





## Postgraduate Certificate

### Methodology and Learning Based on the Elementary School Classroom Students with Adaptations

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

Website: [www.techtute.com/us/education/postgraduate-certificate/methodology-learning-based-elementary-school-classroom-students-adaptations](http://www.techtute.com/us/education/postgraduate-certificate/methodology-learning-based-elementary-school-classroom-students-adaptations)

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# 01

# Introduction

Teaching and Learning are two sides of the same coin. Education involves the use of resources and tools that accelerate, stimulate, facilitate and enhance the teaching-learning process. In this context, educational methodologies become the key factor to achieve the established educational objectives. That is why, this academic program has been designed, according to the importance and constant evolution in the pedagogical methodologies, . The purpose of this program is to provide teachers with exclusive content related to the integration of knowledge with different types of methodologies such as Core Standards, EntusiasMat, Jump Math and ABN. All this will be achieved with the support of audiovisual resources and a 100% online pedagogical format.





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*TECH offers in you with a high- first level and flexible Postgraduate Certificate. Sign up and train comfortably from any device with an internet connection”*

There are many challenges facing the citizens of the 21st century in a society in which new ways of being, doing and knowing how to do have brought about the fourth industrial revolution. But far from assuming the word challenge as something unattainable, it should rather be understood as the opportunity given to educators to analyze the environment, trends, and needs to be solved with substantive solutions. The ways of learning, apprehending and applying knowledge must be sufficiently innovative, creative and inspiring. This with the intention of capturing the attention of students with state-of-the-art learning dynamics.

In this way, studies and research in this area have advanced, renewing various teaching criteria, confirming that Mathematics professionals must remain at the forefront in this area of knowledge. Therefore, this Postgraduate Certificate will provide the expert with the most current innovations in the didactic methodology for the teaching of Mathematics in Primary School.

Students will enhance their knowledge in detailed aspects related to the design of didactic games for learning Mathematics, becoming a current object of study, analyzing and deepening concepts such as the Singapore Method. A program that integrates a specialized teaching team together with high quality multimedia content that provides ease of learning during the academic process.

Therefore, TECH is innovation and excellence, so this program offers the most complete update and the highest standards, thus being a highly flexible program that requires only a device with internet connection to easily access the virtual platform from the comfort of home.

This **Postgraduate Certificate in Methodology and Learning Based on the Elementary School Classroom Students with Adaptations** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ The development of practical cases presented by experts in Arithmetic, Algebra, Geometry and Measurement
- ♦ The graphic, schematic, and 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 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



*The best program in the academic landscape to update your practice in Methodology and Learning through pedagogical innovation adapted to Primary Education”*

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*In TECH, you will develop the competencies and skills necessary to perform your teaching work through 180 hours of the best theoretical, practical and additional content”*

*Access 180 hours of the best theoretical and practical content and use it to explain certain concepts to your students.*

*This is a program created with the time flexibility you need with the possibility of accessing the virtual platform 24/7.*

The program's teaching staff includes professionals from the field 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 students will be assisted by an innovative interactive video system created by renowned and experienced experts.



# 02

# Objectives

This Postgraduate Certificate in Methodology and Learning Based on the Elementary School Classroom Students with Adaptations has been developed primarily to provide the professional with the most recent updates in the field of Mathematics. In addition, TECH offers a variety of innovative technological tools, ensuring success throughout the program. At the end of this program, the student will have reinforced their skills in integrating knowledge of different types of Methodologies such as Core Standards, EntusiasMat, Jump Math and ABN.





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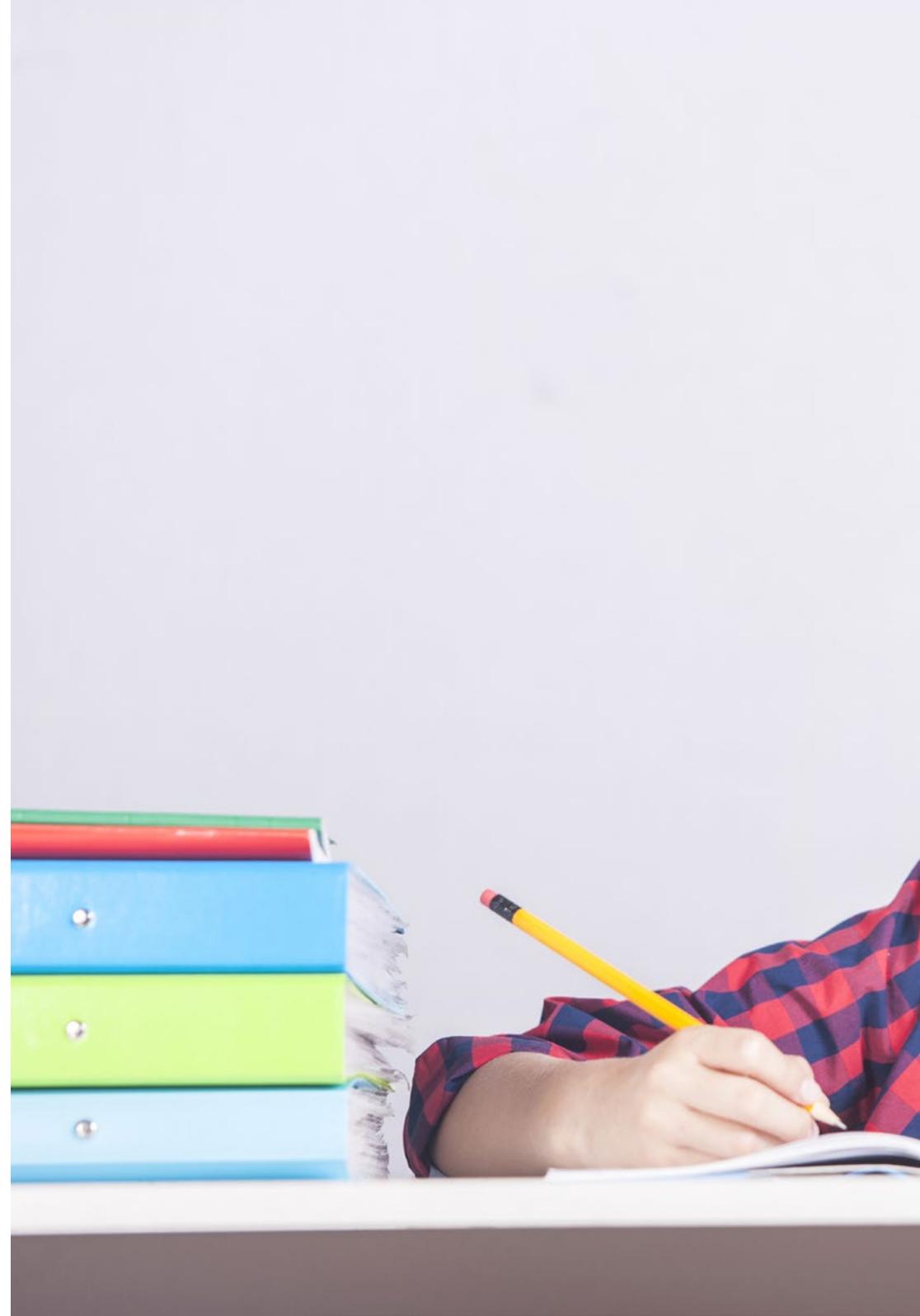
*One of the purposes of TECH is to broaden your intellectual scope and therefore position yourself at the top of your professional career”*



## General Objectives

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- ♦ Provide students with theoretical and practical knowledge that will allow them to acquire and develop essential competencies and skills for their role as teachers
- ♦ Design didactic games for learning mathematics
- ♦ Gamifying the classroom, a new resource for motivation and learning applied to mathematics





## Specific Objectives

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- ♦ Be able to use evaluation criteria
- ♦ Develop materials and resources to work on the problems in the classroom
- ♦ Become familiar with different methodologies such as Core Standards, EntusiasMat, Jump Math y ABN

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*TECH provides different academic innovation tools for problem-solving through multiple teaching resources”*

03

# Course Management

TECH provides an elite education for the professional who attends the programs thanks to the technological tools that succeed in carrying out the development of each of the courses. In this sense, the graduate will access a content developed by a teaching team specialized in Direction and Management of Educational Centers and Special Education and Didactics of Mathematics. Its extensive experience and deep knowledge will allow the graduate to resolve doubts or answer questions that arise in the course of the program.





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*With TECH you will find the best teaching staff specialized in new Learning Methodologies and Mathematics”*

## International Guest Director

Doctor Noah Heller is a leading professional in the field of **Education**, specializing in the teaching of **Mathematics** and **Science**. With a focus on **teaching innovation**, he has dedicated his career to improving **educational practices in the K-12 system**. In addition, his main interests include the **professional development of teachers** and the creation of **teaching strategies** to improve the understanding of **Mathematics**, in **Primary** and **High School** students, through **innovative didactic approaches**.

Throughout his career, he has held positions of great relevance, for example, as **Faculty Chair** of the **Leadership Institute** at the **Harvard Graduate School of Education**. He has also directed the **“Master Math for America” Teacher Fellowship Program**, where he has overseen the instruction and expansion of a program that has impacted over 700 math and science teachers in **New York City**, working closely with senior **mathematics and science professionals**.

At the same time, he has collaborated as a researcher in several publications on the **teaching of mathematics** and **new didactics** applied to **primary education**. He has also given conferences and seminars in which he has promoted **pedagogical approaches** that encourage critical thinking in students, making mathematics teaching a dynamic and accessible process.

Internationally, Dr. Noah Heller has been recognized for his ability to implement innovative strategies in **STEM education**. In fact, his leadership in **“Master Math for America”** has positioned him as a key figure in teacher training, receiving accolades for his ability to connect academia with classroom practice. His work has also been instrumental in the creation of one of the most prestigious **professional development programs in education**.



## Dr. Heller, Noah

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- ♦ Faculty Chair at the Harvard Graduate School of Education, Cambridge, United Kingdom
- ♦ Director of the “Master Math for America” Teacher Fellowship Program
- ♦ Doctor of Philosophy from New York University
- ♦ B.S. in Science, Physics and Mathematics from The Evergreen State College

“

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

## Management



### Ms. Delgado Pérez, María José

- ♦ TPR and Mathematics teacher at Peñalar College
- ♦ Professor of Secondary and Baccalaureate Education
- ♦ Expert in management of educational centers
- ♦ Co-author of technology books with McGraw Hill Publishers
- ♦ Master's Degree in Educational Center Management and Administration
- ♦ Leadership and management in Elementary, Middle School and High School
- ♦ Graduate in teaching with a specialization in English
- ♦ Industrial Engineer

## Professors

### Ms. Hitos, María

- ♦ Early Childhood and Elementary School Teacher Specialized in Mathematics
- ♦ Pre-school and Primary Education Teacher
- ♦ Child English Department Coordinator
- ♦ Language qualification in English by the Community of Madrid

### Ms. Iglesias Serranilla, Elena

- ♦ Teacher of Pre-school and Elementary School Education with specialization in Music
- ♦ Elementary School Education First Cycle Coordinator
- ♦ Training in New Learning Methodologies

### D. López Pajarón, Juan

- ♦ Secondary and High School Science Teacher
- ♦ Secondary and High School Science Teacher at Montesclaros College Educare Group
- ♦ Coordinator and Head of Educational Projects in Secondary and Baccalaureate
- ♦ Technician at Tragsa
- ♦ Biologist with experience in the field of environmental conservation
- ♦ Professional Master's Degree in Direction and Management of Educational Centers by the
- ♦ International University of La Rioja

### Ms. Vega, Isabel

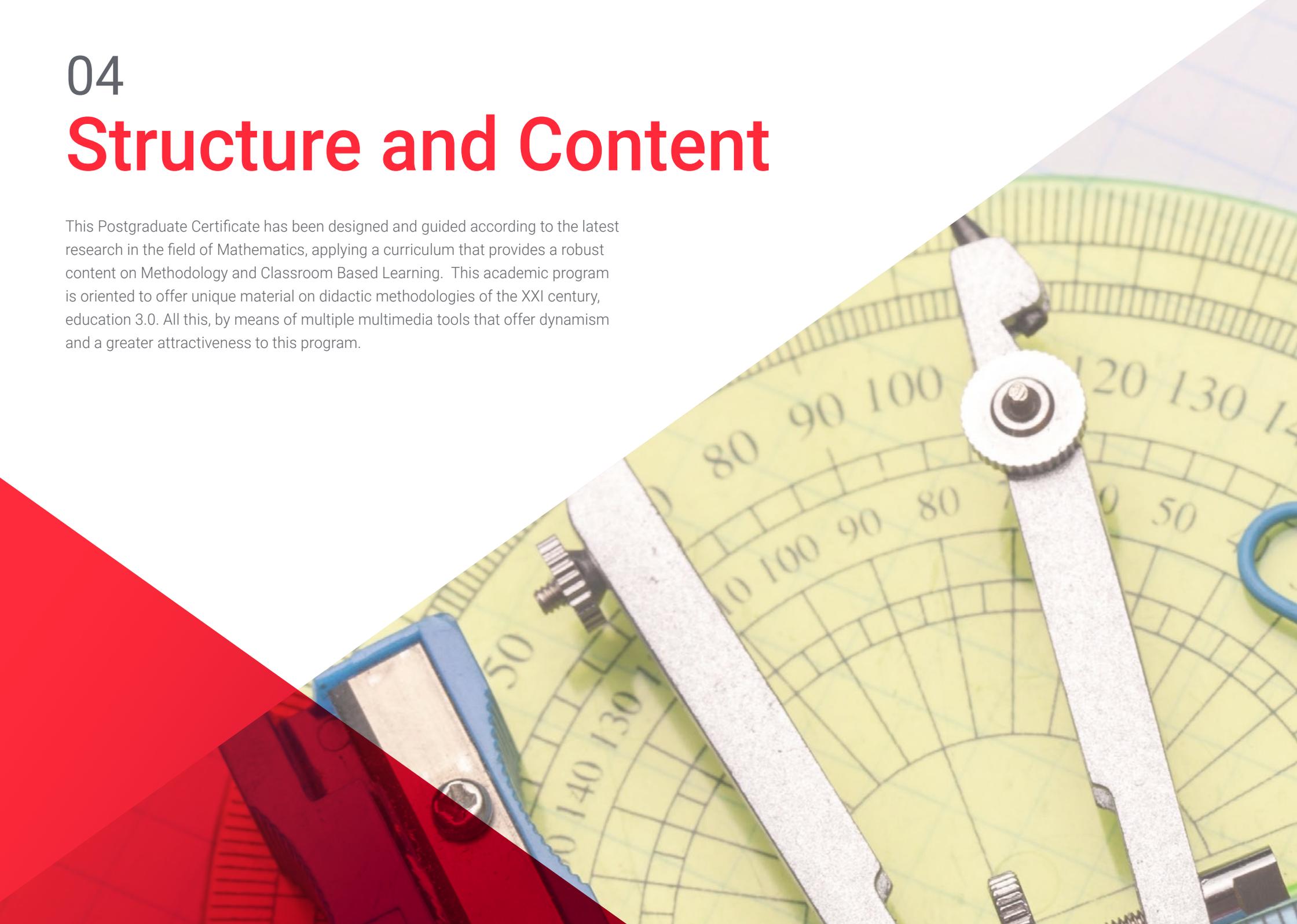
- ♦ Specialized Teacher in teaching mathematics and learning disabilities
- ♦ Primary Education Teacher
- ♦ Elementary School Education Cycle Coordinator
- ♦ Specialization in Special Education and Mathematics Didactics
- ♦ Graduate in Teaching



# 04

# Structure and Content

This Postgraduate Certificate has been designed and guided according to the latest research in the field of Mathematics, applying a curriculum that provides a robust content on Methodology and Classroom Based Learning. This academic program is oriented to offer unique material on didactic methodologies of the XXI century, education 3.0. All this, by means of multiple multimedia tools that offer dynamism and a greater attractiveness to this program.



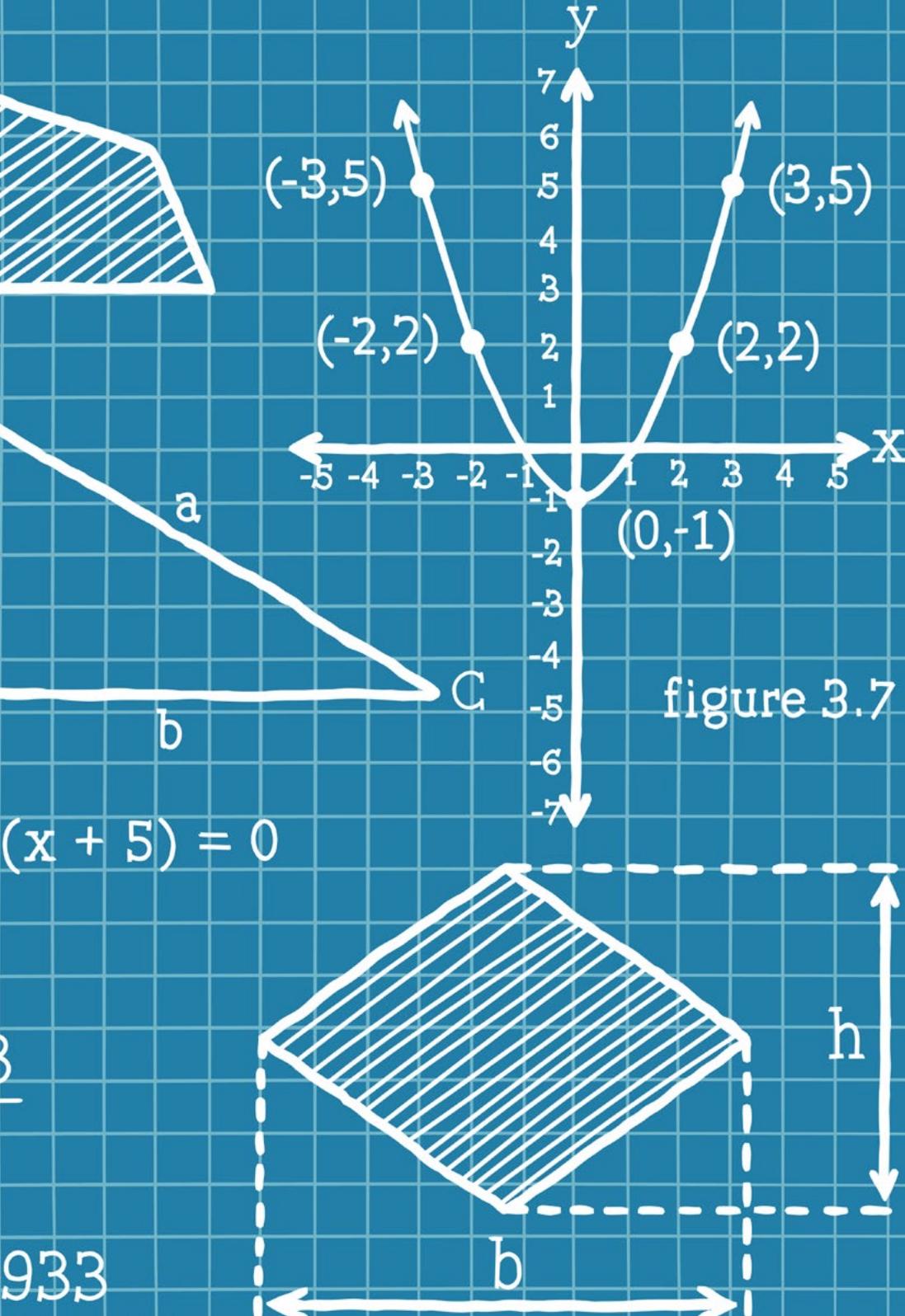
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*A course curriculum made with advanced content on materials and resources for teaching and learning mathematics”*

**Module 1. Methodology and Classroom Based Learning in the Elementary School Classroom Students with Adaptations**

- 1.1. Mathematics Curriculum in Elementary School Education
  - 1.1.1. General Considerations of the Elementary School Education Curriculum
  - 1.1.2. General Considerations for the Mathematics Curriculum in Primary-school Education
  - 1.1.3. Mathematics Curriculum Objectives
  - 1.1.4. Learning Standards
  - 1.1.5. Basic Skills
  - 1.1.6. Contribution of Mathematics to Skills Development
  - 1.1.7. Assessment Criteria
  - 1.1.8. Headings
  - 1.1.9. Application of the Assessment
- 1.2. Didactic Methodology in Elementary School Education
  - 1.2.1. Introduction to Didactic Methodology in Elementary School Education
  - 1.2.2. Teaching Methodology for Elementary School Mathematics
  - 1.2.3. Didactic Methodologies of the XXI Century, Education 3.0.
  - 1.2.4. Methods: Which One to Choose
  - 1.2.5. State - Memorize - Understand vs. Understand - State - Memorize - Apply
  - 1.2.6. Metalanguage and Object Language
  - 1.2.7. Competencies of the Mathematics Teacher
  - 1.2.8. Educational Practice
- 1.3. Assessment in the Mathematics Classroom
  - 1.3.1. What is Assessment?
  - 1.3.2. Assessment According to the Mathematics Curriculum
  - 1.3.3. Learning Assessment
  - 1.3.4. Assessment of the Acquisition of Key Concepts
  - 1.3.5. Assessment of the Teaching Methodology
  - 1.3.6. Mathematics Exam Design
  - 1.3.7. Correction of Mathematics Exams
  - 1.3.8. Headings
  - 1.3.9. Student Self-Assessment

$2x + 3y = 14$   
 $V = \frac{1}{3}Bh$   
 figure 1.2  
 $81.94\text{cm}^3$   
 $(x - 5)$   
 $\frac{c \sin B}{\sin B}$   
 $f(x) = 2x^3$   
 $0.95257$



- 1.4. Errors, Difficulties and Blockages in the Teaching and Learning of Mathematics
  - 1.4.1. Visual Memory
  - 1.4.2. Understanding of Concepts about Magnitudes
  - 1.4.3. Understanding Abstract Concepts
  - 1.4.4. Reading and Interpreting Statements
  - 1.4.5. Basic Operations
  - 1.4.6. Multiplication Tables
  - 1.4.7. Fractions
  - 1.4.8. Problem Solving
  - 1.4.9. Rushing
- 1.5. Materials and Resources for the Teaching and Learning of Mathematics
  - 1.5.1. Introduction to Materials and Resources
  - 1.5.2. Sense and Purpose of its Use for Learning Enhancement
  - 1.5.3. Classification of Materials
  - 1.5.4. Mathematics Book
  - 1.5.5. Mathematics Books for All
  - 1.5.6. Manipulative Materials vs. Digital Materials
  - 1.5.7. Materials
  - 1.5.8. Discussion on the Use of a Calculator
  - 1.5.9. Audiovisual Materials
- 1.6. Globalized Teaching: Learning Through Projects
  - 1.6.1. Brief Conceptualization
  - 1.6.2. Introduction to Project-Based Learning
  - 1.6.3. Requirements for Working with Mathematics using a Project Based Learning Approach
  - 1.6.4. A Model Applicable to the Classroom
  - 1.6.5. Project Sheets
  - 1.6.6. Description of Project Objectives
  - 1.6.7. Timing
  - 1.6.8. Implementation
  - 1.6.9. Assessment

- 1.7. Cooperative Work in the Mathematics Classroom
  - 1.7.1. Brief Conceptualization
  - 1.7.2. Requirements for Working with Mathematics through Cooperative Work
  - 1.7.3. Advantages and Disadvantages in the Mathematics Classroom
  - 1.7.4. Teacher facing Cooperative Work
  - 1.7.5. A Model Applicable to the Classroom
  - 1.7.6. Mathematics Teaching to Develop Cooperative Work
  - 1.7.7. Cooperative Learning Models
  - 1.7.8. Implementation of Cooperative Work
  - 1.7.9. Assessment of Cooperative Work
- 1.8. Other Methodologies
  - 1.8.1. Singapore Method
  - 1.8.2. Common Core Standards Method
  - 1.8.3. EntusiasMat
  - 1.8.4. Jump Math
  - 1.8.5. ABN
  - 1.8.6. Dialogic Learning
  - 1.8.7. Learning Communities: Reggio Emilia
  - 1.8.8. Learning Communities: Montessori
  - 1.8.9. Analysis of Methodologies
- 1.9. Attention to Diversity
  - 1.9.1. General Principles of Attention to Diversity
  - 1.9.2. Concept of Curricular Adaptation
  - 1.9.3. Characteristics of Curricular Adaptations
  - 1.9.4. Phases and Components of the Adaptation Process
  - 1.9.5. Responding to Diversity: A Collaborative Effort
  - 1.9.6. Strategies
  - 1.9.7. Resources
  - 1.9.8. Specific Didactic Materials
  - 1.9.9. Technical Resources





- 1.10. Methodological Proposals for Students with Special Educational Needs
  - 1.10.1. SEN in Mathematics Education
  - 1.10.2. Dyscalculia
  - 1.10.3. ADHD
  - 1.10.4. High Abilities
  - 1.10.5. Recommendations when Difficulties are due to the Nature of Mathematics Itself
  - 1.10.6. Recommendations when Difficulties are due to the Methodological Organization of Mathematics
  - 1.10.7. Recommendations when Difficulties are Due to Internal Student Factors
  - 1.10.8. ICT for the Teaching of SEN Students
  - 1.10.9. Recommended Guidelines for Algorithm Implementation

“ A 100% online program that provides flexibility and convenience to delve deeper into cooperative learning models”

05

# Methodology

This training program offers 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.





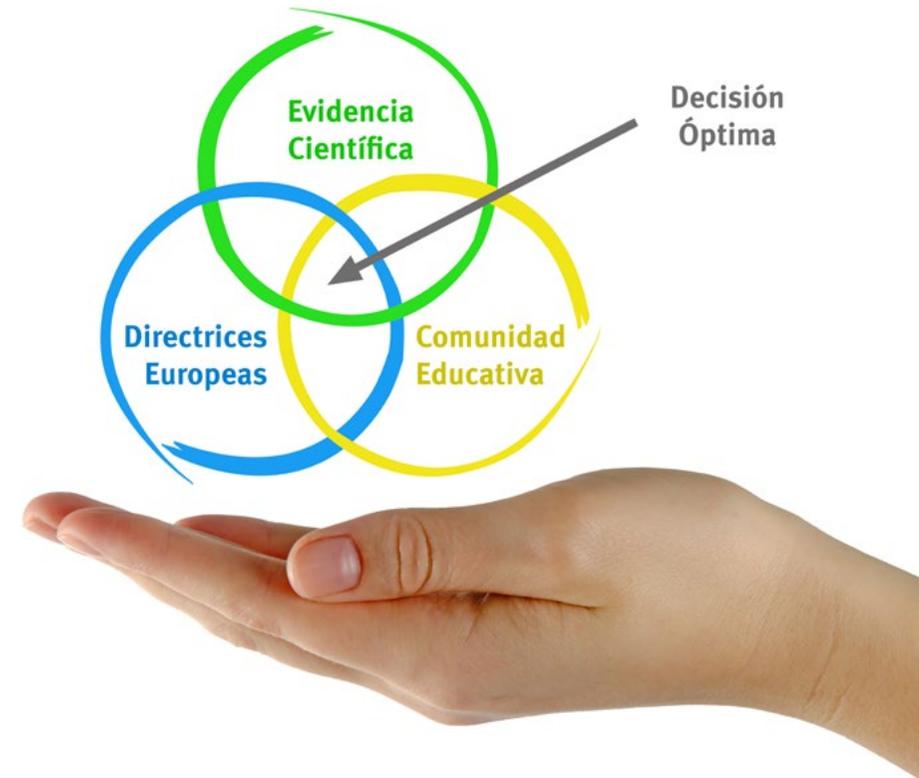
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*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## At TECH Education School we use the Case Method

In a given situation, what should a professional do? Throughout the program students will be presented with multiple simulated cases based on real situations, where they will have to investigate, establish hypotheses and, finally, resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method.

*With TECH, educators can experience a learning methodology that is shaking the foundations of traditional universities around the world.*



*It is a technique that develops critical skills and prepares educators to make decisions, defend their arguments, and contrast opinions.*

“

*Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method”*

The effectiveness of the method is justified by four fundamental achievements:

1. Educators who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
2. The learning process is solidly focused on practical skills that allow educators to better integrate the knowledge into daily practice.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life teaching.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.



## Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

Our University is the first in the world to combine case studies with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, which represent a real revolution with respect to simply studying and analyzing cases.



*Educators will learn through real cases and by solving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.*

At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology we have trained more than 85,000 educators with unprecedented success in all specialties. 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.*

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.

The overall score obtained by our learning system is 8.01, according to the highest international standards.



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



#### Study Material

All teaching material is produced by the specialist educators who teach the course, specifically for the course, so that the teaching content is really 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.



#### Educational Techniques and Procedures on Video

TECH introduces students to the latest techniques, with the latest educational advances, and to the forefront of Education. All this, first-hand, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



#### Interactive Summaries

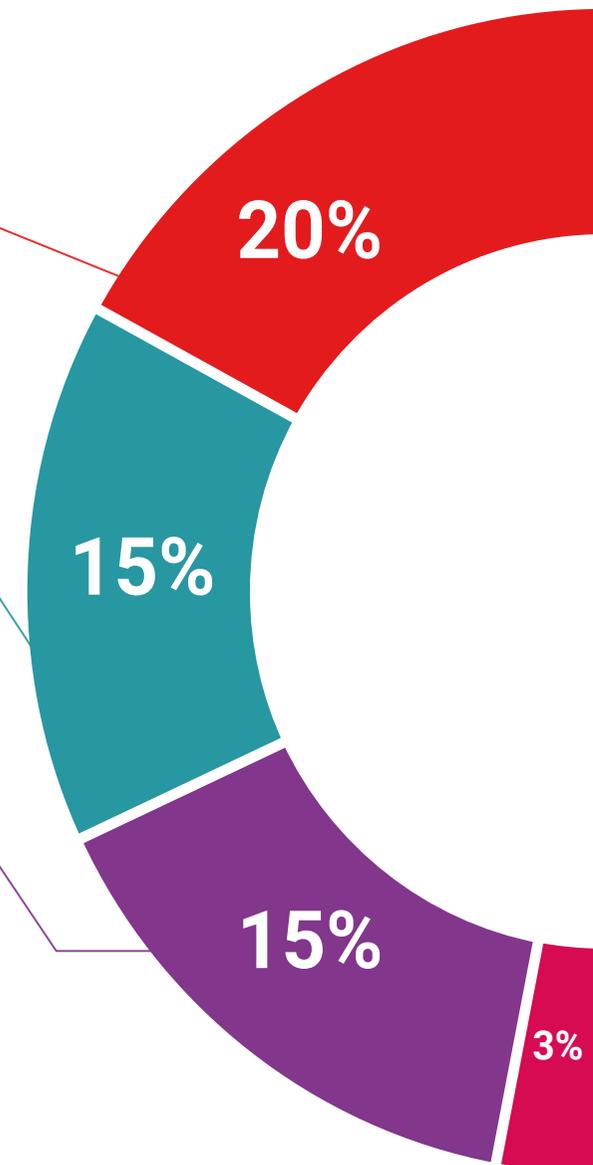
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

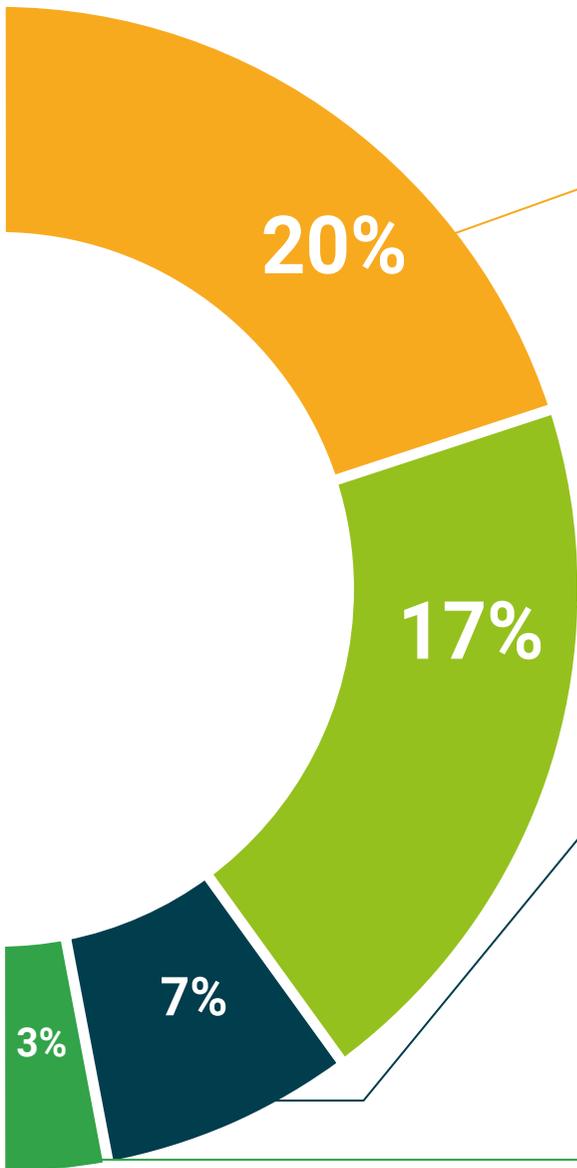
This exclusive multimedia content presentation training Exclusive system was awarded by Microsoft as a "European Success Story".



#### 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.





**Expert-Led Case Studies and Case Analysis**

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



**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.



**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.



**Quick Action Guides**

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.



06

# Certificate

The Postgraduate Certificate in Methodology and Learning Based on the Elementary School Classroom Students with Adaptations 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 Methodology and Learning Based on the Elementary School Classroom Students with Adaptations** 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.

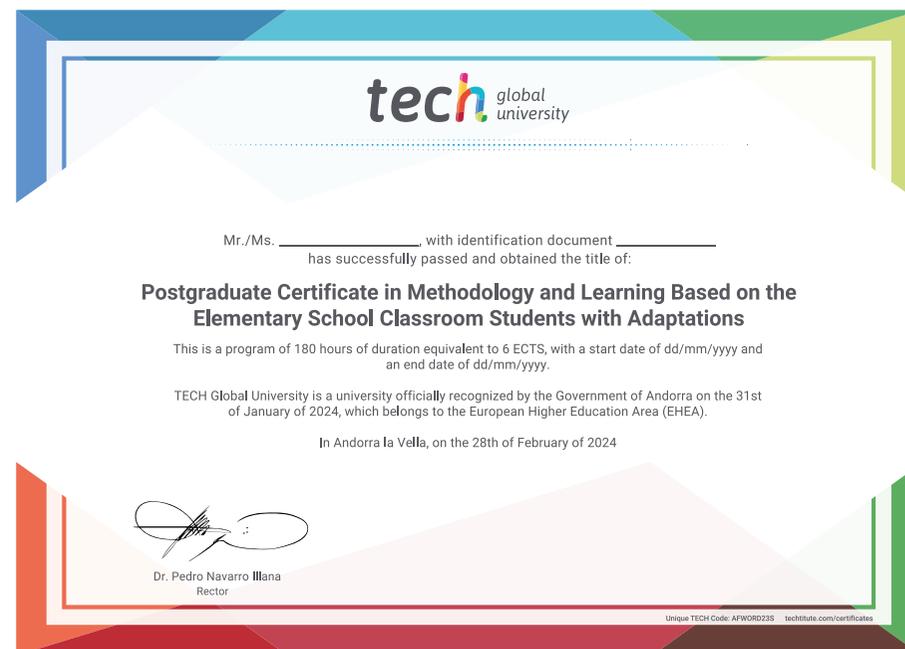
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Certificate in Methodology and Learning Based on the Elementary School Classroom Students with Adaptations**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**





**Postgraduate Certificate**  
Methodology and Learning  
Based on the Elementary  
School Classroom Students  
with Adaptations

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

Postgraduate Certificate  
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