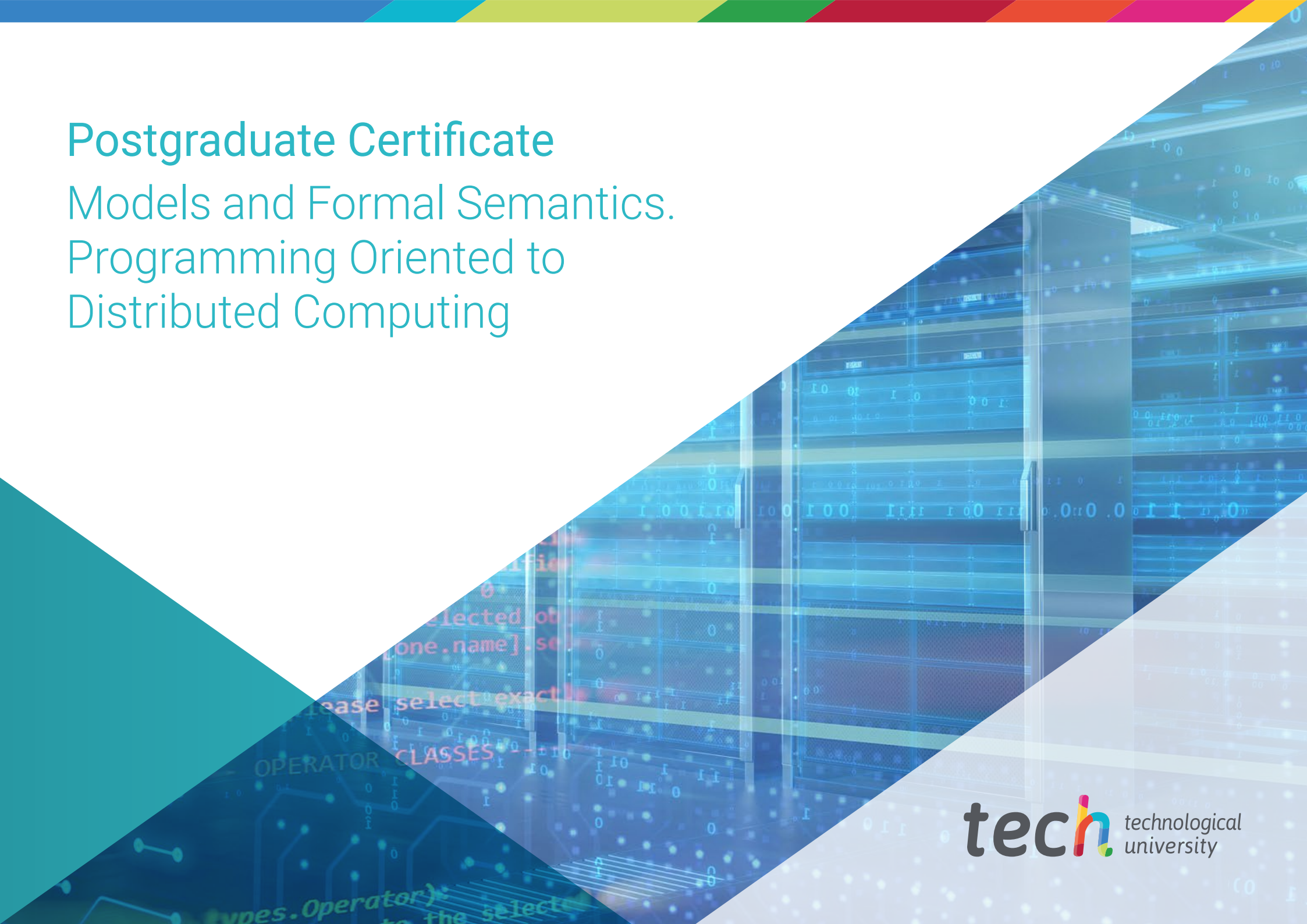
Postgraduate Certificate

Models and Formal Semantics. Programming Oriented to Distributed Computing



tech technological university

tech technological university

Postgraduate Certificate

Models and Formal Semantics. Programming Oriented to Distributed Computing

- Modality: **online**
- Duration: **6 weeks**
- Certificate: **TECH Technological University**
- Dedication: **16h/week**
- Schedule: **at your own pace**
- Exams: **online**

Website: www.techtitute.com/us/technology-information/postgraduate-certificate/models-formal-semantics-programming-oriented-distributed-computing

Index

01

Introduction

Whether programming in Grid, Cluster or in the cloud, Distributed Computing has a varied set of models and formal semantics, to such an extent that the computer scientist can achieve a high professional value if their masters the different languages and types of architectures most commonly used. Aware of this opportunity, the present Postgraduate Certificate has been articulated around the fundamental elements of programming oriented to distributed computing. Written by a highly experienced teaching team, all the contents have been designed to get the most out of the different distributed programming processes, giving the computer scientist an important opportunity to advance in their career. In addition, the 100% online format of the degree allows for effective reconciliation with personal and professional responsibilities of all kinds.

Delve into programming languages, semantic models and cluster computing to gain a significant advantage in your career path"

In the current market there are a variety of tools to implement Distributed Computing systems. Two prominent examples of this are Microsoft Cloud Computing or Amazon Cloud Computing, both of which are cloud-based and have a number of very prominent reference architectures and functionalities.

The computer scientist who acquires advanced knowledge in this area, in addition to mastering the models and formal semantics of this area, will have an advantageous position to lead complex Distributed Computing projects. In such projects it will be necessary for you to develop your skills in the different distributed models, issues covered by this program along with parallel, monolithic or cooperative programming.

The format of the Diploma is completely online, which means that the student has the freedom to download the entire content from the first day. By eliminating face-to-face classes and fixed schedules, a preferential flexibility is achieved, together with a teaching load lightened by the numerous multimedia resources and complementary material to which the computer scientist will have access.

This **Postgraduate Certificate in Models and Formal Semantics. Programming Oriented to Distributed Computing** contains the most complete and up-to-date scientific program on the market. The most important features include:

- The development of case studies presented by experts in Parallel and Distributed Computing.
- 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 the self-assessment process can be carried out to improve learning
- Its special emphasis on innovative methodologies
- Theoretical lessons, questions for experts and individual reflection work
- Access to content from any fixed or portable device with an Internet connection.

Sign up today and start perfecting your distributed architecture programming methodology"

Position yourself as a highly skilled computer scientist in Distributed Computing, becoming proficient in Grid and Cluster computing"

Incorporate the most advanced Models and Formal Semantics in Distributed Computing to your daily work.

Choose how to distribute the entire course load, being able to study in the place and at the time you prefer.

The program's teaching staff includes professionals from 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

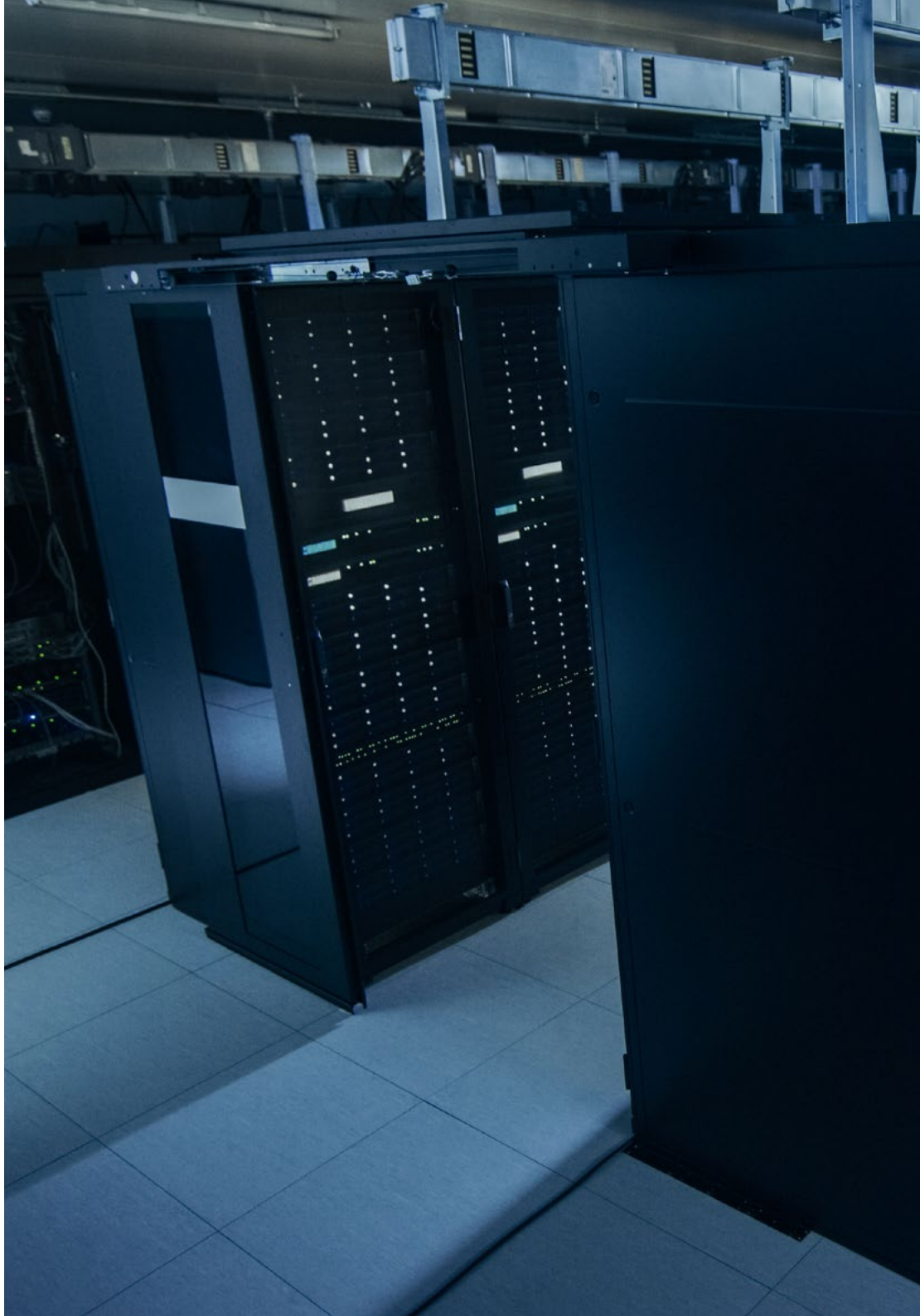
This Postgraduate Certificate aims to provide the computer scientist with advanced and useful knowledge in the field of Distributed Computing, focusing even more on its Models and Formal Semantics. In this way, the professional will gain a more comprehensive understanding of the creation process itself of parallel architectures, thus being able to improve his own creation and programming.

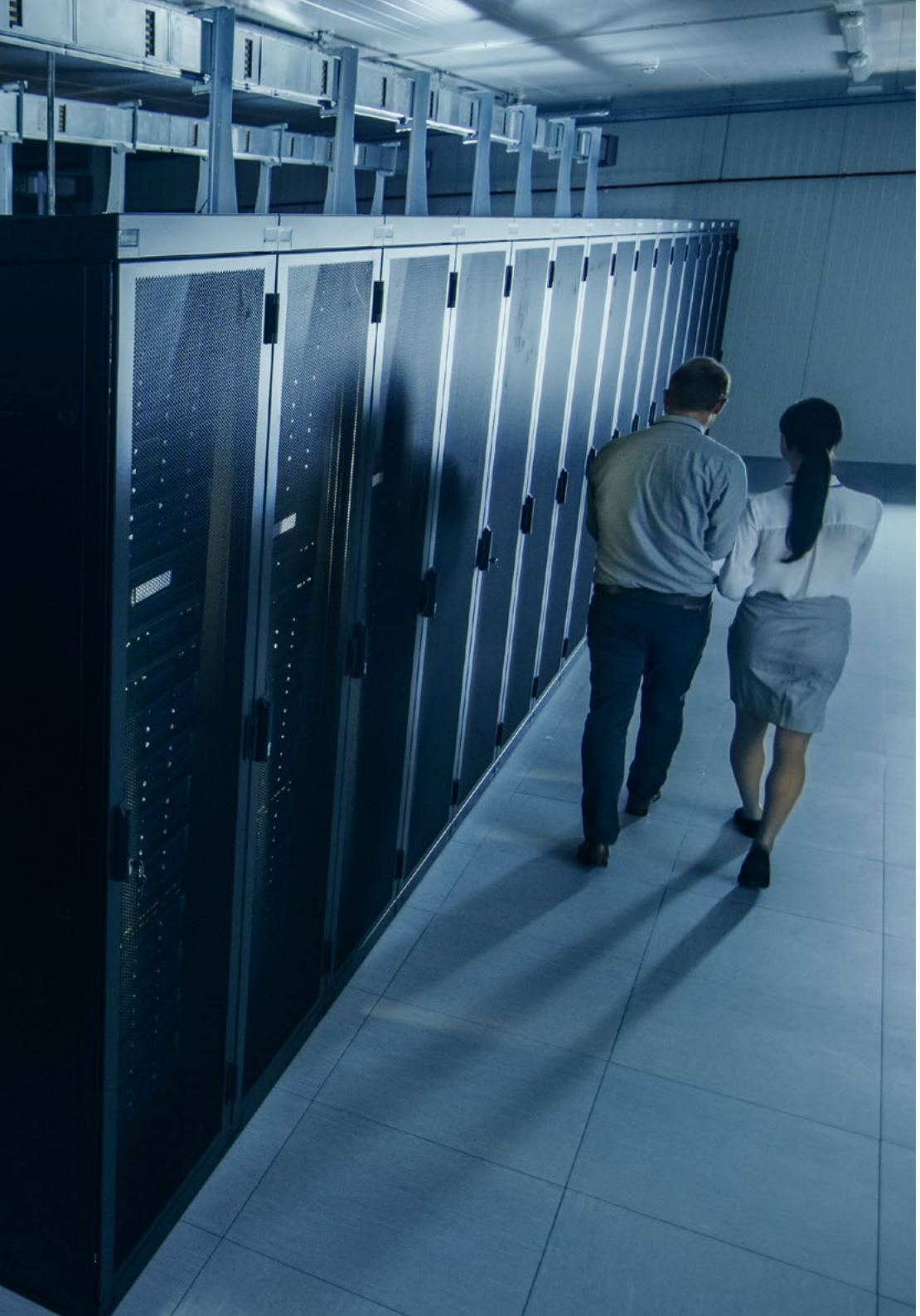
You will have a technical team committed to solve any kind of doubt or circumstance that you may encounter during the course"

General Objectives

- Identify the benefits of Formal Semantics
- Examine how formal semantics help Distributed Computing oriented programming
- Realize the possibilities of formal semantics applied to Distributed Computing oriented programming
- Develop in depth the main tools in terms of project feasibility in the use of this technology

You will achieve your most ambitious professional goals, supported by the most advanced pedagogical methodology and educational technology"





Specific Objectives

- Delve into the Semantic Data Model
- Identify programming languages in the Semantic Model
- Determine how these semantic models help us with programming languages
- Evaluate and compare computational models
- Identify the benefits of *Grid*, *Cluster* and *Cloud*
- Concretize the use of distributed models
- Present the most advanced market tools for projects

03

Course Management

This Postgraduate Certificate has been developed by a teaching team with extensive experience in handling all types of computer architectures, especially those developed from Distributed Computing. Their extensive expertise in this field has enabled them to write a comprehensive and integrated educational content, which combines the most advanced modeling technology theory and formal semantics with their own experience and the most effective practical techniques.

All your doubts or concerns about Distributed Computing and its semantics will be solved by a team of experts committed to your professional improvement"

Management

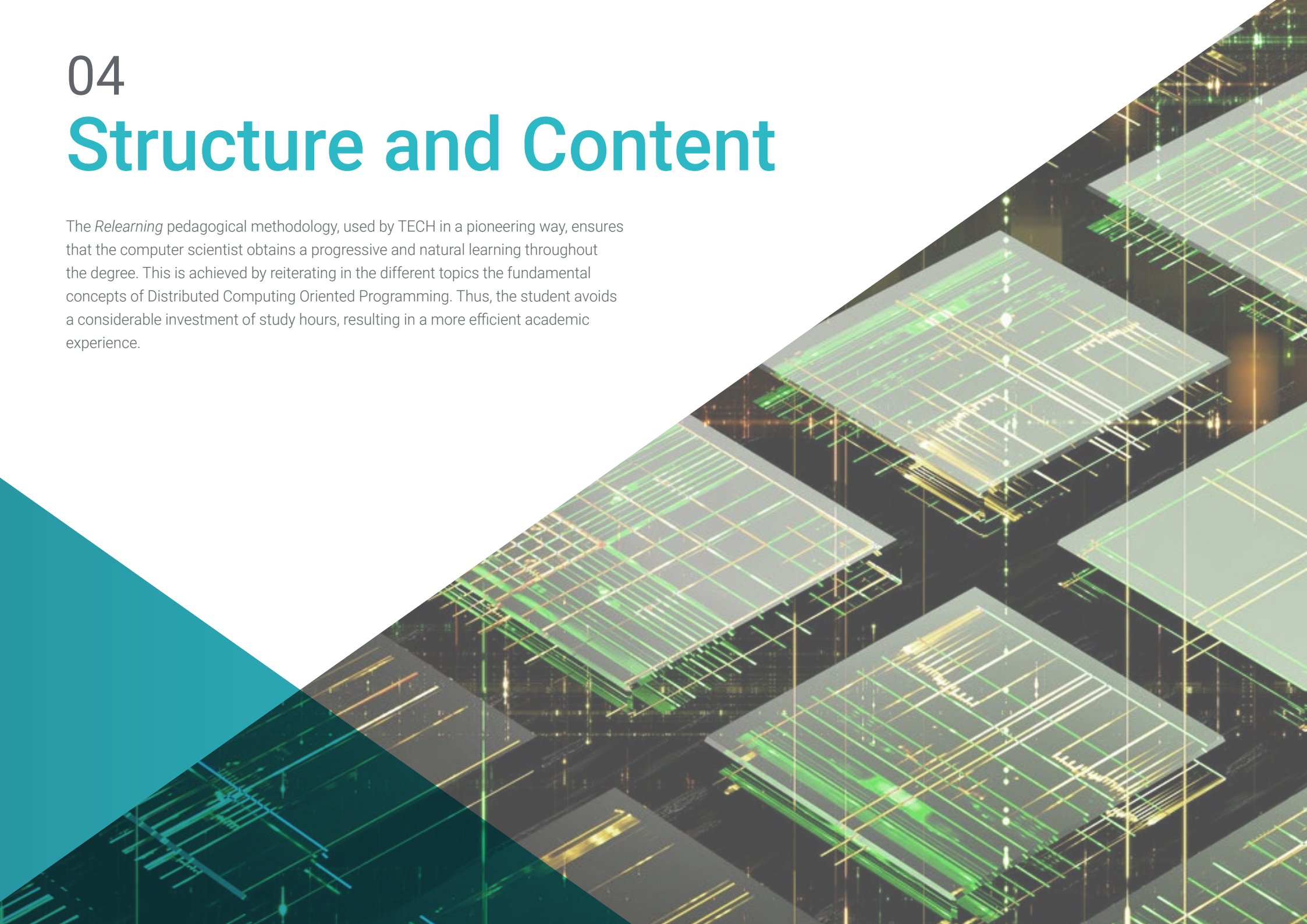
Mr. Olalla Bonal, Martín

- Technical Sales Blockchain Specialist in IBM
- Blockchain Hyperledger and Ethereum Architecture Manager at Blocknitive
- Director of the Blockchain area at PSS Information Technologies.
- Chief Information Officer in ePETID – Global Animal Health
- IT Infrastructure Architect at Bankia - wdoIT (IBM - Bankia Join Venture)
- Project Director and Manager in Daynet Servicios Integrales
- Director of Technology at Wiron Construcciones Modulares
- Head of IT Department at Dayfisa
- Head of IT Department at Dell Computer, Majsa and Hippo Viajes
- Electronics Technician in IPFP Juan de la Cierva

04

Structure and Content

The *Relearning* pedagogical methodology, used by TECH in a pioneering way, ensures that the computer scientist obtains a progressive and natural learning throughout the degree. This is achieved by reiterating in the different topics the fundamental concepts of Distributed Computing Oriented Programming. Thus, the student avoids a considerable investment of study hours, resulting in a more efficient academic experience.



Take the leap towards the most prestigious Distributed Computing thanks to all the contents of this Diploma"

Module 1. Models and Formal Semantics Distributed Computing Oriented Programming

1.1. Semantic Data Model
- 1.1.1. Semantic Data Models
- 1.1.2. Semantic Data Models Purposes
- 1.1.3. Semantic Data Models Applications

1.2. Semantic Model of Programming Languages
- 1.2.1. Language Processing
- 1.2.2. Translation and Interpretation
- 1.2.3. Hybrid Languages

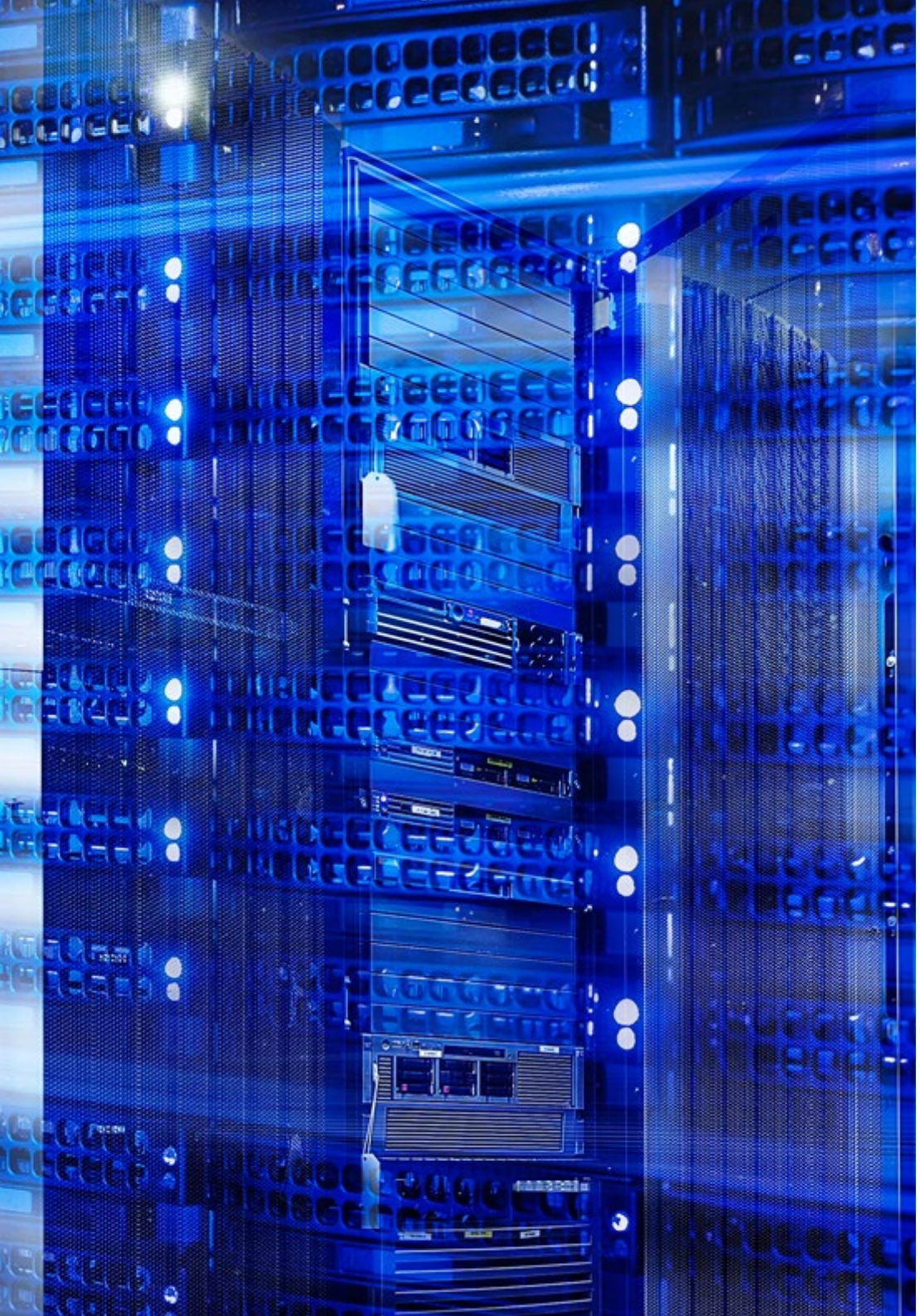
1.3. Computing Models
- 1.3.1. Monolithic Computing
- 1.3.2. Parallel Computing
- 1.3.3. Distributed Computing
- 1.3.4. Cooperative Computing (P2P)

1.4. Parallel Computing
- 1.4.1. Parallel Architecture
- 1.4.2. *Hardware*
- 1.4.3. *Software*

1.5. Distributed Model *Grid Computing*
- 1.5.1. *Grid Computing* Architecture
- 1.5.2. *Grid Computing* Architecture Analysis
- 1.5.3. *Grid Computing* Architecture Applications

1.6. Distributed Model *Cluster Computing*
- 1.6.1. *Cluster Computing* Architecture
- 1.6.2. *Cluster Computing* Architecture Analysis
- 1.6.3. *Cluster Computing* Architecture Applications

1.7. *Cluster Computing* Current Tools to Implement It Hypervisors
- 1.7.1. Market Competitors
- 1.7.2. VMware *Hypervisor*
- 1.7.3. Hyper-V



1.8. Distributed Model *Cloud Computing*
  1.8.1. *Cloud Computing* Architecture
  1.8.2. *Cloud Computing* Architecture Analysis
  1.8.3. *Cloud Computing* Architecture Applications
1.9. Distributed Model *Cloud Computing* Amazon
  1.9.1. *Cloud Computing* Amazon. Functionalities
  1.9.2. *Cloud Computing* Amazon Licences
  1.9.3. *Cloud Computing* Amazon Architecture of Reference
1.10. Distributed Model *Cloud Computing* Microsoft
  1.10.1. *Cloud Computing* Microsoft Functionalities
  1.10.2. *Cloud Computing* Microsoft Licences
  1.10.3. *Cloud Computing* Microsoft Architecture of Reference

Download all the contents of this Diploma, having full access to them for later use as reference material"

05

Methodology

This training program provides you with a different way of learning. Our methodology uses a cyclical learning approach: ***Re-learning***.

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 Re-learning, 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.

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

A learning method that is different and innovative.

This intensive program in Computer Science at TECH Technological University prepares you to face all the challenges in this area, 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 Technological 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 Computer 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.

Re-Learning Methodology

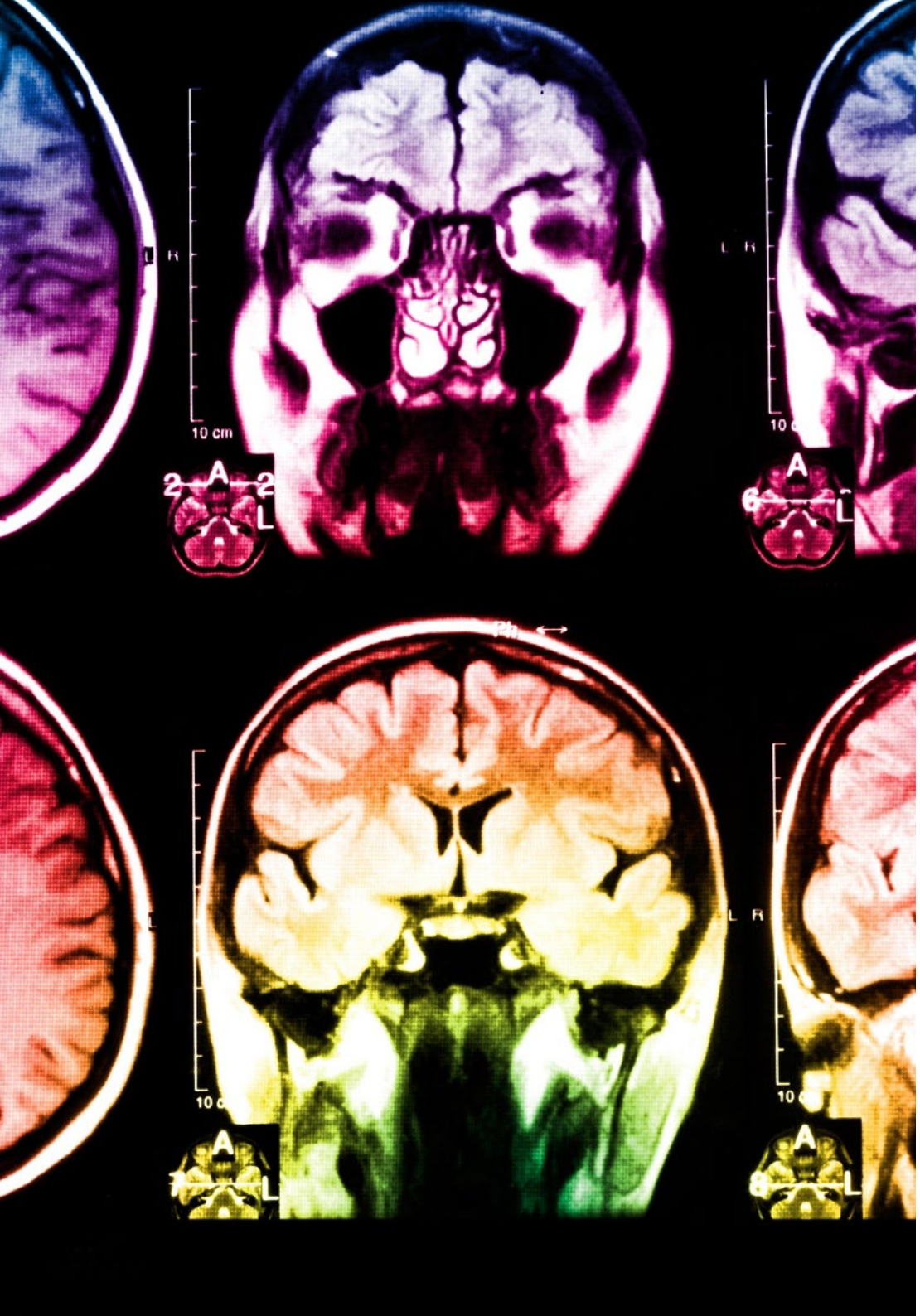
Our university is the first in the world to combine Harvard University *case studies* with a 100%-online learning system based on repetition, which combines different teaching elements in each lesson.

We enhance Harvard *case studies* with the best 100% online teaching method: Re-learning.

In 2019 we obtained the best learning results of all Spanish-language 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 Re-learning.

Our university is the only Spanish-speaking university qualified 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 Spanish 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.

Re-learning 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.

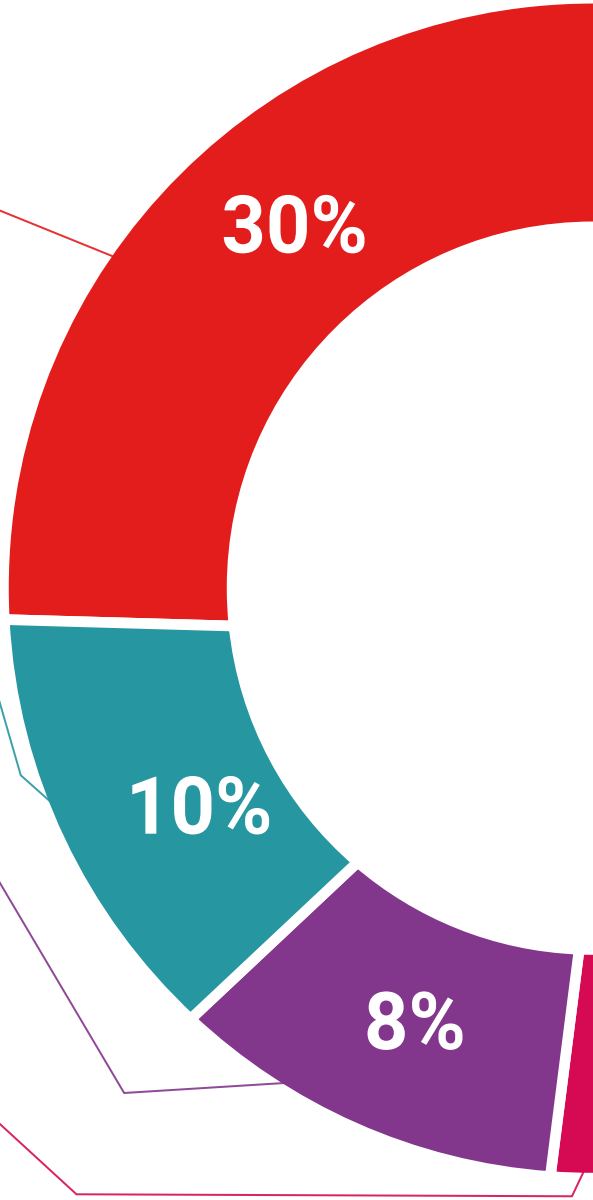
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

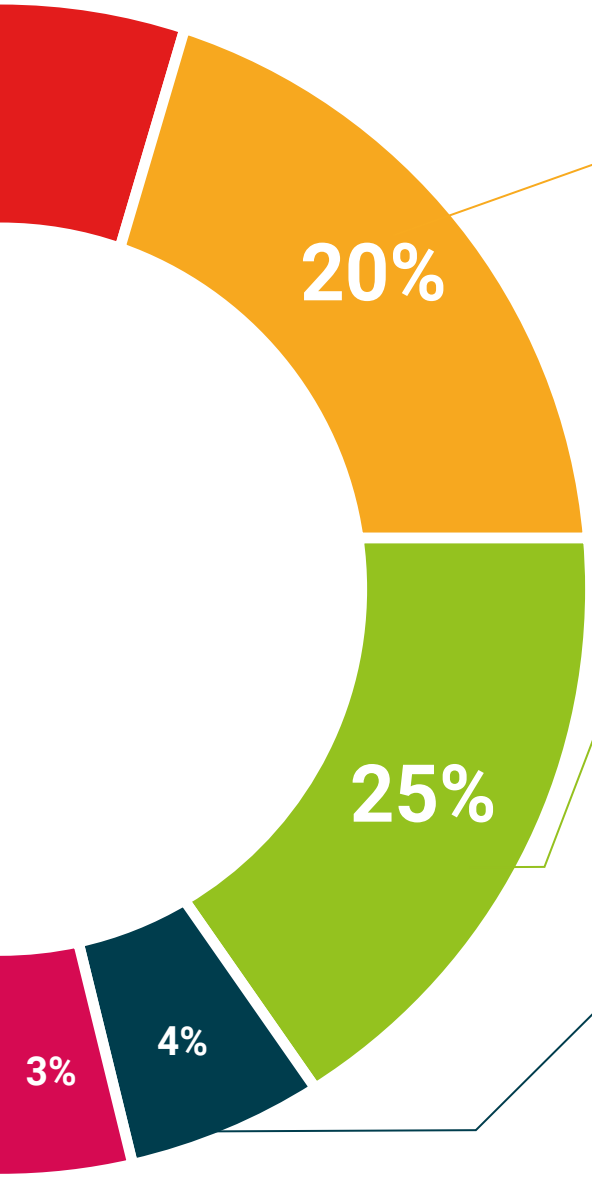
Practising Skills and Abilities

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.





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 Latin America.

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 & Re-testing

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.

06

Certificate

This Postgraduate Certificate in Models and Formal Semantics. Programming Oriented to Distributed Computing, in addition to the most rigorous and up-to-date training, access to a Postgraduate Certificate issued by TECH Technological University.

Successfully complete this training program and receive your diploma without travel or laborious paperwork"

This **Postgraduate Certificate in Models and Formal Semantics. Programming Oriented to Distributed Computing** contains the most complete and up-to-date program on the market.

After the student has passed the assessments, they will receive their corresponding**Postgraduate Certificate** issued by **TECH Technological University** via tracked delivery.

The certificate issued by **TECH Technological University** will reflect the qualification obtained though the Postgraduate Certificate, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Postgraduate Certificate in Models and Formal Semantics. Programming Oriented to Distributed Computing**

Official Nº of Hours: **150 hours.**


tech technological university

Awards the following

DIPLOMA

to

Mr./Ms. _____, with identification number _____.

For having passed and accredited the following program

POSTGRADUATE CERTIFICATE

in

Models and Formal Semantics. Programming Oriented to Distributed Computing

This is a qualification awarded by this University, equivalent to 150 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro
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 EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

tech technological university

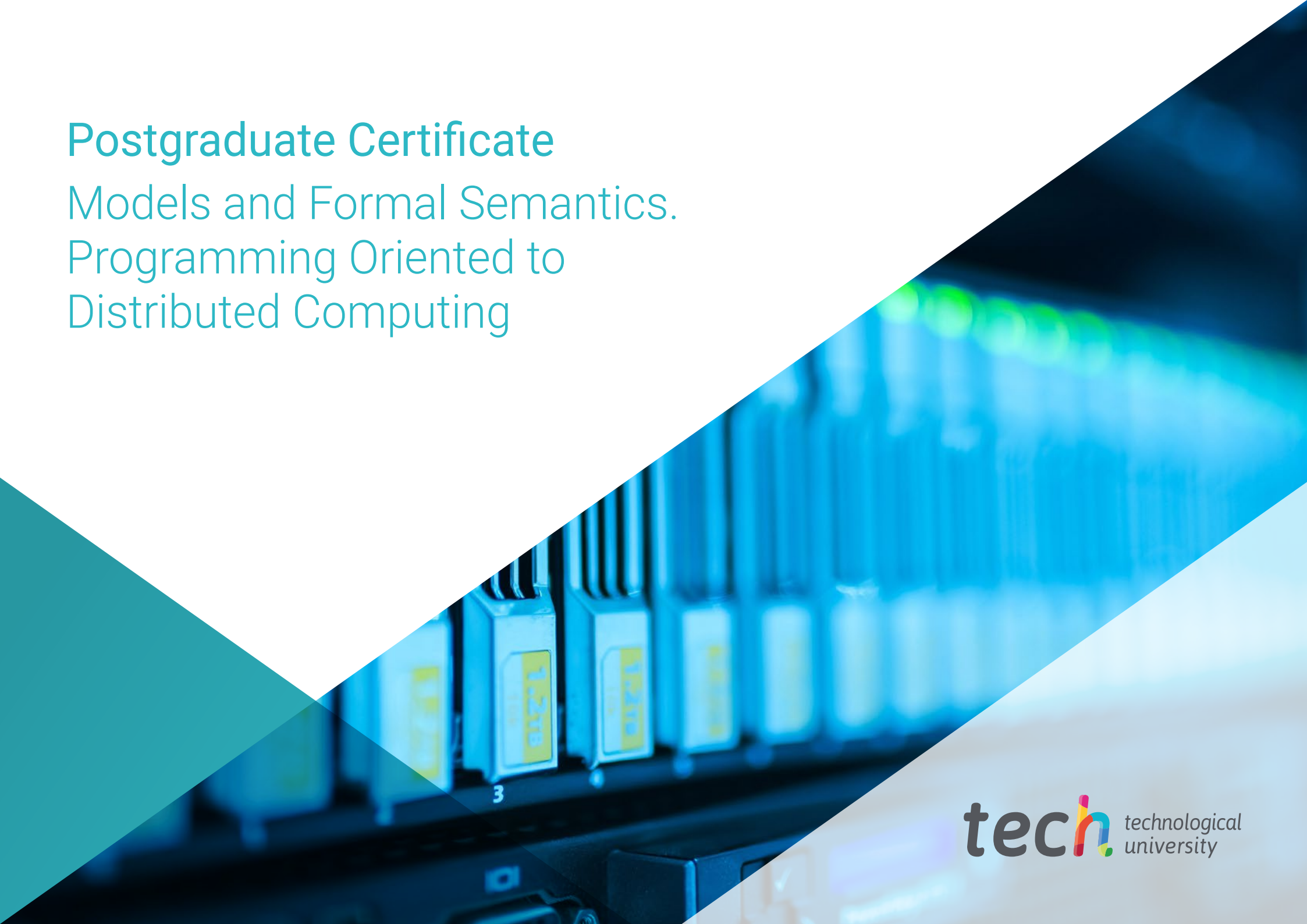
Postgraduate Certificate

Models and Formal Semantics. Programming Oriented to Distributed Computing

- Modality: **online**
- Duration: **6 weeks**
- Certificate: **TECH Technological University**
- Dedication: **16h/week**
- Schedule: **at your own pace**
- Exams: **online**

Postgraduate Certificate

Models and Formal Semantics. Programming Oriented to Distributed Computing



tech technological university