Postgraduate Certificate
Smart Cities

tech global university

Postgraduate Certificate
Smart Cities

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

Website: **www.techtitute.com/us/information-technology/postgraduate-certificate/postgraduate-certificate-smart-cities**

Index

01
Introduction

Smart Cities respond to the changing needs of public administrations, companies and the population through new technologies. This means an improvement in the quality of public services and transparency for a city with a more efficient, accessible and inclusive administration. Smart Cities are a booming area of work in which there is still a long way to go, to discover and to investigate. This program, which is completely online, shows graduates how Smart Cities will become platforms that will transform today's cities into more efficient, sustainable and safe spaces. Furthermore, they will serve to develop new business opportunities based on their own connectivity.

Take advantage of the key features of Smart Cities and take advantage of them to develop new business opportunities"

Smart Cities are cities based on sustainable urban development, which apply innovation and Information and Communication Technologies (ICT) to the management and provision of their different services. It is predicted that by 2024, 90% of the electronic devices used by the inhabitants of a Smart City will be connected to the Internet. Therefore, this course presents a model based on a neural system of sensors that collect and return data in real time, turning it into an entity with a life of its own.

Graduates with this qualification will specialize in the foundations of the technological architecture of Smart Cities. These are the parameterization and sensorization of their environments, the datification of public infrastructures, the measurement and scanning of social events and the advanced analysis of urban dynamics of devices. All this with the aim of improving the maintenance of facilities and buildings; knowing and predicting the behavior of the population; implementing new services; optimizing current services and making very accurate predictions to increase the efficiency of the rest of the ecosystems that make up the city.

Furthermore, this Postgraduate Certificate has the best 100% online study methodology, which eliminates the need to attend classes in person or have to comply with a predetermined schedule. Over the course of 6 weeks, students will deepen their understanding of the scope of Digital Twins, understanding the competitive advantages they bring, so they will be positioned at the forefront of technology and will be able to lead ambitious projects in the present and in the future.

This **Postgraduate Certificate in Smart Cities** contains the most complete and up-to-date educational program on the market. Its most notable features are:

- Case studies presented by experts in Smart Cities
- The graphic, schematic, and eminently practical contents with which they are created, provide 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

With the implementation of a Smart City, it collects and returns data in real time, turning your city into an entity with a life of its own"

"*Smart Cities are increasingly integrating technologies such as sensing, IoT, algorithms, Cloud, Big Data, Artificial Intelligence and Blockchain into their systems"*

A Smart City can reduce energy consumption, reduce CO2 emissions and increase the well-being of citizens.

Singapore, London, New York, San Francisco and Chicago are some examples of Smart Cities and reinvention.

The program's teaching staff includes professionals from the sector who contribute their work experience to this training 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 training programmed to train 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.

02
Objectives

The Postgraduate Certificate in Smart Cities focuses on addressing the topic of Smart Cities from a practical point of view, in order to give students a sense of security that will allow them to be more effective in their daily practice. The direct application of the knowledge acquired is an added professional value that very few computer scientists specialized in information and communication technologies can offer.

You will get the inhabitants of your Smart City to connect with each other through multiple networks and through multiple technologies"

General objectives

- Present the current panorama of the Smart City model in different countries
- Analyze the advantages of a hyperconnected Smart City model
- Establish different Big Data models and their prediction models
- Propose application scenarios in different city typologies

Consequently, a Smart City provides a traditional city with tools and systems that make its habitability more efficient"

Specific objectives

- Analyze the technological platform
- Determine what a City Digital Twin is (Virtual Model)
- Establish which are the monitoring layers: density, movement, consumptions, water, wind, solar radiation, etc
- Carry out a comparative analysis of the following variables
- Integrate the different sensor networks (IoT/M2M) as well as the behavioral parameters of the inhabitants of the city (treated as human sensors)
- Develop a detailed vision of how Smart Cities will influence the future of people
- Establish new uses
- Generate interest in the implementation of smart city models

Course Management

This program has highly qualified teachers who have first-hand knowledge of the characteristics and peculiarities of Smart Cities. They will offer the best contents in order for the graduate to specialize in the application of the technologies of the future, of the near and not so near future, but with real applications in the present. Therefore, the computer scientist will acquire specialized knowledge of the technologies of the coming years starting from the present moment.

With the support of a team of experts, you will acquire up-to-date knowledge that will favor your professional growth"

Management

Mr. Molina Molina, Jerónimo

- Head of Artificial Intelligence at Helphone
- AI Engineer & Software Architect at NASSAT, Internet Satellite in Motion
- Senior Consultant at Hexa Engineer
- Artificial Intelligence Introducer (ML and CV)
- Expert in Artificial Intelligence Based Solutions in the fields of Computer Vision, ML/DL and NLP
- Postgraduate Diploma in Business Creation and Development at Bancaixa and Fundeun
- Computer Engineer by the University of Alicante
- Professional Master's Degree in Artificial Intelligence from the Catholic University of Avila
- MBA Executive at the European Business Campus Forum

Professors

Mr. Pradilla Pórtoles, Adrián

- Head of IT at Open Sistemas
- Ruby on Rails Developer at Populate Tools
- Product Development at Global ideas4all
- Senior Systems Technician at Sociedad de Prevencion de FREMAP
- Bootcamp in Tokenization by Tutellus
- Executive Master in Artificial Intelligence by the Artificial Intelligence Institute (Instituto de Inteligencia Artificial)
- Postgraduate degree in Marketing and Advertising from the Antonio de Nebrija University
- Degree in Computer Engineering from the Antonio de Nebrija University
- Degree in Technical Engineering in Computer Systems by Antonio de Nebrija University

04
Structure and Content

This program contains a module with specialized knowledge on the different options offered by Smart Cities. Likewise, a Smart City model is being developed based on a neural system of sensors that collect and return data in real time, turning it into an entity with a life of its own. All this from a practical and innovative business perspective, thereby ensuring that the contents have a highly practical focus.
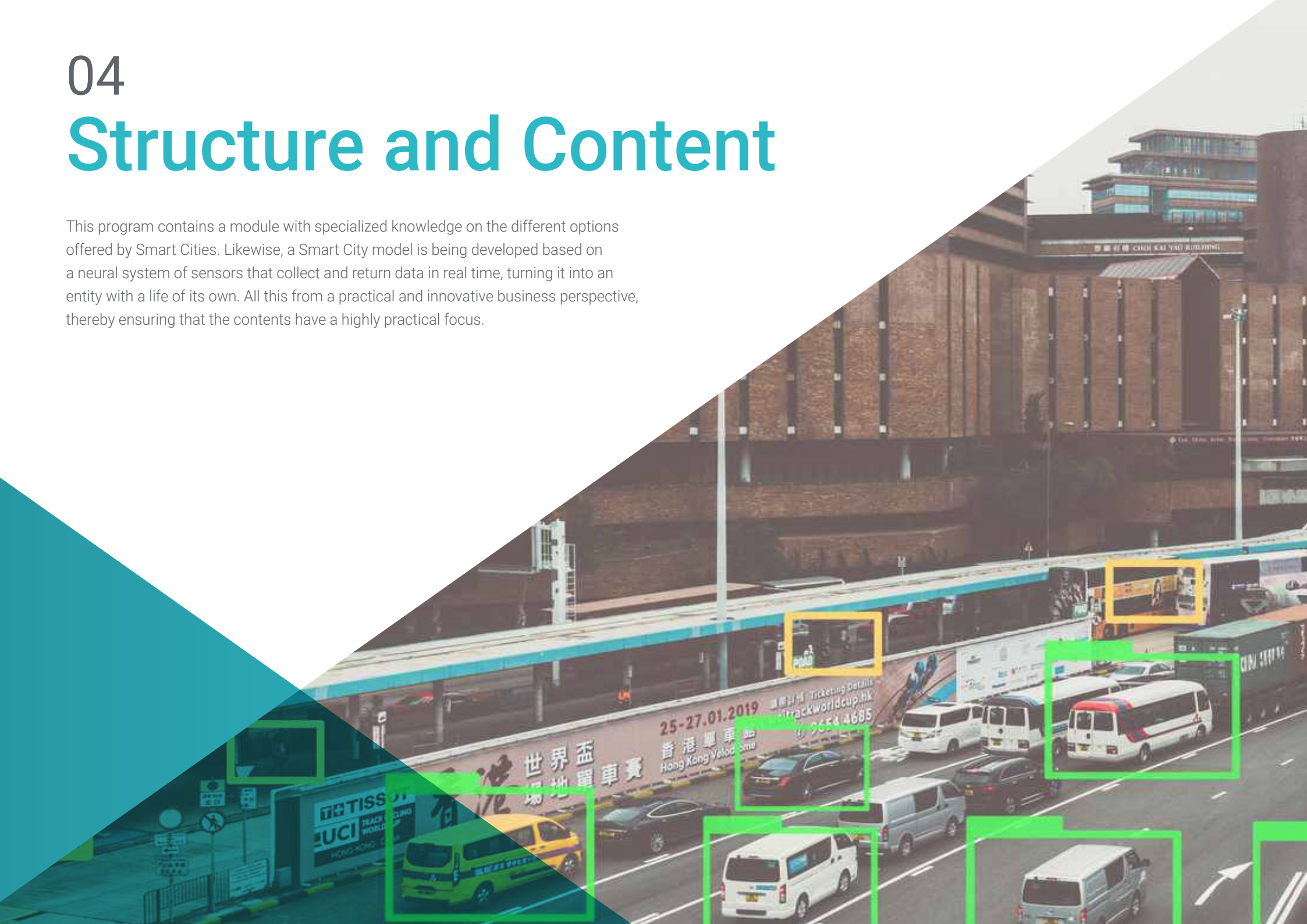
A unique, key and decisive learning experience to boost your professional development"

Module 1. Smart Cities as Innovation Tools

You will acquire in-depth knowledge of the scope of application of Smart Cities, understanding the competitive advantages it brings"

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"

At TECH we use the Case Method

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

"

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

We are the first online university to combine Harvard Business School case studies with a 100% online learning system based on repetition.

A learning method that is different and innovative.

This intensive Information Technology program at TECH Global University prepares you to face all the challenges in this field, both nationally and internationally. We are committed to promoting your personal and professional growth, the best way to strive for success, that is why at TECH Global University you will use Harvard case studies, with which we have a strategic agreement that allows us, to offer you material from the best university in the world.

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.

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

Relearning Methodology

Our university is the first in the world to combine Harvard University case studies with a 100% online learning system based on repetition, which combines different teaching elements in each lesson.

We enhance Harvard case studies 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 university 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 competencies and skills in each thematic area. Exercises and activities to acquire and develop the skills and abilities that a specialist 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%

20%

25%

4%

3%
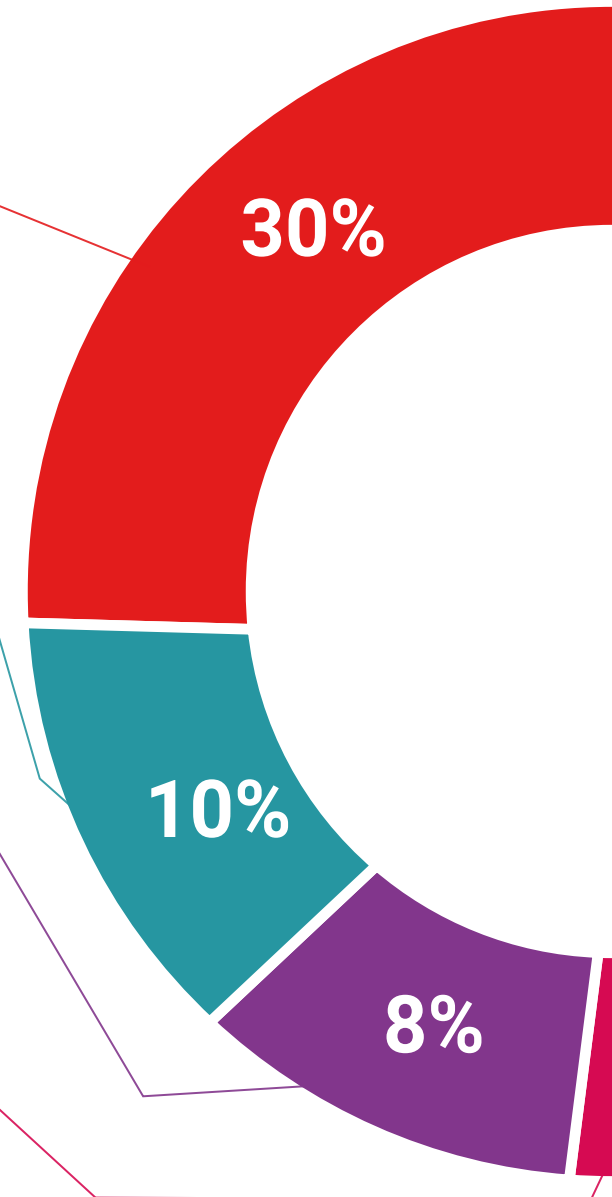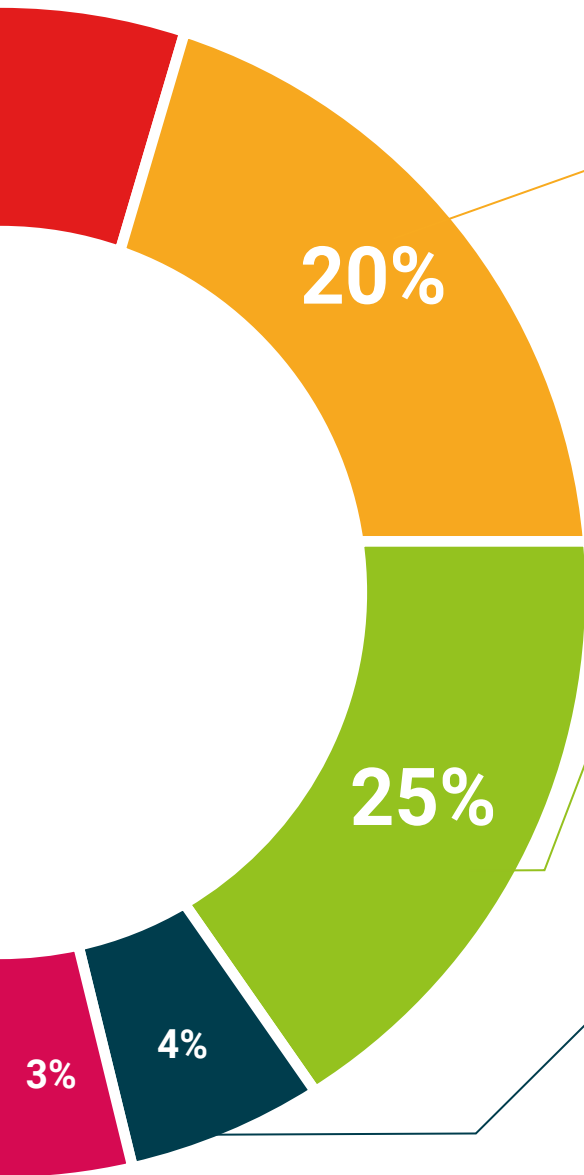
Case Studies

They will complete a selection of the best case studies in the field used at Harvard. 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 multimedia content presentation training Exclusive system 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 your goals.

Certificate

The Postgraduate Certificate in Smart Cities 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 training program and receive your university certificate without travel or laborious paperwork"*

This program will allow you to obtain your **Postgraduate Certificate in Smart Cities** 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 Smart Cities**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**

tech global university

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

Postgraduate Certificate in Smart Cities

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

*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.

Postgraduate Certificate
Smart Cities

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

Postgraduate Certificate
Smart Cities

tec*h* global university