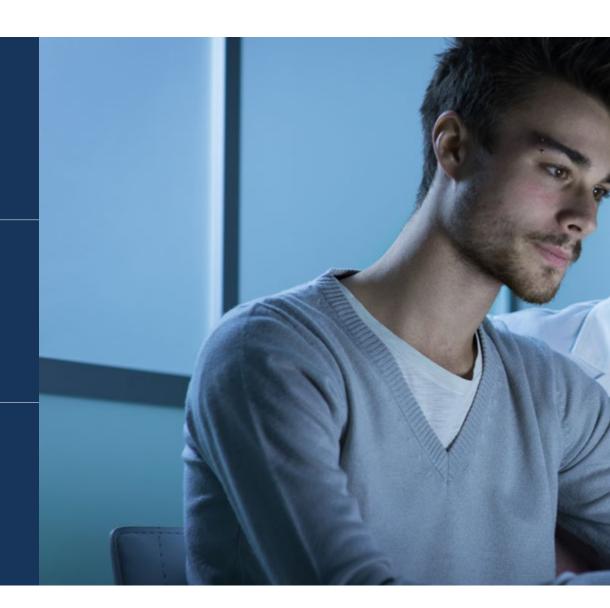
Establish the operation and implementation of a PKI

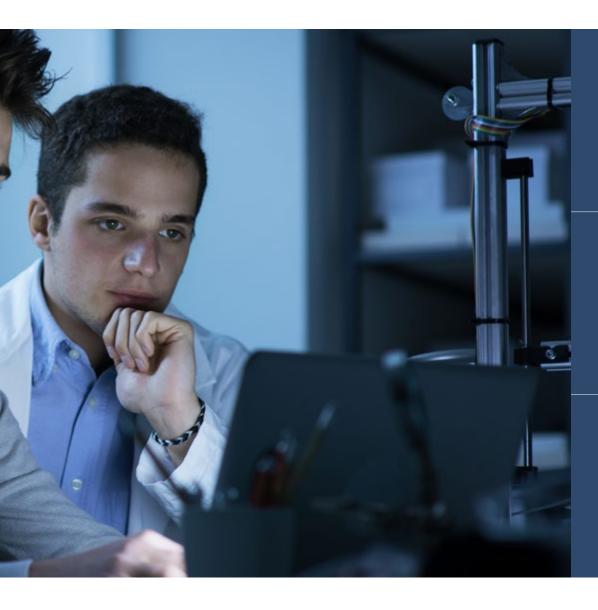


Analyze the concept of monitoring and the implementation of metrics



Configure audit trails within systems





20

Install and master SNMP operations

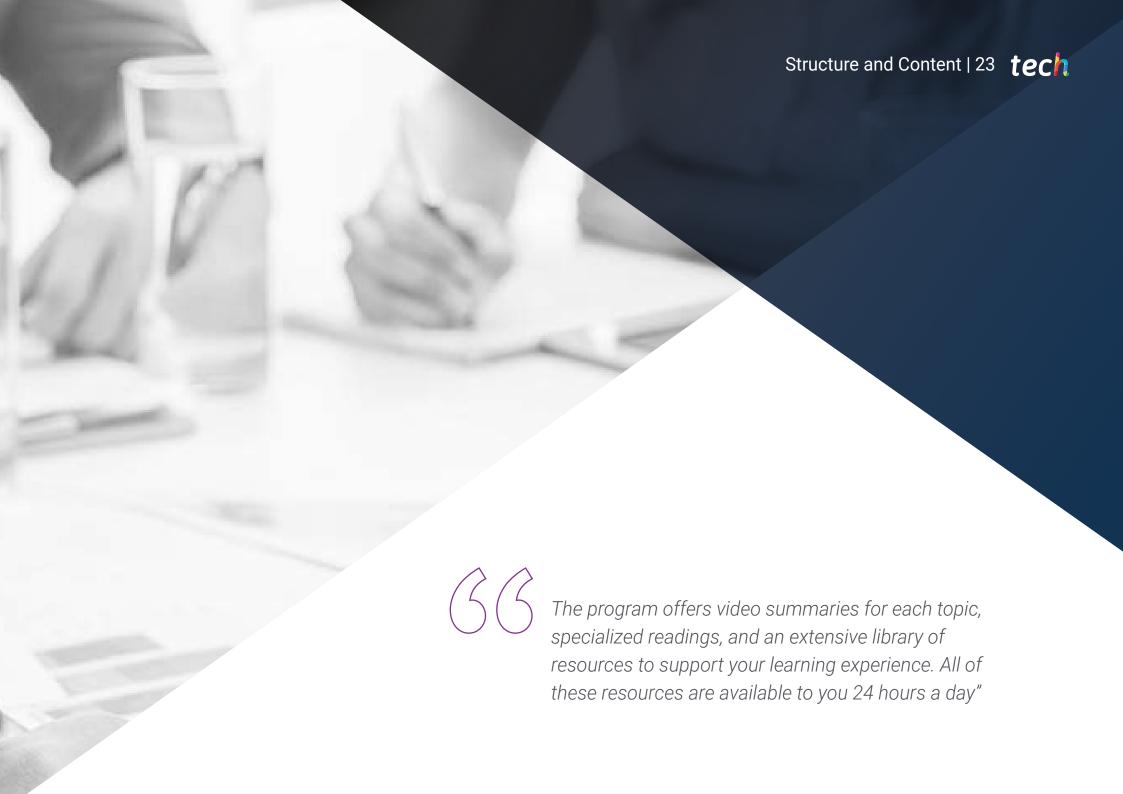
21

Configure network monitoring settings

22

Acquire specialized knowledge in the installation and operation of Nagios, Zabbix, Cacti, Pandora, and Solawins





tech 24 | Structure and Content

Syllabus

The Postgraduate Diploma in Implementation of IT Security Policies offered by TECH U is an intensive program designed to equip students with the knowledge and skills required to establish comprehensive plans and policies within their companies to effectively mitigate cyber-attacks of various types.

The program's content is specifically designed to empower managers with essential competencies, enabling them to make informed decisions in any department of the company that may be impacted by a computer attack.

Throughout 600 hours of education, students will engage in individual and team work, analyzing a wide range of practical cases to enhance their understanding and application of concepts. It is, therefore, an authentic immersion in real business situations.

This Postgraduate Diploma covers in depth the security policies in software and hardware, in physical and environmental elements of the company, as well as the monitoring tools to be used for the detection of attacks and the application of more effective measures. The program is specifically designed to educate professionals in a rapidly evolving field.

This Postgraduate Diploma takes place over six months and is divided into four modules:

Module 1	Practical Implementation of Software and Hardware Security Policies
Module 2	Implementation of Physical and Environmental Safety Policies in the Company
Module 3	Secure communications policies in the company
Module 4	Monitoring tools for information system security policies



Where, When and How is it Taught?

TECH provides the opportunity to complete the Postgraduate Diploma in Implementation of Computer Security Policy entirely through an online format. Throughout the six-month educational program, you will have unrestricted access to all program content, enabling you to manage your study time according to your preferences and schedule.

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

tech 26| Structure and Content

Module 1. Practical Implementation of Software and Hardware Security Policies							
1.1. 1.1.1. 1.1.2. 1.1.3.	·	1.2.1. 1.2.2. 1.2.3. 1.2.4.	Identification and Authorization Technologies Identifier and OTP USB Token or PKI Smart Card The "Confidential Defense" Key Active RFID	1.3. 1.3.1. 1.3.2. 1.3.3.	Security Policies Implementation of Access Control Policies	1.4.1. 1.4.2.	User Access Management Access Rights Management Segregation of Roles and Access Functions Implementation of Access Rights in Systems
1.5. 1.5.1. 1.5.2. 1.5.3.	Access Control to Systems and Applications Minimum Access Rule Secure Logon Technologies Password Security Policies	1.6.2.	Identification Systems Technologies Active Directory OTP PAP, CHAP KERBEROS, DIAMETER, NTLM	1.7. 1.7.1. 1.7.2. 1.7.3.	CIS Controls for Systems Hardening Basic CIS Controls Fundamental CIS Controls Organizational CIS Controls	1.8.1. 1.8.2.	Operational Safet Protection Against Malicious Code Backup Copies Activity Log and Supervision
1.9. 1.9.1. 1.9.2. 1.9.3.	, , ,	1.10.1	Implementation of Security Policy Practices Logical Vulnerabilities Implementation of Defense Policies				

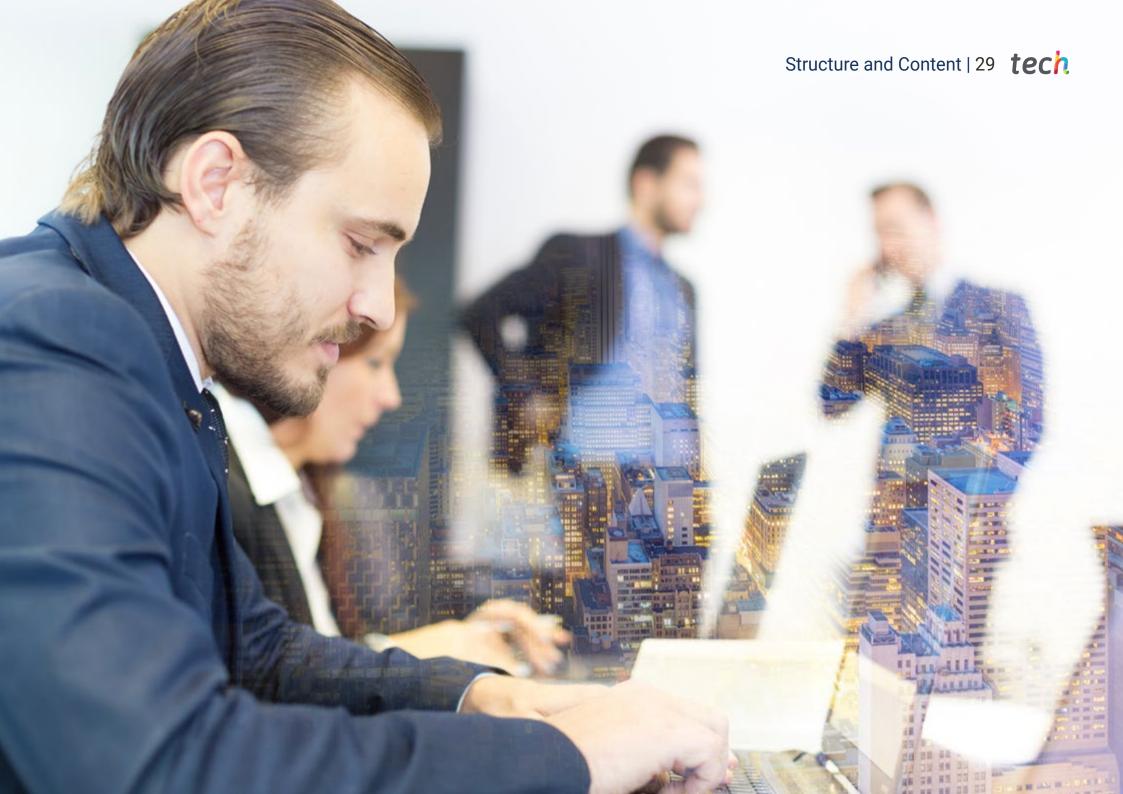
2.1. Security Areas 2.1.1. Physical Security Perimeter 2.1.2. Working in Safe Areas 2.1.3. Security of Offices, Offices and Resources		Physical Input Controls Physical Access Control Policies Physical Input Control Systems	2.3. 2.3.1. 2.3.3.	Physical Access Vulnerabilities Main Physical Vulnerabilities Implementation of Safeguards Measures	2.4.1. 2.4.2. 2.4.3.	Physiological Biometric Systems Fingerprint Facial Recognition Iris and Retinal Recognition Other Physiological Biometric Systems
2.5. Biometric Behavioral Systems 2.5.1. Signature Recognition 2.5.2. Writer Recognition 2.5.3. Voice Recognition 2.5.4. Other Biometric Behavioral Systems		Biometrics Risk Management Implementation of Biometric Systems Vulnerabilities of Biometric Systems	2.7. 2.7.1. 2.7.2. 2.7.3. 2.7.4.	Installation of Supply and Security Cabling Equipment Location	2.8.2.	Environmental Protection Fire Protection Systems Earthquake Protection Systems Earthquake Protection Systems
2.9. Data Processing Center Security 2.9.1. Security Doors 2.9.2. Video Surveillance Systems (CCTV) 2.9.3. Safety Control	2.10.1 2.10.2	International Physical Security Standards . IEC 62443-2-1 (European) . NERC CIP-005-5 (U.S. USA) . NERC CIP-014-2 (U.S. USA)				

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4.9. SolarWinds. Network Monitoring System
4.9.1. SolarWinds
4.9.2. Operation of SolarWinds
4.9.3. Installation of SolarWinds

Module 3. Secure Communications Police	cies in the Company		
3.1. Network Security Management3.1.1. Network Control and Monitoring3.1.2. Segregation of Networks3.1.3. Network Security Systems	3.2. Secure Communication Protocols 3.2.1. TCP/IP Model 3.2.2. IPSEC Protocol 3.2.3. TLS Protocol	 3.3. Protocol TLS 1.3 3.3.1. Phases of a TLS1.3 Process 3.3.2. Handshake Protocol 3.3.3. Registration Protocol 3.3.4. Differences with TLS 1.2 	 3.4. Cryptographic Algorithms 3.4.1. Cryptographic Algorithms Used in Communications 3.4.2. Cipher-Suites 3.4.3. Cryptographic Algorithms allowed for TLS 1.3
3.5. Digest Functions 3.5.1. Digest Functions 3.5.2. MD6 3.5.3. SHA	3.6. PKI. Public Key Infrastructure 3.6.1. PKI and its Entities 3.6.2. Digital Certificates 3.6.3. Types of Digital Certificates	 3.7. Tunnel and Transport Communications 3.7.1. Tunnel Communications 3.7.2. Transport Communications 3.7.3. Encrypted Tunnel Implementation 	3.8. SSH. Secure Shell 3.8.1. SSH. Safe Capsule 3.8.2. SSH Functions 3.8.3. SSH Tools
3.9. Audit of Cryptographic Systems3.9.1. Integration Test3.9.2. Cryptographic System Testing	3.10. Cryptographic Systems 3.10.1. Cryptographic Systems Vulnerabilities 3.10.2. Cryptographic Safeguards		
Module 4. Information Systems Security	Policy Monitoring Tools		
 4.1. Information Systems Monitoring Policies 4.1.1. System Monitoring 4.1.2. Metrics 4.1.3. Types of Metrics 	4.2. Systems Auditing and Registration4.2.1. Systems Auditing and Logging4.2.2. Windows Auditing and Logging4.2.3. Linux Auditing and Logging	 4.3. SNMP Protocol. Simple Network Management Protocol 4.3.1. SNMP Protocol 4.3.2. SNMP Functions 4.3.3. SNMP Tools 	4.4. Network Monitoring4.4.1. Network Monitoring in Control Systems4.4.2. Network Monitoring in Control Systems4.4.3. Monitoring Tools for Control Systems
 4.5. Nagios. Network Monitoring Syster 4.5.1. Nagios 4.5.2. Operation of Nagios 4.5.3. Nagios Installation 	4.6. Zabbix. Network Monitoring System 4.6.1. Zabbix 4.6.2. How Zabbix Works 4.6.3. Zabbix Installation	4.7. Cacti. Network Monitoring System 4.7.1. Cacti 4.7.2. How Cacti Works 4.7.3. Installation of Cacti	 4.8. Pandora. Network Monitoring System 4.8.1. Pandora 4.8.2. Operation of Pandora 4.8.3. Pandora Installation

4.10. Monitoring Regulations
4.10.1. CIS Controls Over Auditing
and Record Keeping
4.10.2. NIST 800-123 (U.S.) USA)





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.



tech 32 | Methodology

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.





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.

tech 34 | Methodology

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.



Methodology | 35 tech

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.



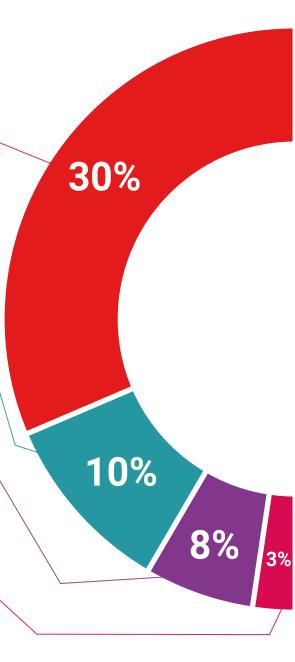
Management Skills Exercises

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.





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.

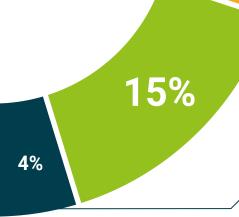


This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".

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.



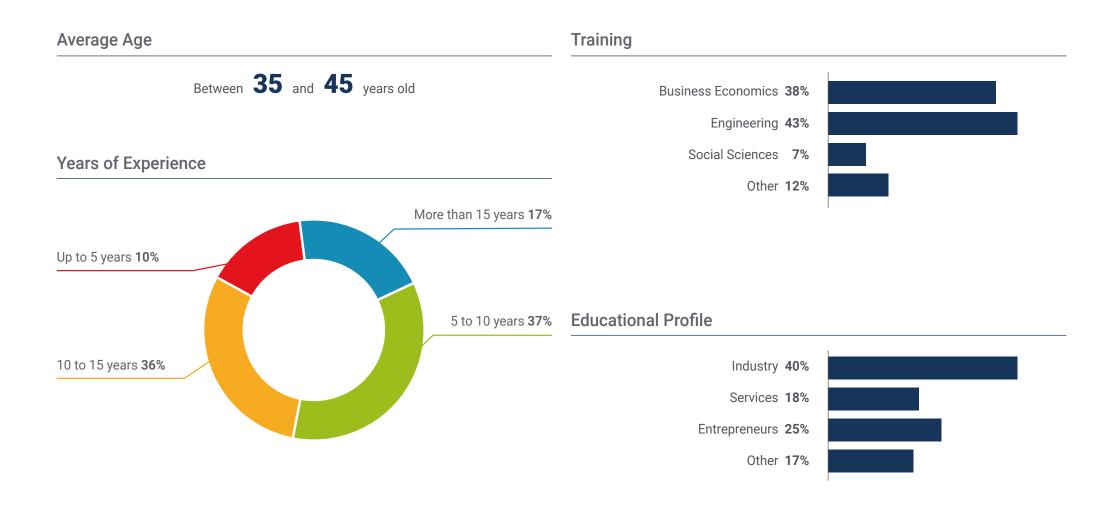


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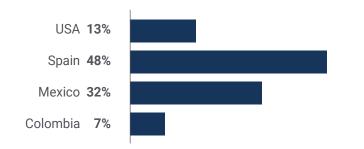




tech 40 | Our Students' Profiles



Geographical Distribution



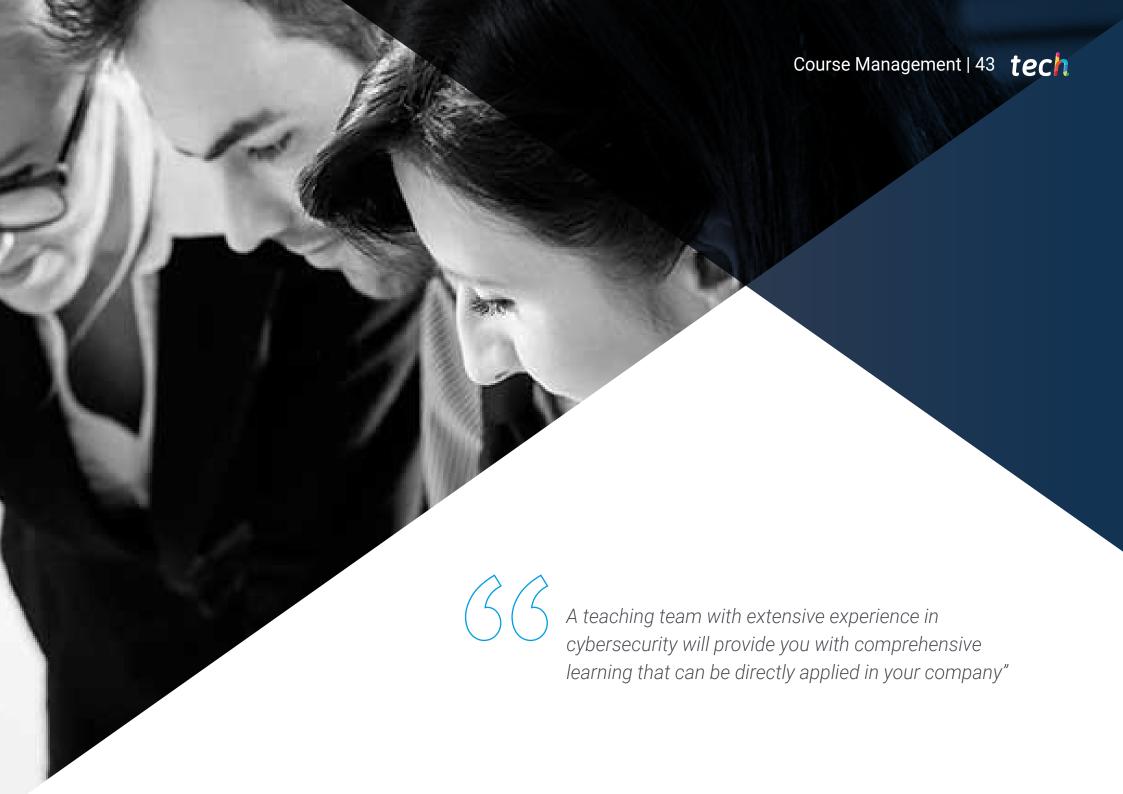


Roberto Uribe

Security TECHNIQUES in Networks

"I recommend this program for any company that wants to improve its security policies. Thanks to its practical content and updated material, I have obtained the keys to improving the cyber security of my company. Moreover, TECH offered me a dedicated team of professionals who were always ready to address my concerns. Their support has provided me with valuable knowledge that may be applicable to diverse business environments"





tech 44 | Course Management

Management



Ms. Fernández Sapena, Sonia

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



Course Management | 45 tech

Professors

Ms. López García, Rosa María

- Management Information Specialist
- Teacher at Linux Professional Institute
- Collaborator at Incibe Hacker Academy
- Cybersecurity Talent Captain at Teamciberhack
- Administrative and accounting and financial manager at Integra2Transportes
- Administrative assistant in purchasing at the Education Center Cardenal Marcelo Espínola
- Higher Technician in Cybersecurity and Ethical Hacking
- Member of Ciberpatrulla

Mr. Oropesiano Carrizosa, Francisco

- Computer Engineer
- Microcomputing, Networking and Security Technician at Cas-Training
- Web Services, CMS, e-Commerce, UI and UX Developer at Fersa Reparaciones
- Web services, content, mail and DNS manager at Oropesia Web & Network
- Graphic and web applications designer at Xarxa Sakai Projectes
- Diploma in Computer Systems at the University of Alcalá de Henares
- Master in DevOps: Docker and Kubernetes at Cyber Business Center
- Network and Computer Security Technician from the University of the Balearic Islands
- Expert in Graphic Design from the Polytechnic University of Madrid





If you aspire to advance in your professional career, this Postgraduate Diploma will serve as a catalyst to propel you forward. Enroll now.

Are you ready to take the leap?

Excellent professional development awaits you.

TECH's Postgraduate Diploma in IT Security Policy Implementation is an intensive program that prepares the student to face challenges and business decisions in the field of Cyber-security. The main objective is to promote personal and professional growth. Helping the students to achieve success.

If your aim is self-improvement, positive professional transformation, and networking with top-notch individuals, then this is the ideal place for you.

In just six months, you can achieve your goals through our program, which utilizes an online learning methodology.

Time of Change

During the program

11%

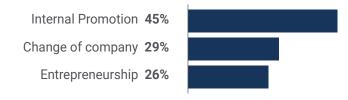
During the first year

63%

After 2 years

26%

Type of Change



Salary Increase

The completion of this program represents a salary increase of more than **25.22%** for our students.

Salary before

\$57,900

A salary increase of

25.22%

Salary after

\$72,500





tech 52 | Benefits for Your Company

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



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.



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.



Building agents of change

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



Increased international expansion possibilities

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





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.



Increased competitiveness

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





tech 56 | Certificate

This program will allow you to obtain your **Postgraduate Diploma in Implementation of IT Security Policies** endorsed by **TECH Global University**, the world's largest online university.

TECH Global University is an official European University publicly recognized by the Government of Andorra (*official bulletin*). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: Postgraduate Diploma in Implementation of IT Security Policies

Modality: online

Duration: 6 months

Accreditation: 24 ECTS



Postgraduate Diploma in Implementation of IT Security Policies

This is a program of 600 hours of duration equivalent to 24 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024



^{*}Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH Global University will make the necessary arrangements to obtain it, at an additional cost.



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