

Postgraduate Certificate Databases



Postgraduate Certificate Databases

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

Website: www.techtitute.com/us/engineering/postgraduate-certificate/databases

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Certificate

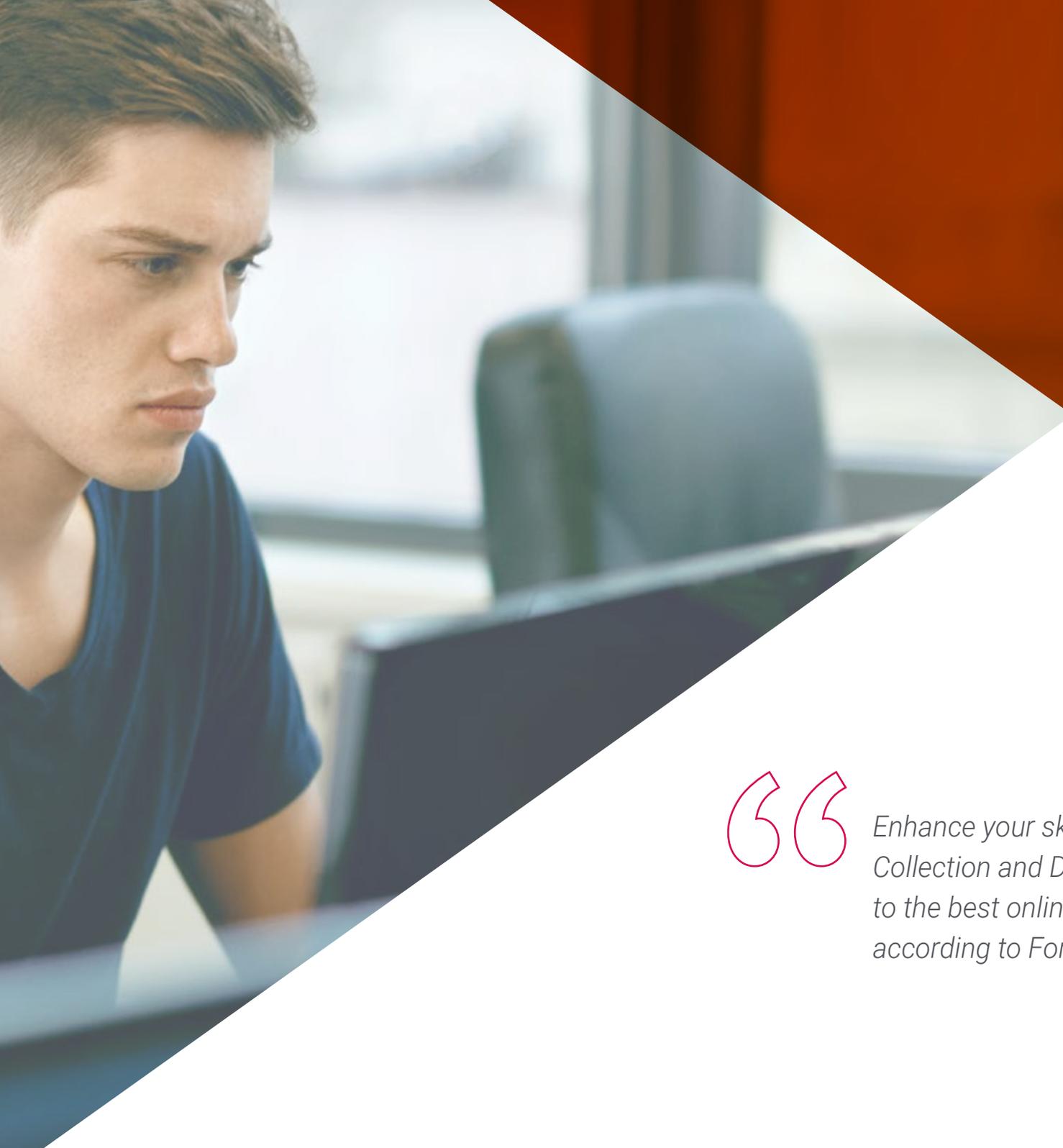
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01

Introduction

In statistics, database design and management are crucial for the analysis and interpretation of economic and financial information. A well-designed and managed database can facilitate the collection, storage, organization and access to economic and financial data, allowing professionals in this area to perform more accurate and effective statistical analysis. For this reason, TECH has designed a program that allows students to increase their knowledge to the highest level on aspects such as Information Systems, the Architecture of Database Management Systems, Design Stages or HTML Notions, among others. All this, thanks to a 100% online format and with the most dynamic and practical multimedia materials available in the academic market.





“

Enhance your skills on Web Page Data Collection and Data Warehousing, thanks to the best online university of the world according to Forbes, thanks to TECH”

Database design and management are fundamental in economic statistics because they ensure accuracy, integrity and efficiency in data access, which is essential for data analysis and interpretation. In addition, it can ensure data privacy and security, which is of great importance in financial data management.

For this reason, TECH has designed a Postgraduate Certificate in Databases with which it seeks to provide students with the necessary skills and competencies to be able to perform their work as specialists, with the highest possible efficiency and quality. Therefore, throughout this program, aspects such as Design Stages, HTML Notions, Web Page Data Storage, Management Systems Architecture or Database Application Development will be addressed.

All this, through a convenient 100% online format that allows students to manage their schedules and studies, combining them with their other day-to-day work and interests. In addition, this program has the most complete theoretical and practical materials on the market, which facilitates the student's study process and allows them to achieve their goals quickly and efficiently.

This **Postgraduate Certificate in Databases** contains the most complete and up-to-date program on the market. The most important features include:

- ◆ The development of case studies presented by Database experts
- ◆ The graphic, schematic and eminently practical contents with which it is conceived provide sporting and practical information on those disciplines that are essential for professional practice
- ◆ Practical exercises where the self-assessment process can be carried out 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



Become a successful expert in the field of Databases and Economic Statistics, in only 6 weeks and with total freedom of management”

“Acquire new and better skills on Database Implementation, in a comfortable 100% online format”

The program's teaching staff includes professionals from sector who contribute their work experience to this educational 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. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

Improve your professional profile in one of the most promising areas in the Engineering field, thanks to TECH and the most practical and dynamic materials in the academic market.

Delve into HTML Notions and Regular Expressions from any device with Internet connection, whether a Tablet, cell phone or computer.



02

Objectives

The final objective of this Postgraduate Certificate in Databases is that the student acquires a precise up-to-date knowledge in this area. An up-to-date approach that will allow the student to work with the highest possible quality and efficiency. All this, thanks to TECH and a 100% online format that gives total freedom of management and schedules to the student.



“

Delve into all the essential aspects of Databases in Economic Statistics, without leaving home and without the need to travel”

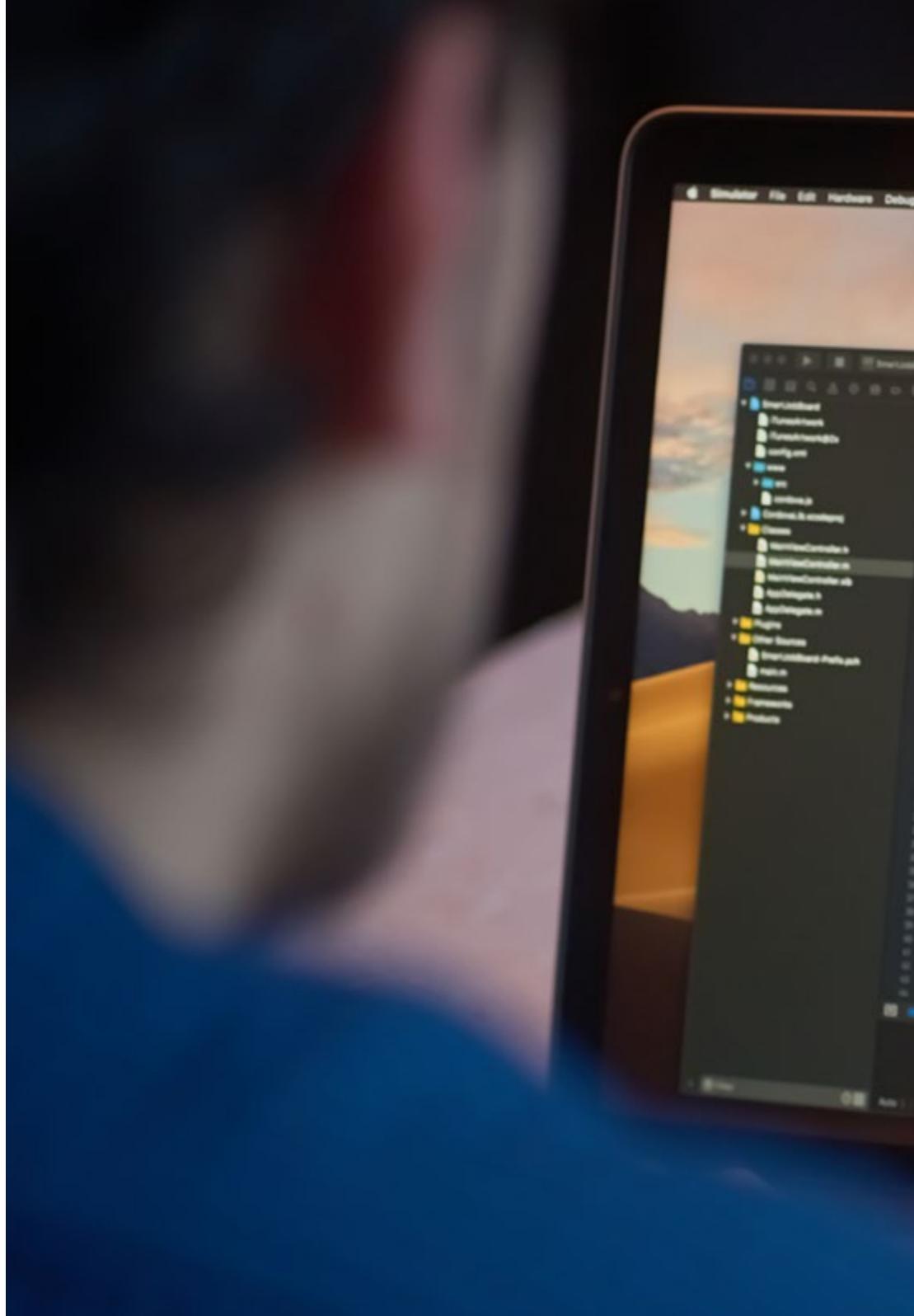


General Objectives

- ◆ Apply their knowledge to their work or vocation in a professional manner and possess the skills that are usually demonstrated through the development and defence of arguments and problem solving within their area of study
- ◆ Perform basic operations related to information debugging
- ◆ Use the appropriate sources of information for each type of applied study
- ◆ Describe the main sources of aggregate output growth of an economy in the long run
- ◆ Calculate and use elasticities and cost-of-living indexes



Exceed your highest expectations, thanks to a program that is unique and offers the most complete theoretical and practical materials on the academic market”





Specific Objectives

- ◆ Understand computer algorithms used to manage databases and SQL language
- ◆ Critically evaluate the work performed using quality criteria
- ◆ Manage a database
- ◆ Correctly identify types of data and measures
- ◆ Identify the advantages and disadvantages of the Internet as an important source of statistical information
- ◆ Possess and understand knowledge in their field of study that builds on the foundation of general secondary education. While relying on advanced textbooks, it also includes some aspects that involve knowledge from the forefront of this field of study

03

Structure and Content

The structure and all the didactic resources of this Postgraduate Certificate in Databases have been designed by the renowned professionals that are part of TECH's team of experts in this area of Engineering. These specialists have used their extensive experience and their most advanced knowledge to create practical and completely up-to-date contents. All this, based on the most efficient teaching methodology, TECH's *Relearning*.



“

Expand your knowledge of Databases, thanks to the most innovative teaching materials and a wide variety of additional content available on the Virtual Campus”

Module 1. Databases: Design and Management

- 1.1. Introduction to Databases
 - 1.1.1. What is a Database?
 - 1.1.2. History of Database Systems
- 1.2. Information System and Databases
 - 1.2.1. Concepts
 - 1.2.2. Features
 - 1.2.3. Evolution of Databases
- 1.3. Definition and Characteristics of a Database Management System
 - 1.3.1. Definition
 - 1.3.2. Features
- 1.4. Architecture of Database Management Systems
 - 1.4.1. Centralized and Client-Server Architectures
 - 1.4.2. Server Systems Architectures
 - 1.4.3. Parallel Systems
 - 1.4.4. Distributed Systems
 - 1.4.5. Types of Networks
- 1.5. Main Database Management Systems
 - 1.5.1. Types of DBMS
- 1.6. Development of Database Applications
 - 1.6.1. Web Interfaces for Databases
 - 1.6.2. Performance Tuning
 - 1.6.3. Performance Testing
 - 1.6.4. Standardization
 - 1.6.5. E-Commerce
 - 1.6.6. Inherited Systems
- 1.7. Database Design Stages
 - 1.7.1. Conceptual Design
 - 1.7.2. Logical Design
 - 1.7.3. Application Design



- 1.8. Database Implementation
 - 1.8.1. Structured Query Language (SQL)
 - 1.8.2. Data Processing
 - 1.8.3. Data Query
 - 1.8.4. SQL Database Management
 - 1.8.5. Working with SQLite Databases
- 1.9. Notions of HTML and Regular Expressions
 - 1.9.1. Structure and Code of a Web Page
 - 1.9.2. HTML and CSS Tags and Attributes
 - 1.9.3. Text Searching with Regular Expressions
 - 1.9.4. Special Characters, Sets, Groups and Repetitions
- 1.10. Collecting and Storing Data from Web Pages
 - 1.10.1. Introduction to Web Scraping Tools
 - 1.10.2. Programming Web Scraping Tools in Python
 - 1.10.3. Searching and Obtaining Information with Regular Expressions
 - 1.10.4. Searching and Obtaining Information with BeautifulSoup
 - 1.10.5. Storing in Databases
 - 1.10.6. Exporting Results in Comma-Separated Value Files

“

*Put your new skills to test,
performing a wide variety of
challenging practical activities, only
at TECH Global University”*

04

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 is the most widely used learning system in the best faculties in the world. 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 program, the studies 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 8 different teaching elements in each lesson.

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

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

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

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



In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

This methodology has trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, and financial markets and instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

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

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

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



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



Study Material

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

These contents are then 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.



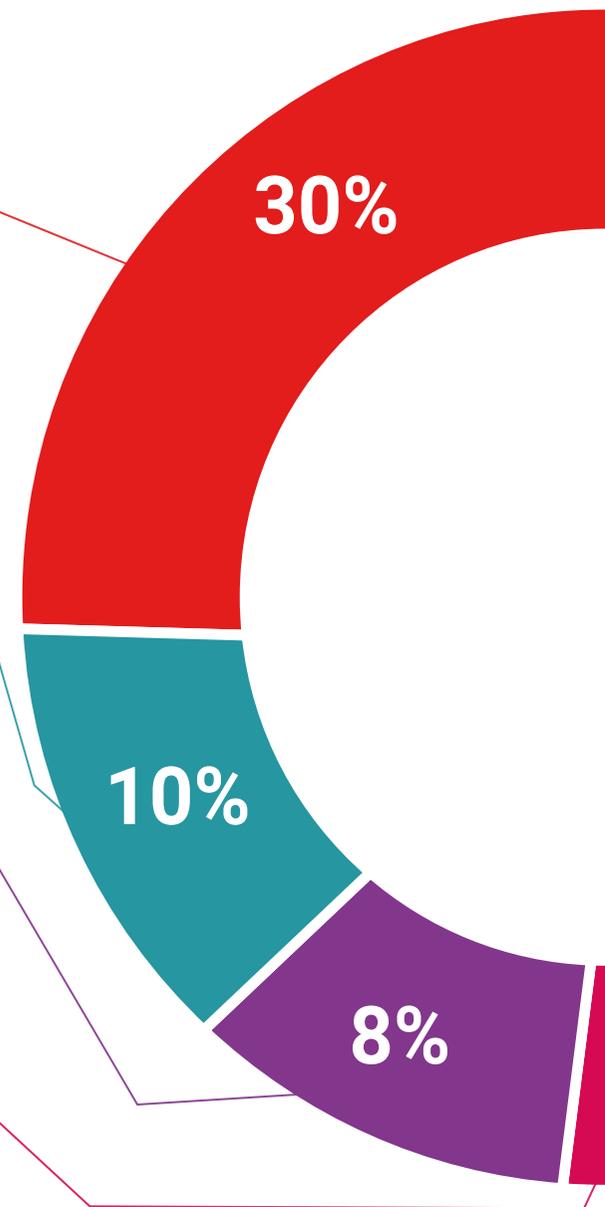
Practising Skills and Abilities

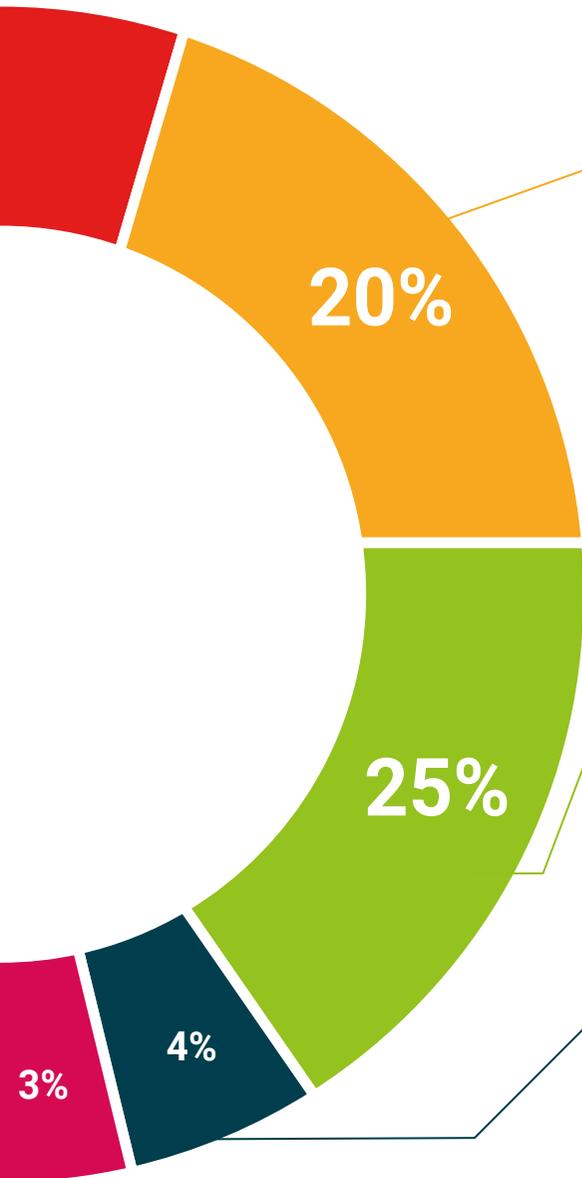
They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



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.





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.



05

Certificate

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



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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 Databases** 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 Databases**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



*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.

future
health confidence people
education information tutors
guarantee accreditation teaching
institutions technology learning
community commitment
personalized service innovation
knowledge present quality
development lang
virtual classroom



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