

# Postgraduate Certificate

## Knowledge of Natural Sciences in Primary Education





## Postgraduate Certificate Knowledge of Natural Sciences in Primary Education

- » 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/knowledge-natural-sciences-primary-education](http://www.techtute.com/us/education/postgraduate-certificate/knowledge-natural-sciences-primary-education)

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# 01

# Introduction

The teaching of Natural Sciences requires expert professionals who are capable of handling a deep knowledge of this subject, in such a way that they can transmit all their knowledge to their students. But, for this, it is essential to specialize with training courses such as the one we present at this time, which has a very complete information on relevant aspects of this subject.







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*We offer you the best Course to specialize in Natural Sciences so that you will be able to transmit to your students the most complete information on this subject"*

Teachers of natural sciences must have an updated and complete knowledge of the subject, which will be the basis for the future knowledge of their students. Therefore, the need for courses such as this one is essential for them to acquire superior training. In this way, the objective of this course is to provide teachers with part of the scientific and didactic foundations necessary for their future professional teaching practice within the framework of Primary Education and in the field or area generically called Natural Environment Knowledge.

To this end, the order and distribution of the subjects and their topics is specially designed to allow students to decide their dedication and self-manage their time. Additionally, they will have at their disposal theoretical materials presented through enriched texts, multimedia presentations, exercises and guided practical activities, motivational videos, master classes and practical cases, where they will be able to evoke in an orderly way the knowledge and train the decision-making that demonstrates their training within the field of teaching.

This program is distinguished by the fact that it can be taken in a 100% online format, adapting to the needs and obligations of the training, in an asynchronous and completely self-manageable way. The student will be able to choose which days, at what time and how much time to dedicate to the study of the contents of the program. Always in tune with the skills and capabilities dedicated to it.

This **Postgraduate Certificate in Knowledge of Natural Sciences in Primary Education** contains the most complete and up-to-date educational program on the market. The most important features include:

- ♦ The development of practical cases presented in simulated scenarios by experts in the area of knowledge, where the student will evoke in an orderly manner the knowledge learned and demonstrate the acquisition of the competencies
- ♦ The graphic, schematic, and practical contents with which they are created provide scientific and practical information on the disciplines that are essential for professional practice
- ♦ The latest developments on the educational task of the primary school teacher
- ♦ Practical exercises where to perform the self-assessment process to improve learning, as well as activities at different skill levels
- ♦ Special emphasis on innovative methodologies and teaching research
- ♦ 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



*TECH provides you with the main educational tools to train you to develop your work in the field of teaching”*

“ *We want to offer you a unique study experience, and we achieve this thanks to our comprehensive training, our teaching methodology and the quality of our contents”*

*You will be able to access this Course from any fixed or mobile device with an Internet connection.*

*The program invites us to learn and grow, to develop as teachers, to learn about educational tools and strategies in relation to the most common needs in our classrooms.*

Its teaching staff includes professionals belonging to the field of education Primary, who bring to this program their work experience, as well as renowned specialists from prestigious universities and reference societies.

Its multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will deliver an immersive learning experience, programmed to prepare in real situations.

The design of this program focuses on Problem-Based Learning, by means of which the teacher must try to solve the different professional practice situations that are presented to them. For this purpose, the specialist will be assisted by an innovative interactive video system created by renowned and experienced experts in Natural Sciences and with great experience.





# 02

# Objectives

The Postgraduate Certificate in Knowledge of Natural Sciences in Primary Education is oriented to develop in students the skills required for the exercise of their profession. For this purpose, the most complete education offered by leading experts in the field.





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*Increase your training as a primary school teacher thanks to the opportunity offered by TECH, the world's leading online university”*



## General Objectives

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- ♦ Design, plan, deliver and assess teaching and learning processes , both individually and in collaboration with other teachers and professionals of the center
- ♦ Recognize the importance of rules in all educational processes
- ♦ Promote participation and respect for the rules of coexistence
- ♦ Teach Nature Science lessons to primary school students



*This program will allow you to acquire the necessary skills to develop your work with total guarantees of success"*







## Specific Objectives

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- ♦ To acquire basic knowledge, skills and attitudes that allow organizing and directing the learning of Natural Sciences
- ♦ Know current trends in the teaching-learning of Natural Sciences
- ♦ Know and apply the scientific method both in their work as students and in their future work as teachers
- ♦ Analyze the basic concepts of Natural Sciences and the peculiarities of their teaching-learning
- ♦ Know how to choose, adapt and/or elaborate didactic units of Natural Sciences according to their own purposes
- ♦ Develop original and motivating activities related to Natural Sciences for primary school students



# 03

# Structure and Content

The structure of the contents has been designed by top level professionals within the educational panorama, with a wide trajectory and recognized prestige in the profession, endorsed by their experience, and with a wide command of the new technologies applied to teaching.







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*The best content to  
create the best teachers”*

## Module 1. Knowledge of Natural Sciences in Primary Education

- 1.1. Scientific Knowledge
  - 1.1.1. Scientific Knowledge
  - 1.1.2. Inductivism
  - 1.1.3. Falsificationism
  - 1.1.4. Kuhn: the scientific paradigm
- 1.2. Our planet. Earth
  - 1.2.1. Our Solar System
  - 1.2.2. Earth: movements
  - 1.2.3. The atmosphere that surrounds us
  - 1.2.4. The magnitudes of mass and weight
- 1.3. Energy
  - 1.3.1. Definition and Concept of Energy
  - 1.3.2. Simple manifestations of energy
  - 1.3.3. Energy Conservation
  - 1.3.4. Energy transfer through mechanisms
- 1.4. Electricity and Magnetism
  - 1.4.1. What is Energy Electrical?
  - 1.4.2. Static electricity through Coulomb's Law
  - 1.4.3. Electrical current through Ohm's Law
  - 1.4.4. Magnetism and its paths
- 1.5. Various Energy Sources
  - 1.5.1. What Are Energy Source?
  - 1.5.2. Renewable Energies
  - 1.5.3. Non-Renewable Energies
  - 1.5.4. Matter: Concept and Characteristics
- 1.6. What is matter?
  - 1.6.1. We pay attention to the structure of the material
  - 1.6.2. What are pure substances and mixtures?
  - 1.6.3. What are the properties of matter?
  - 1.6.4. Some chemical reactions we found
  - 1.6.5. Carbon Chemistry







- 1.7. Let's talk about Geology
  - 1.7.1. Research of the Earth's interior: Methods used
  - 1.7.2. Minerals and rocks
  - 1.7.3. The theory of plate tectonics
  - 1.7.4. What is a cell?
- 1.8. Cell as a unit of Life
  - 1.8.1. Let's talk about prokaryotic cells
  - 1.8.2. Let's talk about the eukaryotic cell
  - 1.8.3. What are the main differences between cell types?
- 1.9. What is biodiversity?
  - 1.9.1. Introduction
  - 1.9.2. What Are to Nature Kingdom?
  - 1.9.3. The Five kingdoms
  - 1.9.4. Monera Kingdom
  - 1.9.5. Protist Kingdom
  - 1.9.6. Fungi Kingdom
  - 1.9.7. Plant Kingdom
  - 1.9.8. Animal Kingdom
  - 1.9.9. What Do We Understand as Ecology?
- 1.10. The Human Body and its Evolution
  - 1.10.1. Introduction
  - 1.10.2. The human body and its functions
  - 1.10.3. The three vital functions
  - 1.10.4. Other non-vital functions
  - 1.10.5. What is genetics? Do we all have it?
  - 1.10.6. Evolution and its evidence
  - 1.10.7. Some evolutionary theories

04

# 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.



05

# Certificate

The Postgraduate Certificate in Knowledge of Natural Sciences in Primary Education 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 Knowledge of Natural Sciences in Primary Education** 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 Knowledge of Natural Sciences in Primary Education**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



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



**Postgraduate Certificate**  
Knowledge of  
Natural Sciences  
in Primary Education

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



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