Postgraduate Certificate
Data Science in Business Areas and Sectors

tech global university

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Postgraduate Certificate
Data Science in Business Areas and Sectors

- » Modality: **online**
- » Duration: **12 weeks**
- » Certificate: **TECH Global University**
- » Accreditation: **6 ECTS**
- » Schedule: **at your own pace**
- » Exams: **online**

Website: **www.techtitute.com/us/information-technology/postgraduate-certificate/data-science-business-areas-sectors**

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01
Introduction

It is normal for companies to start racing towards digital transformation. Those that succeed perform quality information processing, managing and leveraging data to make quick and optimal decisions. The focus of this program is on the importance of using adequate analytics systems to benefit the company. What is more, case studies will be provided to learn the uses and implementations of artificial intelligence in a company.

"

Analyze the benefits of using data analytic techniques in every company department"

This program will provide an in-depth analysis of the importance of using sound information analytics systems to benefit company departments. IT engineers therefore need to know how each department works in order to identify their needs and develop an appropriate action plan.

Moreover, special emphasis will be placed on the progress that artificial intelligence has made in the business world, changing the way in which we relate to each other on a personal and professional level. Consequently, this program will analyze a wide variety of use cases and AI implementations in this field.

The entire program is comprised of a series of case studies that will help computer engineers who are looking to advance their careers and challenge themselves to achieve excellence.

This **Postgraduate Certificate in Data Science in Business Areas and Sectors** contains the most complete and up-to-date program on the market. The most important features include:

- Practical cases studies are presented by experts in Engineering in data analysis
- The graphic, schematic, and eminently practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- Practical exercises where self-assessment can be used to improve learning
- Its special emphasis on innovative methodologies
- Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- Content that is accessible from any fixed or portable device with an Internet connection

Examine the evolution of new technologies and where they are headed in the coming years in the industrial sector"

"*Analyze the strategies chosen to select the best technologies to implement in each company department*"

Propose techniques and objectives in order to be as productive as possible for each department.

Learn statistical, quantitative and technical knowledge in real situations through a 100% online program.

The program's teaching staff includes professionals from the sector who contribute their work experience to this program, as well as renowned specialists from leading societies and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive education programmed to learn in real situations.

This program is designed around Problem Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the academic year. Students will be assisted by an innovative, interactive video system made by renowned experts with extensive experience in Data Science in Business Areas and Sectors.

02
Objectives

The knowledge provided in this program will help computer engineers understand the benefits of applying data analytics techniques to every department in the company where they work. Students will thus consolidate themselves as agents of change willing to offer new proposals for the benefit of all. To that end, TECH has established the following general and specific objectives.

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It's time to take your career to the next level by becoming an agent of change in your work environment"

General Objectives

- Analyze the benefits of applying data analytic techniques in every company department
- Develop the basis for understanding the needs and applications of each department
- Generate specialized knowledge to select the right tool
- Propose techniques and objectives in order to be as productive as possible according to the department

Discover new alternatives to business problems by applying innovative technologies"

Specific Objectives

- Develop analytical skills in order to make quality decisions
- Examine effective marketing and communication campaigns
- Determine the creation of scorecards and KPIs according to the department
- Generate specialized knowledge to develop predictive analytics
- Propose business and loyalty plans based on market research
- Develop the ability to listen to the customer
- Apply statistical, quantitative and technical knowledge in real situations
- Analyze the state-of-the-art artificial intelligence (AI) and data analytics
- Develop specialized knowledge of most commonly used technologies
- Generate a better understanding of technology through cases of use
- Analyze the chosen strategies to select the best technologies to implement
- Determine the areas of application
- Examine the actual and potential risks of the technology used
- Propose benefits derived from the use
- Identify future trends in specific fields

03
Course Management

The Postgraduate Certificate in Data Science in Business Areas and Sectors brings together a select group of professionals with multiple years of experience in data analysis in the field of business. Students are thus guaranteed that the knowledge imparted comes from professionals capable of answering any questions they may have while providing them with real cases to better exemplify the contents on the program.

"

The program is taught by a distinguished group of professors experienced in the field of Data Science"

International Guest Director

Dr. Tom Flowerdew is an internationally prominent personality in the field of data science. He has served as Vice President of Data Science at MasterCard in London. In this role, he has been responsible for the preparation, operation and strategy of a consolidated team in this area, with the mission to support a portfolio of innovative products in payments, fight against money laundering (AML) and analyze cryptocurrency use cases.

He has also been Director of Data Science in Cyber Intelligence Solutions, also at MasterCard, where he has led the integration of data to support revolutionary cryptocurrency-based products. In fact, his ability to handle complex data and develop advanced solutions has been instrumental to the success of multiple projects in the cybersecurity and finance space.

Similarly, for the company Featurespace, he has held several crucial roles, including Head of Standardized Product Delivery, in Cambridge, leading a team and a transformation project that has reduced delivery time and effort by more than 75%. In addition, as Head of Delivery, U.S. headquarters, he has managed all of the company's North American delivery functions, significantly improving operational efficiency and strengthening customer relationships.

Additionally, Doctor Tom Flowerdew has demonstrated his ability to build and lead high-performing teams throughout his career, most notably in his role as Data Scientist, both in Atlanta, where he has recruited and managed a group of experts in the field, and in Cambridge. In this way, his focus on innovation and problem solving has left an indelible mark on the organizations where he has worked, establishing himself as an influential leader in the field of data science.

Dr. Flowerdew, Tom

- Vice President of Data Science at MasterCard, London, United Kingdom
- Director of Data Science, Cyber Intelligence Solutions, MasterCard, London
- Head of Standardized Product Delivery at Featurespace, Cambridge
- Delivery Manager for United States, at Featurespace, Cambridge
- Data Scientist at Featurespace, Atlanta, Georgia, United States
- Data Scientist at Featurespace, Cambridge
- Research Fellow in Statistics and Operations Research at the University of Lancaster
- Ph.D. in Operations Research from Lancaster University
- B.S. in Systems Engineering from BAE Systems
- B.Sc. in Mathematics from the University of York

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

Management

Dr. Peralta Martín-Palomino, Arturo

- CEO and CTO at Prometeus Global Solutions
- CTO at Korporate Technologies
- CTO in AI Shephers GmbH
- Doctorate in Psychology from the University of Castilla La
- PhD in Economics, Business and Finance from the Camilo José Cela University. Outstanding Award in her PhD
- PhD in Psychology, University of Castilla La Mancha
- Master's Degree in Advanced Information Technologies from the University of Castilla la Mancha
- Master MBA+E (Master's Degree in Business Administration and Organizational Engineering) from the University of Castilla La Mancha
- Associate lecturer, teaching undergraduate and master's degrees in Computer Engineering at the University of Castilla la Mancha
- Professor of the Master in Big Data and Data Science at the International University of Valencia
- Lecturer of the Master's Degree in Industry 4.0 and the Master's Degree in Industrial Design and Product Development
- Member of the SMILe Research Group of the University of Castilla la Mancha

Professors

Mr. Martín-Palomino Sahagún, Fernando
- CTO at AURA Diagnostics (medTech)
- Business Development Spain SARLIN, Industry 4.0 applied compressed air
- Operations Management Alliance Diagnostics
- Manager at Innovation Alliance Medical
- CIO at Alliance Medical
- Field Engineer & Digital Radiology Project Management at Kodak
- Head Telecommunications Engineer MBA at Polytechnic University of Madrid
- Executive Master's Degree in Marketing and Sales, ESADE Teaching Experience
- Training medical personnel in the use of new technologies for digital diagnosis
- Training industrial plant personnel in the use of 4.0 applications

Ms. Rissanen, Karoliina
- Responsible for the development of training programs and professional experience
- HR Specialist, Oy Sinebrychoff Ab (Carlsberg Group)
- Assistant Manager, People, Performance and Development, IATA Global Delivery Center
- Assistant Manager, Customer Services, IATA Global Delivery Center
- Trained and Certified as an instructor for IATA
- Training of customer service personnel
- Diploma in Tourism from Haaga-Helia University
- Master's Degree in Protocol and External Relations from Camilo José Cela University
- Diploma in Human Resources Management from Chartered Institute of Personnel and Development

Ms. Martínez Cerrato, Yésica
- Electronic Security Product Technician at Securitas Security Spain
- Business Intelligence Analyst at Ricopia Technologies (Alcalá de Henares) Degree in Electronic Communications Engineering at the Polytechnic School, University of Alcalá
- Responsible for training new recruits on commercial management software (CRM, ERP, INTRANET), product and procedures in Ricopia Technologies (Alcalá de Henares)
- Responsible for training new scholarship holders incorporated to the Computer Classrooms at the University of Alcalá
- Project Manager in the area of Key Accounts Integration at Correos and Telégrafos (Madrid)
- Computer Technician-Responsible for computer classrooms OTEC, University of Alcalá (Alcalá de Henares)
- Computer classes teacher at ASALUMA Association (Alcalá de Henares).
- Scholarship for Training as a Computer Technician in OTEC, University of Alcala (Alcalá de Henares)

04

Structure and Content

The program modules offer a theoretical and practical perspective to establish the importance of using a sound data analytics system in the company, as well as the use of new technologies, such as artificial intelligence, to improve the management that can slow down progress. Therefore, the objectives of the program, being to create professional, integral and prestigious engineers will be fulfilled.

"
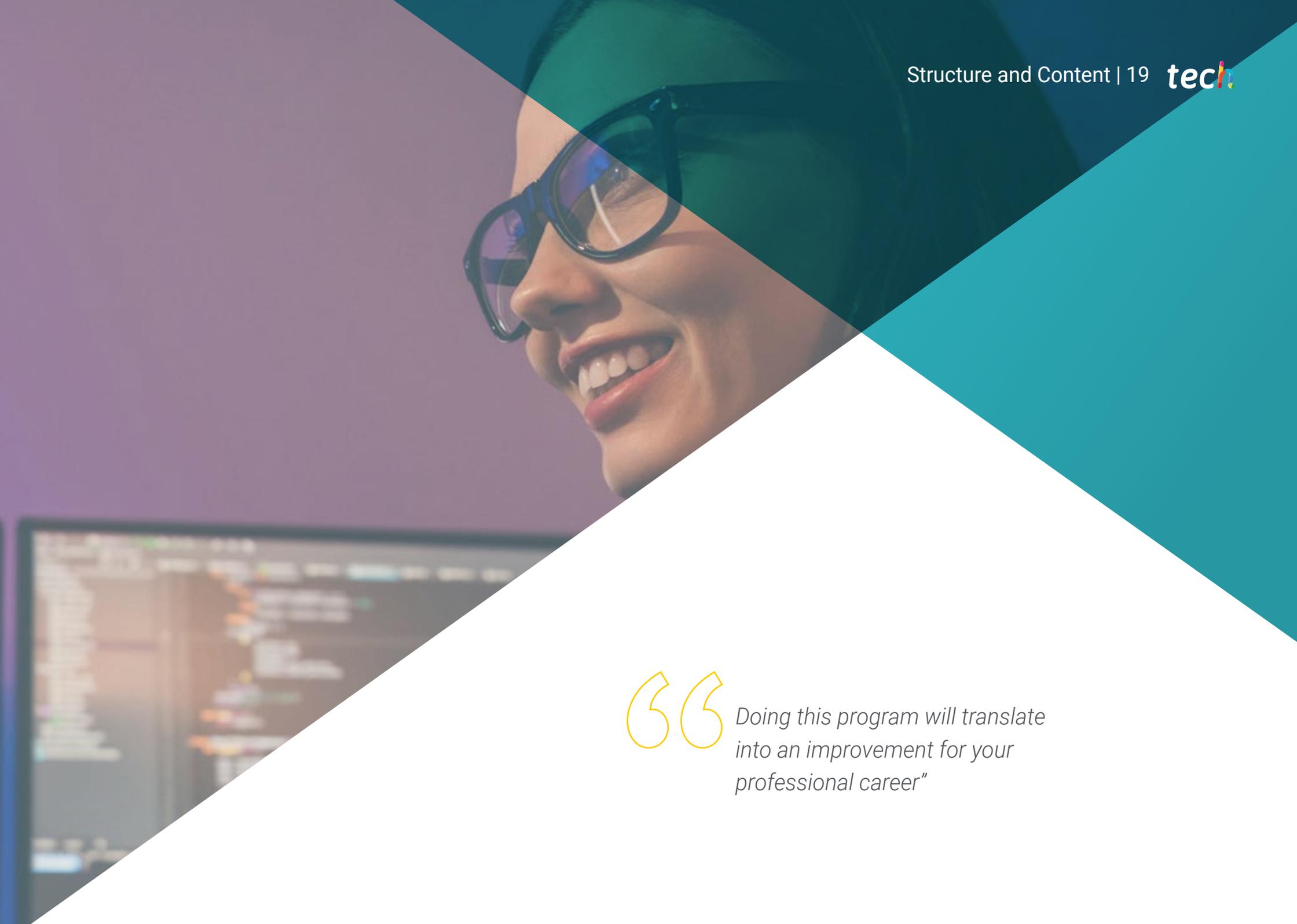
Doing this program will translate into an improvement for your professional career"

Module 1. Data Analysis in a Business Organization

1.1.   Business Analysis
    1.1.1.   Business Analysis
    1.1.2.   Data Structure
    1.1.3.   Phases and Elements
1.2.   Data Analysis in the Business
    1.2.1.   Departmental Scorecards and KPIs
    1.2.2.   Operational, Tactical and Strategic Reports
    1.2.3.   Data Analytics Applied to Each Department
        1.2.3.1. Marketing and Communication
        1.2.3.2. Commercial
        1.2.3.3. Customer Service
        1.2.3.4. Purchasing
        1.2.3.5. Administration
        1.2.3.6. Human Resources (HR)
        1.2.3.7. Production
        1.2.3.8. IT
1.3.   Marketing and Communication
    1.3.1.   KPIs to Be Measured, Applications and Benefits
    1.3.2.   Marketing Systems and Data Warehouse
    1.3.3.   Implementation of a Data Analytics Framework in Marketing
    1.3.4.   Marketing and Communication Plan
    1.3.5.   Strategies, Prediction and Campaign Management
1.4.   Commerce and Sales
    1.4.1.   Contributions of Data Analytics in the Commercial Area
    1.4.2.   Sales Department Needs
    1.4.3.   Market Research
1.5.   Customer Service
    1.5.1.   Loyalty
    1.5.2.   Personal Coaching and Emotional Intelligence
    1.5.3.   Customer Satisfaction
1.6.   Purchasing
    1.6.1.   Data Analysis for Market Research
    1.6.2.   Data Analysis for Competency Research
    1.6.3.   Other Applications

1.7.   Administration
    1.7.1.   Needs of the Administration Department
    1.7.2.   Data Warehouse and Financial Risk Analysis
    1.7.3.   Data Warehouse and Credit Risk Analysis

1.8.   Human resources.
    1.8.1.   HR and the Benefits of Data Analysis
    1.8.2.   Data Analytics Tools in the HR Department
    1.8.3.   Data Analytics Applications in the HR Department

1.9.   Production
    1.9.1.   Data Analysis in a Production Department
    1.9.2.   Applications
    1.9.3.   Benefits

1.10.   IT
    1.10.1.   IT Department
    1.10.2.   Data Analysis and Digital Transformation
    1.10.3.   Innovation and Productivity

Module 2. Practical Application of Data Science in Business Sectors

2.1.   Health Sector
    2.1.1.   Implications of AI and Data Analysis in the Health Sector
    2.1.2.   Opportunities and Challenges

2.2.   Risks and Trends in the Health Sector
    2.2.1.   Use in the Health Sector
    2.2.2.   Potential Risks Related to the Use of AI

2.3.   Financial Services
    2.3.1.   Implications of AI and Data Analysis in Financial Services Sector
    2.3.2.   Use in the Financial Services
    2.3.3.   Potential Risks Related to the Use of AI

2.4.   Retail
    2.4.1.   Implications of AI and Data Analysis in the Retail Sector
    2.4.2.   Use in Retail
    2.4.3.   Potential Risks Related to the Use of AI

2.5.   Industry 4.0
    2.5.1.   Implications of AI and Data Analysis in Industry 4.0
    2.5.2.   Use in the 4.0 Industry

2.6.   Risks and Trends in Industry 4.0
    2.6.1.   Potential Risks Related to the Use of AI

2.7.   Public Administration
    2.7.1.   Implications of AI and Data Analysis in Public Administration
    2.7.2.   Use in Public Administration
    2.7.3.   Potential Risks Related to the Use of AI

2.8.   Educational
    2.8.1.   Implications of AI and Data Analysis in Education
    2.8.2.   Potential Risks Related to the Use of AI

2.9.   Forestry and Agriculture
    2.9.1.   Implications of AI and Data Analysis in Forestry and Agriculture
    2.9.2.   Use in Forestry and Agriculture
    2.9.3.   Potential Risks Related to the Use of AI

2.10.   Human Resources
    2.10.1.   Implications of AI and Data Analysis in Human Resources
    2.10.2.   Practical Applications in the Business World
    2.10.3.   Potential Risks Related to the Use of AI

This program is designed by professionals who want to train the next generation: High-level professional computer engineers"

Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning.**

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.
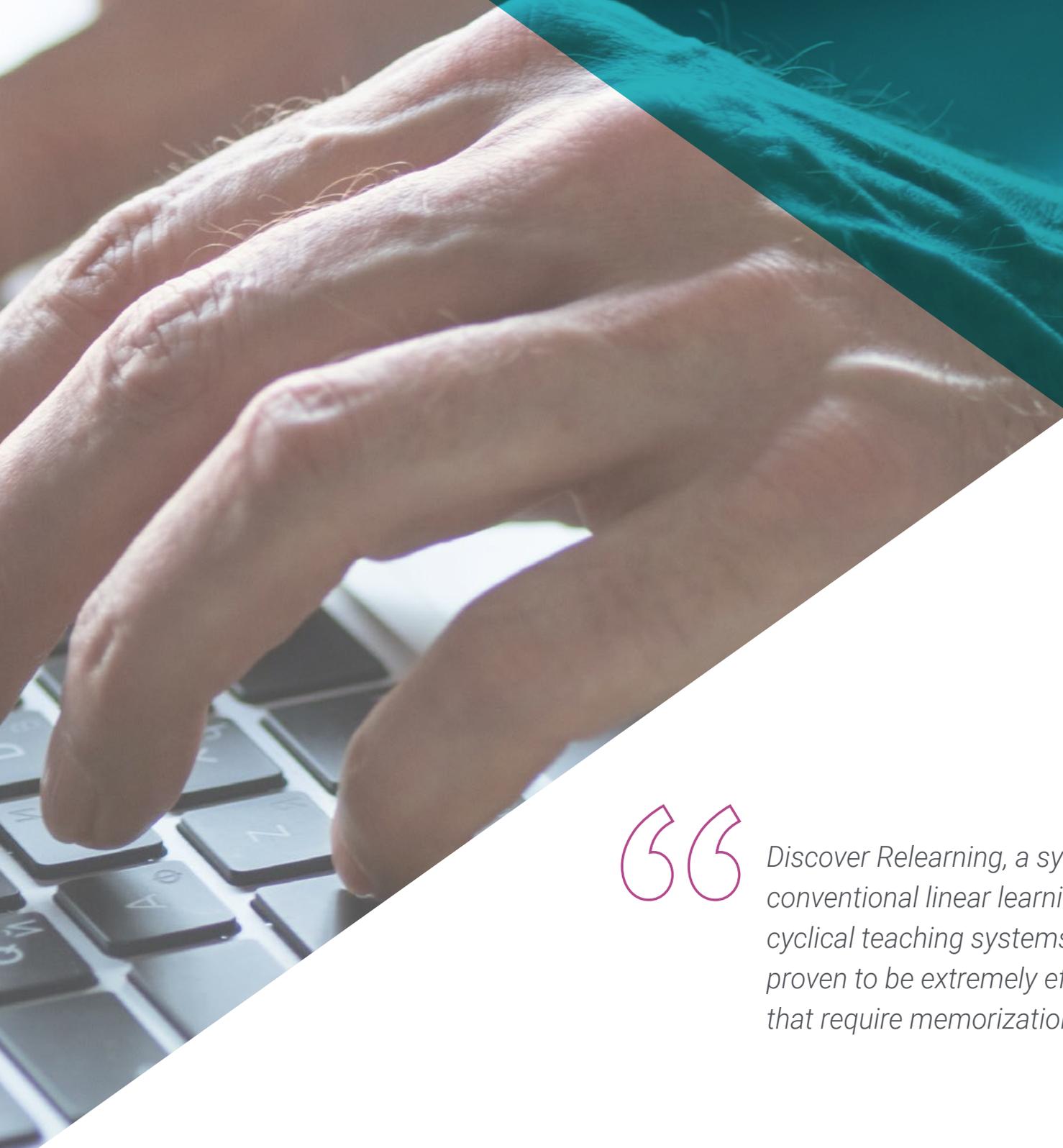
"Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

Case Study to contextualize all content

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

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

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

The student will learn to solve complex situations in real business environments through collaborative activities and real cases.

A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch, which presents the most demanding challenges and decisions in this field, both nationally and internationally. This methodology promotes personal and professional growth, representing a significant step towards success. The case method, a technique that lays the foundation for this content, ensures that the most current economic, social and professional reality is taken into account.

"

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

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

What should a professional do in a given situation? This is the question that you are presented with in the case method, an action-oriented learning method. Throughout the course, students will be presented with multiple real cases. They will have to combine all their knowledge and research, and argue and defend their ideas and decisions.

Relearning Methodology

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

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

> *In 2019, we obtained the best learning results of all online universities in the world.*

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

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

01 learning from evidence

02 relearning from evidence

03 testing

04 learning from an expert

05 neurocognitive context dependent learning

06 Von-Restorff effect

07 case based learning through storytelling

08 competencies testing (retesting)

In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically. This methodology has trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, and financial markets and instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.

From the latest scientific evidence in the field of neuroscience, not only do we know how to organize information, ideas, images and memories, but we know that the place and context where we have learned something is fundamental for us to be able to remember it and store it in the hippocampus, to retain it in our long-term memory.

In this way, and in what is called neurocognitive context-dependent e-learning, the different elements in our program are connected to the context where the individual carries out their professional activity.

This program offers the best educational material, prepared with professionals in mind:
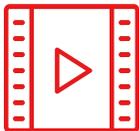
Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.

Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

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

Practising Skills and Abilities

They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.

Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.

20%

25%

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3%
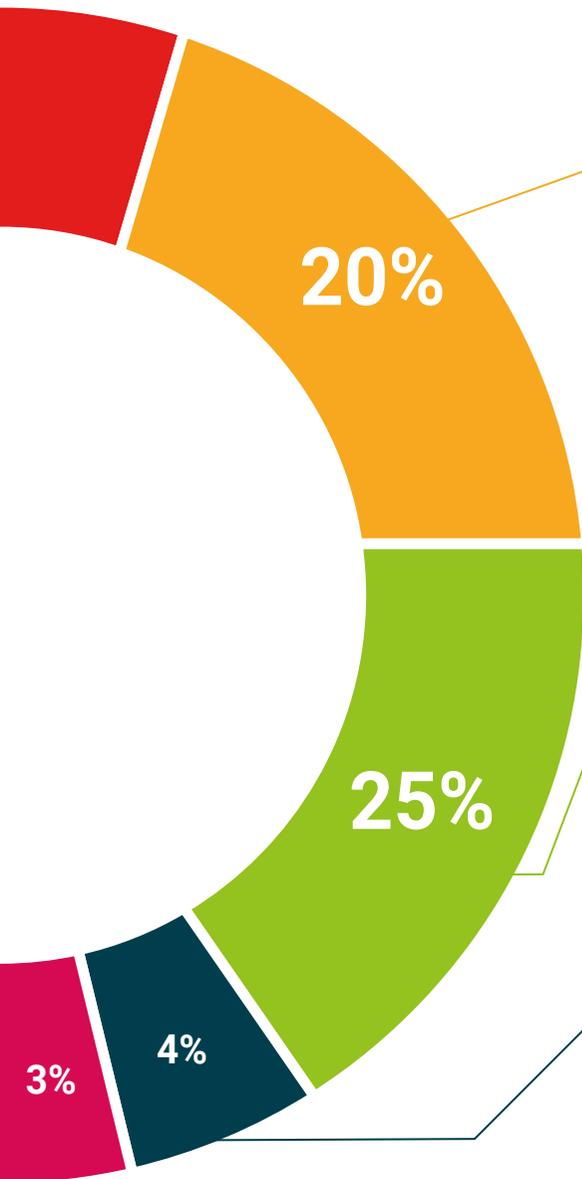
Case Studies

Students will complete a selection of the best case studies chosen specifically for this program. Cases that are presented, analyzed, and supervised by the best specialists in the world.

Interactive Summaries

The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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

Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.

Certificate

The Postgraduate Certificate in Data Science in Data Science in Business Areas and Sectors guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.

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

This private qualification will allow you to obtain an **Postgraduate Certificate in Data Science in Business Areas and Sectors** 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** private qualification, 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 Data Science in Business Areas and Sectors**

Modality: **online**

Duration: **12 weeks**

Accreditation: **12 ECTS**

tech global university

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

Postgraduate Certificate in Data Science in Business Areas and Sectors

This is a private qualification of 360 hours of duration equivalent to 12 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
Dean

Unique TECH Code: AFWORD23S   techtitute.com/certificates

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

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