Postgraduate Certificate
Forensic Fundamentals and DFIR

tech global university

Postgraduate Certificate
Forensic Fundamentals and DFIR

- » Modality: **online**
- » Duration: **6 weeks**
- » Certificate: **TECH Global University**
- » Credits: **6 ECTS**
- » Schedule: **at your own pace**
- » Exams: **online**
- » Aimed at: **University Graduates, Graduates and Undergraduates who have previously completed any of the degrees in the fields of Social and Legal Sciences, Administrative and Business Sciences**

Website: **www.techtitute.com/us/school-of-business/postgraduate-certificate/forensic-fundamentals-dfir**

Index

01
Welcome

The presence of companies in the cyber environment has increased over the years, due to the constant evolution of technologies. But this also has its consequences strongly affecting companies, since attacks in these media have also had a considerable increase, where confidential data of the organizations are exposed. In this sense, it is essential that the institutions have a team specialized in Forensic Fundamentals to carry out the necessary actions to avoid this type of mishaps. For this reason, this academic program has been developed, which will provide exclusive content related to the types of digital evidence. All this with an audiovisual support that will give dynamism to the qualification, in addition to the flexibility of the 100% online format

Postgraduate Certificate in Forensic Fundamentals and DFIR
TECH Global University

This Postgraduate Certificate will contribute to your professional growth and positioning in a sector that is currently booming"

02
Why Study at TECH?

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

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

At TECH 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
executives prepared each year

+200
different nationalities

Empowerment

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

+500 | collaborative agreements with leading companies

Talent

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

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

Multicultural Context

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

TECH students represent more than 200 different nationalities.

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

Learn with the best

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

Teachers representing 20 different nationalities

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

Analysis

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

Academic Excellence

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

Economy of Scale

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

Why Our Program?

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

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

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

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

01

A Strong Boost to Your Career

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

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

02

Develop a strategic and global vision of the company

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

Our global vision of companies will improve your strategic vision.

03

Consolidate the student's senior management skills

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

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

04

You will take on new responsibilities

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

45% of graduates are promoted internally.

05

Access to a powerful network of contacts

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

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

06

Thoroughly develop business projects.

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

20% of our students develop their own business idea.

07

Improve *soft skills* and management skills

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

Improve your communication and leadership skills and enhance your career.

08

You will be part of an exclusive community

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

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

04
Objectives

This university program will provide students with the most important updates regarding skills in the secure and forensic acquisition of digital evidence within the IT area. In this way, TECH will offer the students didactic tools and knowledge related to disassembly and debugging techniques. Therefore, upon completion of this Postgraduate Certificate, the graduates will have enhanced their skills in the processes of evidence acquisition

"
With this program you will develop specialized knowledge in the interpretation of file allocation tables in only 6 weeks of online training"

TECH makes the goals of their students their own goals too
Working together to achieve them
The **Postgraduate Certificate in Forensic Fundamentals and DFIR** enable the students to:

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

02 Apply theoretical knowledge in practical scenarios and simulations, facing real challenges to strengthen Pentestingskills

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

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

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

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

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

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

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

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

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

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

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

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

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

Structure and Content

The Postgraduate Certificate in Forensic Fundamentals and DFIR is an academic program that is especially focused on essential competencies related to disk analysis tools. In this way, this university program is oriented to a theoretical-practical line, accompanied by the great experience and extensive knowledge of a specialized and highly qualified team

A study plan carried out by a professional team specialized in Forensic Fundamentals and DFIR with which you will reach the most ambitious objectives in the labor field"

Syllabus

This Postgraduate Certificate integrates 180 hours of continuous learning, where TECH, through the highest level of education, will take the students to the top of their professional careers. In this way, the graduates will apply to the most important positions in the sector, assuming the different challenges that revolve around Computer Science. In addition, this program provides a variety of knowledge about the fundamental principles of digital forensics

The teaching team has developed a prestigious syllabus that incorporates 1 module, with the purpose of providing the graduates with extensive knowledge about advanced techniques for the analysis of records and logs based on audiovisual content

In this sense, the students of this Postgraduate Certificate will delve into the methodologies of digital forensic investigation in the resolution of cases. Therefore, the professionals will become one of the best specialists in promoting ethical and legal practices in digital forensic investigation

Also, TECH coordinates efficiency and excellence in the best way, so this program offers the most complete and first level educational update, placing its students with the best academic standards at the end of the program. The students will only need an electronic device with Internet coverage and will easily access the virtual platform from the comfort of the place where they are

This Postgraduate Certificate is developed over 6 week and is divided into 1 module:

Module 1	Forensic Fundamentals and DFIR

Where, When and How is it Taught?

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

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

Module 1. Forensic Fundamentals and DFIR

1.1. Digital Forensics
1.1.1. History and Evolution of Computer Forensics
1.1.2. Importance of Computer Forensics in Cybersecurity
1.1.3. History and Evolution of Computer Forensics

1.2. Fundamentals of Computer Forensics
1.2.1. Chain of Custody and Its Application
1.2.2. Types of Digital Evidence
1.2.3. Evidence Acquisition Processes

1.3. File Systems and Data Structure
1.3.1. Main File Systems
1.3.2. Data Hiding Methods
1.3.3. Analysis of File Metadata and Attributes

1.4. Operating Systems Analysis
1.4.1. Forensic Analysis of Windows Systems
1.4.2. Forensic Analysis of Linux Systems
1.4.3. Forensic Analysis of macOS Systems

1.5. Data Recovery and Disk Analysis
1.5.1. Data Recovery from Damaged Media
1.5.2. Disk Analysis Tools
1.5.3. Interpretation of File Allocation Tables

1.6. Network and Traffic Analysis
1.6.1. Network Packet Capture and Analysis
1.6.2. Firewall Log Analysis
1.6.3. Network Intrusion Detection

1.7. *Malware* and Malicious Code Analysis
1.7.1. Classification of Malware and Its Characteristics
1.7.2. Static and Dynamic Malware Analysis
1.7.3. Disassembly and Debugging Techniques

1.8. Log and Event Analysis
1.8.1. Types of Logs in Systems and Applications
1.8.2. Interpretation of Relevant Events
1.8.3. Log Analysis Tools

1.9. Respond to Security Incidents
1.9.1. Incident Response Process
1.9.2. Creating an Incident Response Plan
1.9.3. Coordination with Security Teams

1.10. Evidence and Legal Presentation
1.10.1. Rules of Digital Evidence in the Legal Field
1.10.2. Preparation of Forensic Reports
1.10.3. Appearance at Trial as an Expert Witness

Stand out in sector with enormous potential and become a part of of efficiency and the global change based on excellence"

Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning.**
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

"*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization*"

TECH Business School uses the Case Study to contextualize all content

Our program offers a revolutionary approach to developing skills and knowledge. Our goal is to strengthen skills in a changing, competitive, and highly demanding environment.

" *At TECH, you will experience a learning methodology that is shaking the foundations of traditional universities around the world"*

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

A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch to present executives with challenges and business decisions at the highest level, whether at the national or international level. This methodology promotes personal and professional growth, representing a significant step towards success. The case method, a technique that lays the foundation for this content, ensures that the most current economic, social and business reality is taken into account.

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

The case method has been the most widely used learning system among the world's leading business schools for as long as they have existed. The case method was developed in 1912 so that law students would not only learn the law based on theoretical content. It consisted of presenting students with real-life, complex situations for them to make informed decisions and value judgments on how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

What should a professional do in a given situation? This is the question we face in the case method, an action-oriented learning method. Throughout the program, the studies will be presented with multiple real cases. They must integrate all their knowledge, research, argue and defend their ideas and decisions.

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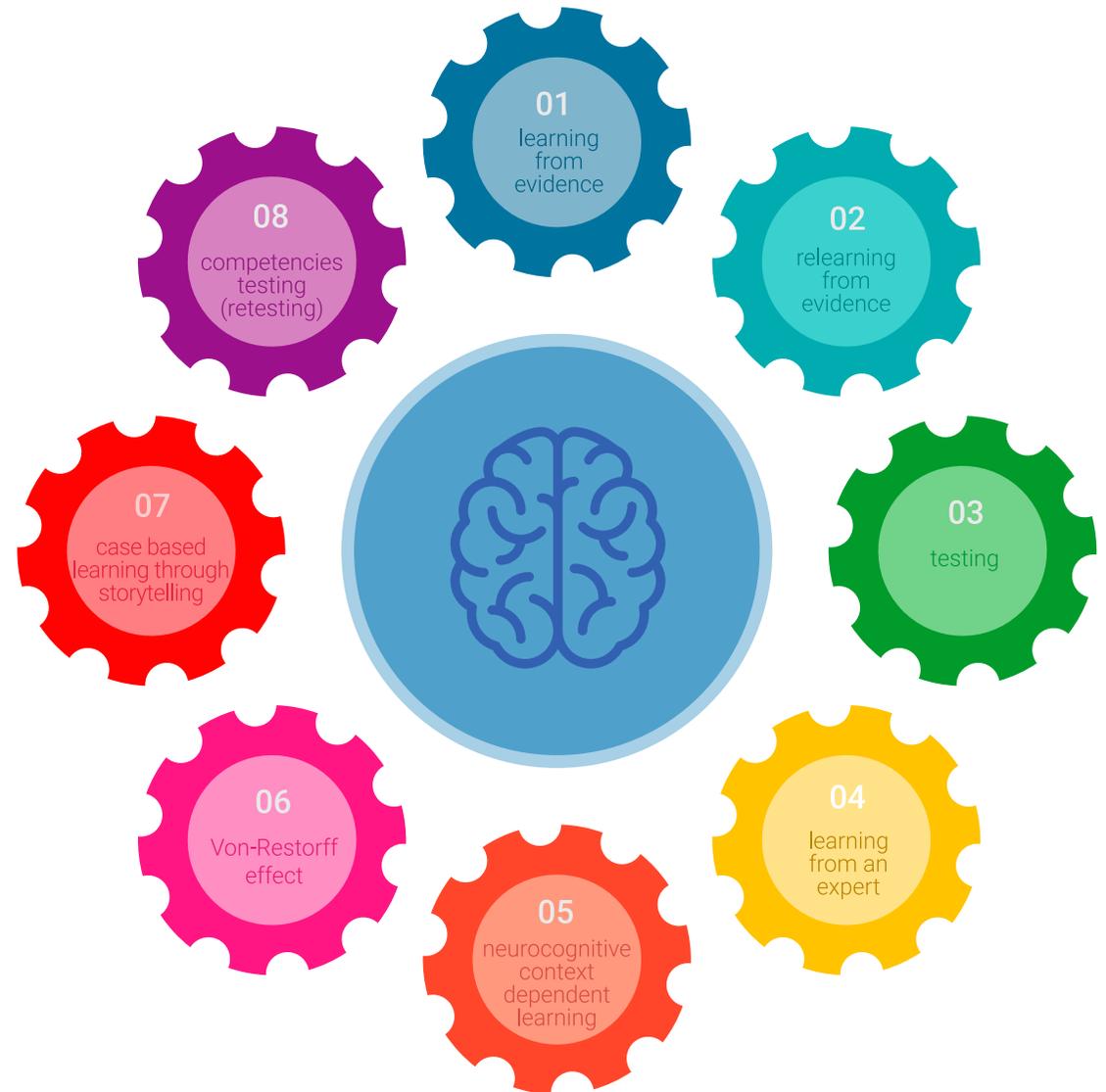
Relearning Methodology

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

We enhance the Case Study with the best 100% online teaching method: Relearning.

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

At TECH you will learn using a cutting-edge methodology designed to train the executives of the future. This method, at the forefront of international teaching, is called Relearning.

Our online business school is the only one in the world licensed to incorporate this successful method. In 2019, we managed to improve our students' overall satisfaction levels (teaching quality, quality of materials, course structure, objectives...) based on the best online university indicators.

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. 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.

30%

10%

8%

3%

30%

15%

4%
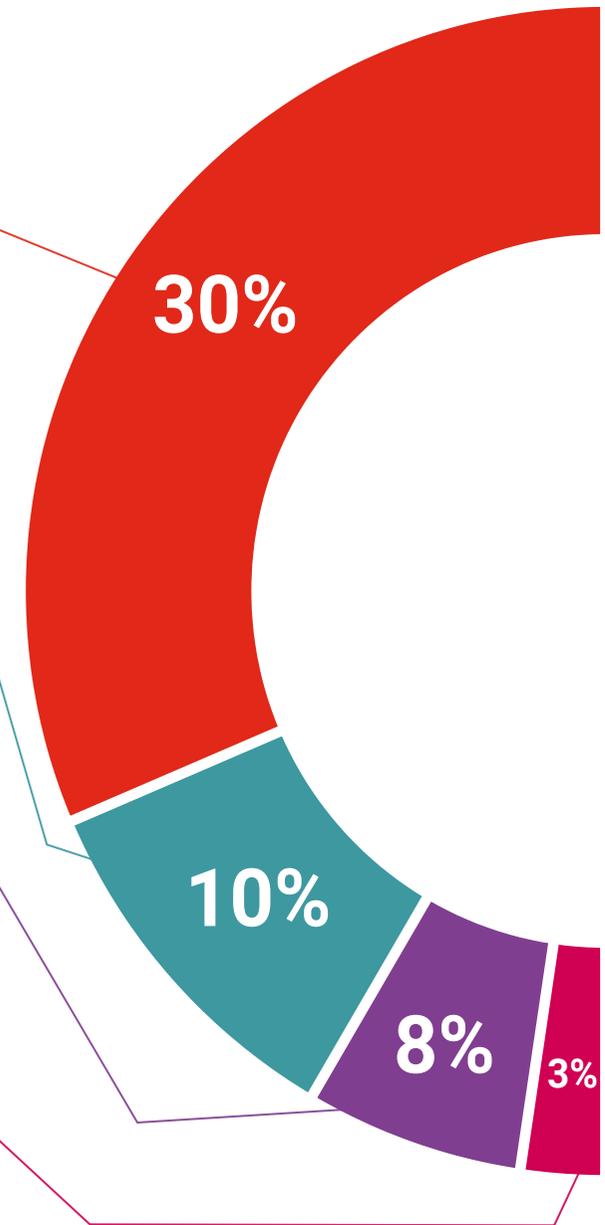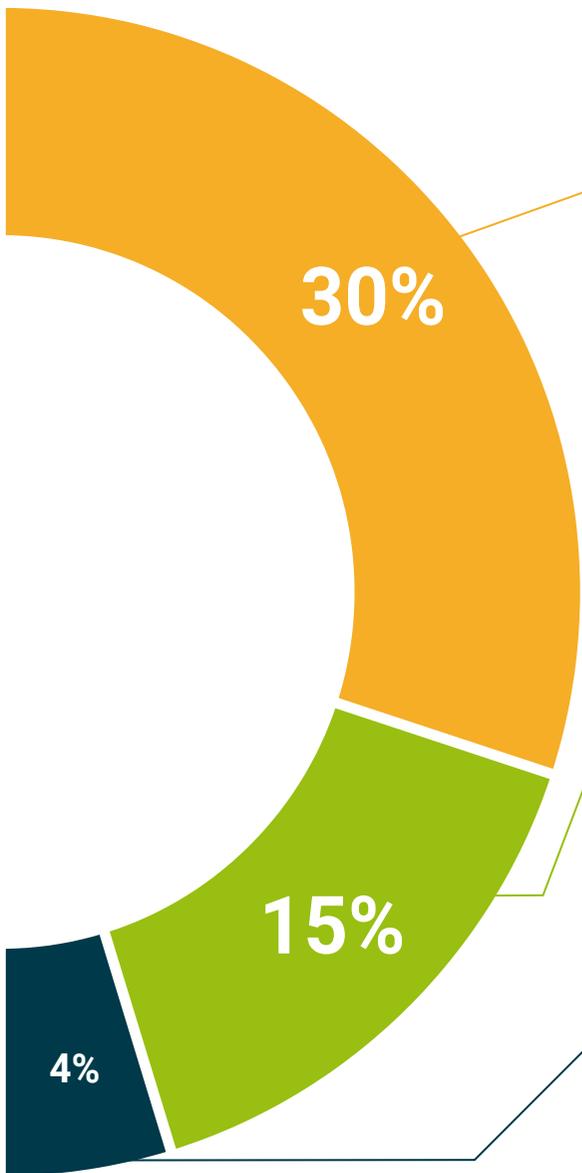
Case Studies

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.

Our Students' Profiles

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

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

Professionals who, being university graduates in any area, have two years of work experience in the IT field, may also take the Postgraduate Certificate
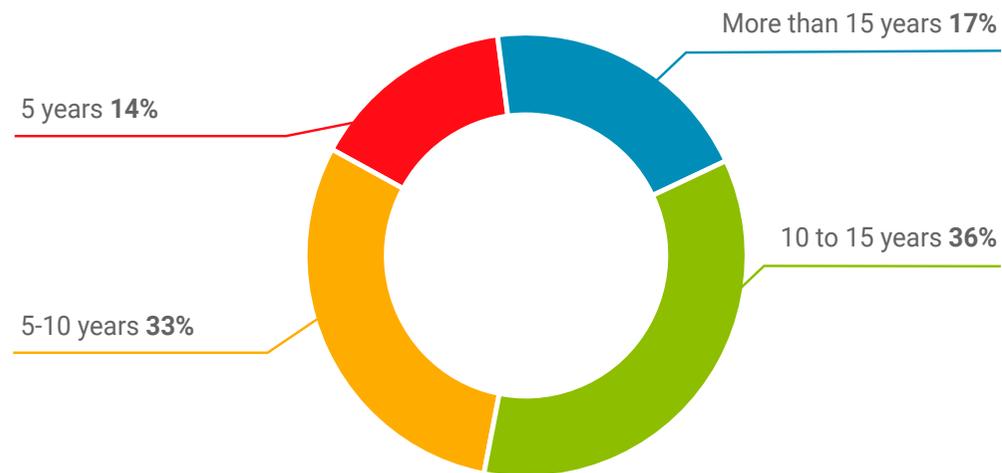
If you have experience in Forensic Fundamentals and DFIR, and are looking for an interesting improvement in your career while continuing to work, this is the program for you"
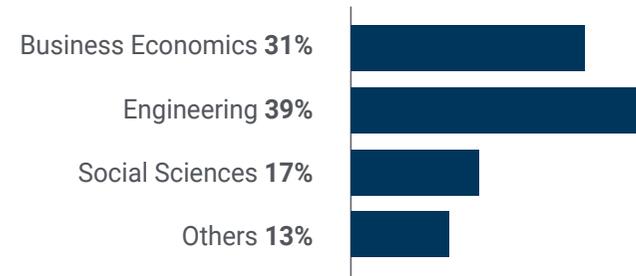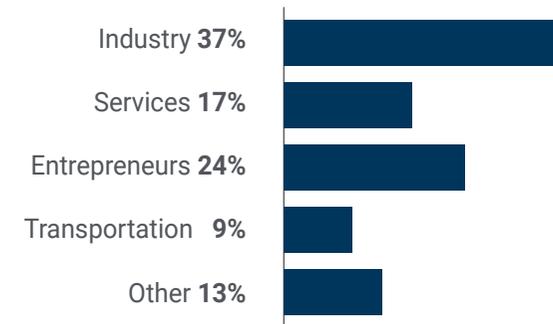
Average Age

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

Years of Experience

More than 15 years **17%**

5 years **14%**

10 to 15 years **36%**

5-10 years **33%**

Training

Business Economics **31%**

Engineering **39%**

Social Sciences **17%**

Others **13%**

Academic Profile

Industry **37%**

Services **17%**

Entrepreneurs **24%**

Transportation **9%**

Other **13%**

Geographical Distribution

U.S.A. **45%**

Spain **36%**

Mexico   **9%**

Colombia **10%**
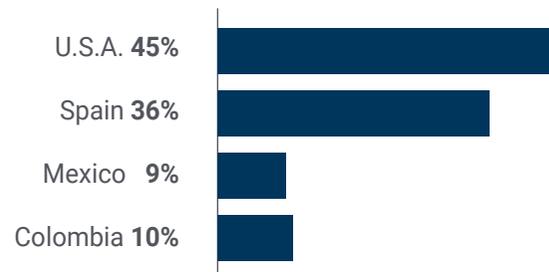
José Vizcaino

Digital Forensic Analyst

"This program has been a great investment in terms of knowledge and skills within the Business area, because it induced me to forensic analysis to clearly understand and identify the type of attack, mechanisms used and the vulnerabilities that the company has to enter into the improvement of these"

Course Management

TECH is at the forefront of quality education and therefore provides an education of the highest standards for the professional who attends its programs with the support of multimedia resources that successfully carry out the development of each of its qualifications. The graduates will have access to a syllabus developed by a teaching staff highly specialized in Software and Technologies of the Information Society. Their extensive experience and broad background in the sector will allow students to solve the various situations that arise during the course of the program

"

If you want to succeed, do it with the best and acquire the necessary skills to excel in the Forensic Fundamentals and DFIR sector"

Management

Mr. Gómez Pintado, Carlos

- Manager of Cybersecurity and Network Team Cipherbit in Oesía Group
- Manager *Advisor & Investor* at Wesson App
- Graduate in Software Engineering and Information Society Technologies, Polytechnic University of Madrid
- Collaboration with educational institutions for the development of Higher Level Training Cycles in cybersecurity

Impact on Your Career

This academic program has been designed with the purpose of providing the graduates with the necessary skills that will lead them to take on the challenges imposed by the business and IT areas. In this way, TECH emphasizes on offering an education of the highest level, focused on the efficiency of each of its programs. Therefore, students will have the certainty of acquiring an elite learning in the preparation of forensic reports

" *Adherence to regulations and standards of conduct in cybersecurity is one of the competencies that you will undoubtedly master at the end of this Postgraduate Certificate"*

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

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

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

A Postgraduate Certificate designed and formulated for the best. Enroll now!

At TECH you will get to expand your skills concerning the forensic analysis of Windows, Linux and macOS systems.

When the change occurs

During the program	During the first year	After 2 years
13%	**64%**	**23%**

Type of change

Internal Promotion **46%**

Change of Company **44%**

Entrepreneurship **10%**
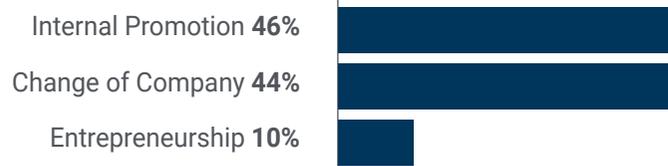
Salary increase

This program represents a salary increase of more than **25,55%** for our students

Salary before	A salary increase of	Salary after
€55,465	**25,55%**	**€74,500**

10

Benefits for Your Company

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

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

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

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

01

Growth of talent and intellectual capital

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

02

Retaining high-potential executives to avoid talent drain

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

03

Building agents of change

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

04

Increased international expansion possibilities

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

05

Project Development

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

06

Increased competitiveness

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

11
Certificate

The Postgraduate Certificate in Forensic Fundamentals and DFIR guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate diploma issued by TECH Global University.

Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork"

This program will allow you to obtain your **Postgraduate Certificate in Forensic Fundamentals and DFIR** 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 Certificate in Forensic Fundamentals and DFIR**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**

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tech global university

Mr./Ms. _____, with identification document _____
has successfully passed and obtained the title of:

Postgraduate Certificate in Forensic Fundamentals and DFIR

This is a program of 180 hours of duration equivalent to 6 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

Dr. Pedro Navarro Illana
Rector

Unique TECH Code: AFWORD23S   techtitute.com/certificates

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*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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