



## Postgraduate Certificate Genetic Syndromes

» Modality: online

» Duration: 6 weeks

» Certificate: TECH Technological University

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/us/education/postgraduate-certificate/genetic-syndromes

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## 01 Introduction

Down Syndrome, Angelman Syndrome or Fragile X Syndrome are some examples of the numerous genetic alterations that affect the cognitive development of young children. These diseases significantly limit the child's ability to speak and communicate efficiently, requiring the help of professionals to stimulate language acquisition. Therefore, speech therapists specialized in dealing with patients suffering from different Genetic Syndromes are very necessary to improve the quality of life of these youngsters. Therefore, TECH has created this 100% online program with which the student will learn to perform a speech therapy evaluation of these patients and acquire innovative intervention techniques to respond solvently to the demands of this sector.





## tech 06 | Introduction

Genetic Syndromes are diseases that produce changes in the normal maturation process of the nervous system of children, causing difficulties in their psychomotor and cognitive development to varying degrees. One of the most notable alterations is the impossibility or the wide limitation to engage in conversations with their parents or with their peers, causing a state of dissatisfaction and frustration both in the child and in their relatives. Given this reason, the role of the speech therapist expert in dealing with people suffering from these pathologies becomes crucial, since they are responsible for designing the necessary strategies to enhance their communication skills

Given this situation, TECH has designed the Postgraduate Certificate in Genetic Syndromes, which will provide the student with the knowledge required to address interventions with children suffering from Rett Syndrome or Prader-Willi Syndrome, among others. During 6 weeks of intensive learning, the student will master the process of diagnosis and evaluation of Down Syndrome from a Speech Therapy perspective and will design the appropriate exercises to promote language acquisition. In the same way, they will use the most sophisticated resources to undertake the speech therapy rehabilitation of the child with Angelman.

Thanks to the 100% online mode in which the Postgraduate Certificate in Genetic Syndromes is taught, the professional will enjoy excellent learning without the need to make uncomfortable trips to a study center. Additionally, they will have access to didactic materials in formats such as explanatory video or interactive summary, which will enable teaching adapted to their own academic requirements.

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

- The development of case studies presented by experts in Speech Therapy
- The graphic, schematic, and practical contents with which they are created, provide practical information on the disciplines that are essential for professional practice
- The practical exercises where the self-evaluation 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



Thanks to this program, map out the best speech therapy rehabilitation strategies for the child suffering from Rett Syndrome or Fragile X Syndrome"



The Relearning system characteristic of this program will enable you to learn at your own pace and according to your academic needs"

The program's teaching staff includes professionals from the sector who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

Its multimedia content, developed with the latest educational technology, will allow the professional a situated and contextual learning, that is, a simulated environment that will provide an immersive training programmed to train in real situations.

The design of this program focuses on Problem-Based Learning, in which the professional will have to try to solve the different professional practice situations that will arise throughout the academic course. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

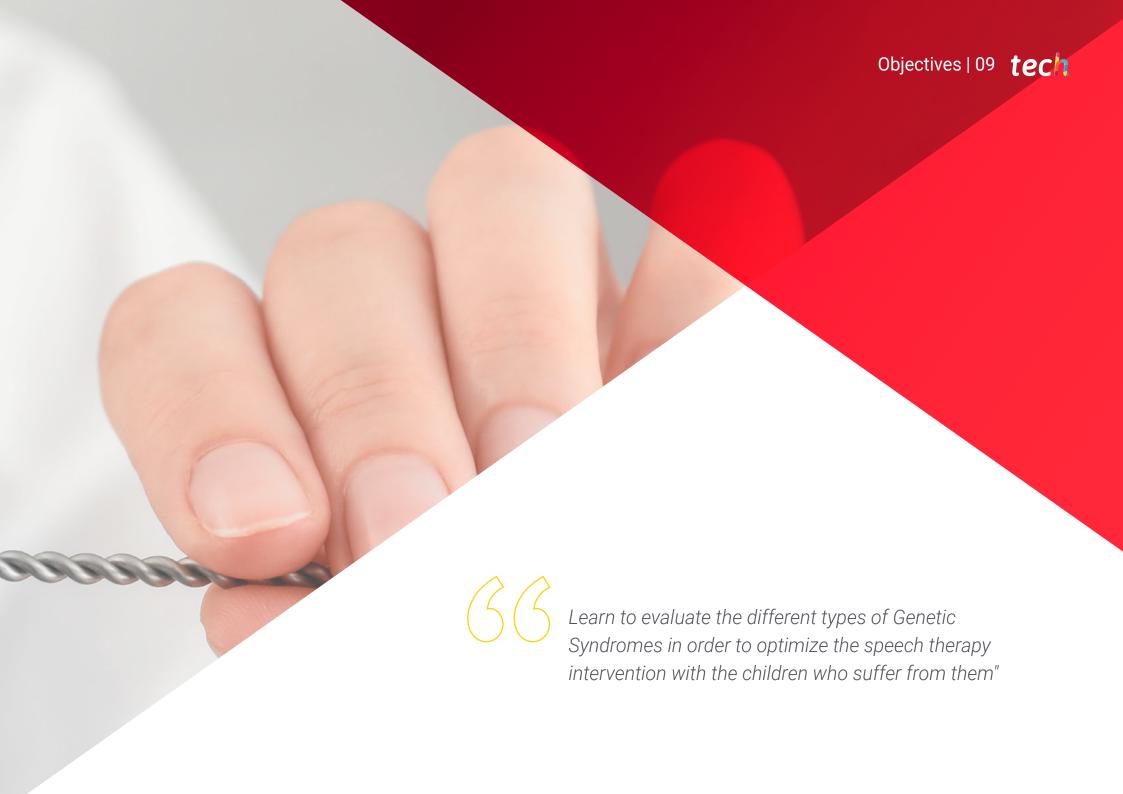
Enjoy an academic experience guided by the best teachers, experts in Speech Therapy and with extensive experience in this sector.

Enhance your job opportunities by pursuing a program that will make you an expert in speech therapy intervention for children with Genetic Syndromes.



# 02 **Objectives**

TECH has created this Postgraduate Certificate with the intention of promoting the acquisition of knowledge and skills related to the speech therapy management of patients suffering from different Genetic Syndromes. In his academic experience, the student will master the peculiarities of each one of them and will outline intervention strategies adapted to the level of difficulty of cognitive development of each child. All this, ensured through the following general and specific objectives.



## tech 10 | Objectives



## **General Objectives**

- Provide a specialized education based on theoretical and instrumental knowledge that will enable the student to obtain skills in detection, prevention, assessment and intervention in the speech therapies treated
- Consolidate basic knowledge of the intervention process in the classroom and other spaces based on the latest technological advances that facilitate access to information and the syllabus for these students
- Update and develop specific knowledge on the characteristics of these disorders in order to refine the differential and proactive diagnosis that sets the guidelines for intervention
- Raise awareness in the educational community about the need for educational inclusion and holistic intervention models with the participation of all members of the community
- Learn about educational experiences and good practices in speech therapy and psychosocial intervention that promote the personal, socio-family and educational adaptation of students with these educational needs





## **Specific Objectives**

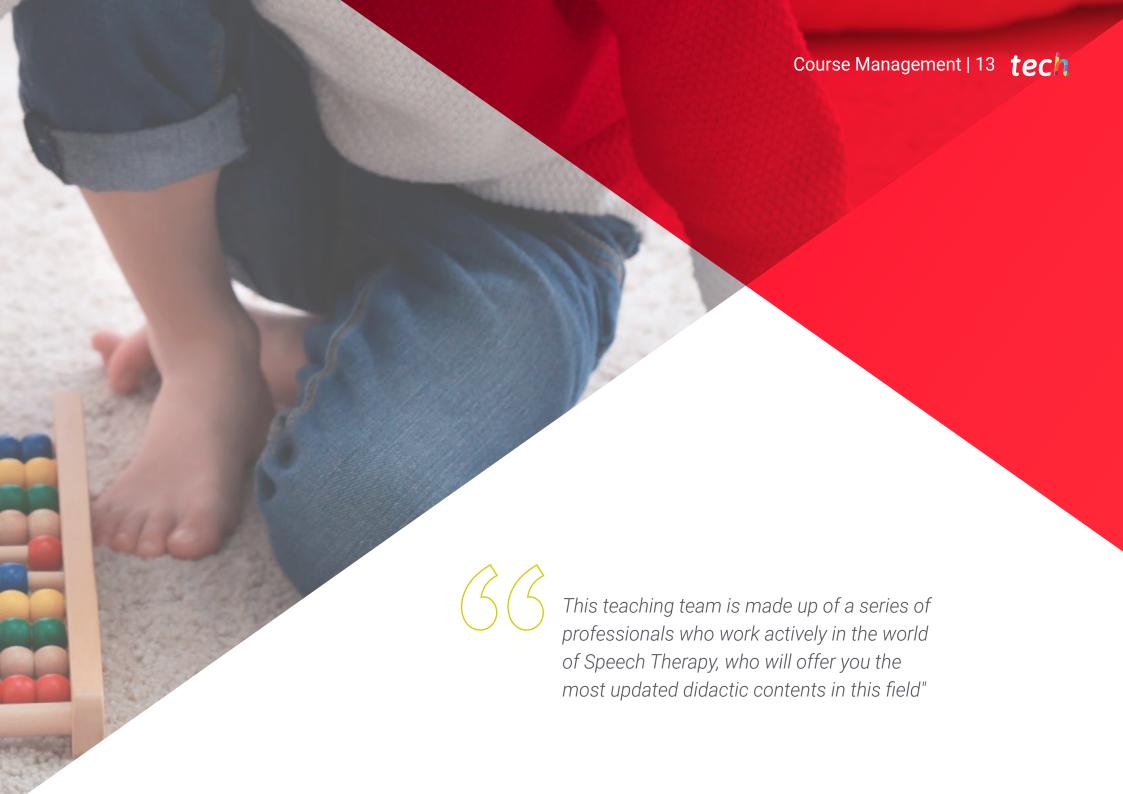
- Be able to know and identify the most frequent and current Genetic Syndromes
- Gain in-depth knowledge about the characteristics of each of the syndromes described in the program
- Acquire optimal knowledge to carry out a correct and functional evaluation of the different symptoms that may occur
- Deepen in different intervention tools, including material and resources, both manual and computer devices, as well as the possible adaptations to be made. All this, in order to achieve an effective and efficient intervention by the professional



Upon completion of this program, you will have a set of skills that will position you as a top professional in the field of Speech Therapy"







#### **International Guest Director**

Dr. Elizabeth Anne Rosenzweig is an internationally renowned specialist dedicated to the care of children with hearing loss. As a Speech Language Expert and Certified Therapist, she has pioneered several telepractice-based early assistance strategies of broad benefit to patients and their families.

Dr. Rosenzweig's research interests have also focused on trauma support, culturally sensitive auditory-verbal practice and personal coaching. Her active scholarly work in these areas has earned her numerous awards, including Columbia University's Diversity Research Award.

Thanks to her advanced skills, she has taken on professional challenges such as the leadership of the Edward D. Mysak Communication Disorders Clinic at Columbia University. She is also known for her academic career, having served as a professor at Columbia's Teachers College and as a collaborator with the General Institute of Health Professions. On the other hand, she is an official reviewer of publications with a high impact in the scientific community such as The Journal of Early Hearing Detection and Intervention and The Journal of Deaf Studies and Deaf Education.

In addition, Dr. Rosenzweig manages and directs the AuditoryVerbalTherapy.net project, from where she offers remote therapy services to patients located in different parts of the world. She is also a speech and audiology consultant for other specialized centers located in different parts of the world. She has also focused on developing non-profit work and participating in the Listening Without Limits Project for children and professionals in Latin America. At the same time, the Alexander Graham Bell Association for the Deaf and Hard of Hearing relies on her as its vice-president.



## Dra. Rosenzweig, Elizabeth Anne

- Director of the Communication Disorders Clinic at Columbia University, New York, United States
- Professor, General Hospital Institute of Health Professions, New York, United States
- Director of Private Practice AuditoryVerbalTherapy.net
- Department Head, Yeshiva University
- Attending Specialist at Teachers College, Columbia University
- Reviewer for The Journal of Deaf Studies and Deaf Education and The Journal of Early
- Hearing Detection and Intervention
- Vice-President, Alexander Graham Bell Association for the Deaf and Hard of Hearing
- Ph.D. in Education from Columbia University
- Master's Degree in Speech Therapy from Fontbonne University
- B.S. in Communication Sciences and Communication Disorders from Texas Christian University
- Member of:
- American Speech and Language Association

- American Cochlear Implant Alliance
- National Consortium for Leadership in Sensory Impairment



Thanks to TECH you will be able to learn with the best professionals in the world"

## tech 14 | Course Management

### Management



### Ms. Vázquez Pérez, María Asunción

- Speech Therapist Specialist in Neurologopedia
- Speech therapist at Neurosens
- Speech therapist in Rehabilitation Clinic Rehasalud
- Speech Therapist at Sendas Psychology Office
- Graduate in Speech Therapy from the University of A Coruña
- Master's Degree in Neurology Therapy

#### **Professors**

#### Ms. Cerezo Fernández, Ester

- Speech therapist at Paso a Paso Neurorehabilitation Clinic
- Speech therapist at the San Jeronimo Residence
- Editor of Zona Hospitalaria Magazine
- Graduate in Speech Therapy from the University of Castilla-La Mancha
- Master's Degree in Clinical Neuropsychology by ITEAP Institute
- Expert in Myofunctional Therapy by Euroinnova Business School
- Expert in Early Childhood Care by Euroinnova Business School
- Expert in Music Therapy by Euroinnova Business School

#### Ms. Mata Ares, Sandra María

- Speech Therapist Specialized in Speech Therapy Intervention in Children and Adolescents
- Speech Therapist at Sandra Comunicate Speech Therapist
- Speech therapist at Fisiosaúde
- Speech therapist at Ana Parada Multi-Purpose Center
- Speech therapist at the Psychology Health Center and Family Speech Therapy
- Diploma in Speech Therapy from the from Coruña University
- Master's Degree in Speech Therapy Intervention in Childhood and Adolescence from the University of Coruña

#### Ms. Rico Sánchez. Rosana

- Director and Speech Therapist at Palabras y Más Center for Speech Therapy and Pedagogy
- Speech therapist at OrientaMedia
- Speaker at specialized conferences
- Diploma in Speech Therapy from the University of Valladolid
- Degree in Psychology from UNED
- Specialist in Alternative and Augmentative Communication Systems (SAAC)

#### Ms. Berbel, Fina Mari

- Speech Therapist Specialist in Clinical Audiology and Hearing Therapy
- Speech therapist at the Federation of Deaf People of Alicante
- Degree in Speech Therapy from the University of Murcia
- Master's Degree in Clinical Audiology and Hearing Therapy from the University of Murcia
- Training in Spanish Sign Language Interpretation (LSE)

#### Ms. Plana González, Andrea

- Founder and Speech Therapist at Logrospedia
- Speech therapist at ClínicActiva and Amaco Salud
- Graduate in Speech Therapy from the University of Valladolid
- Master's Degree in Orofacial Motricity and Myofunctional Therapy from the Pontifical University of Salamanca
- Master's Degree in Vocal Therapy from the CEU Cardenal Herrera University.
- University Expert in Neurorehabilitation and Early Care by CEU Cardenal Herrera University

#### Ms. López Mouriz, Patricia

- Psychologist at FÍSICO Physiotherapy and Health
- Mediator Psychologist at Gómez ADAFAD Association
- Psychologist at Centro Orienta
- Psychologist in Psychotécnico Abrente
- Degree in Psychology from the University of Santiago de Compostela (USC)
- Master's Degree in in General Health Psychology by USC
- Training in Equality, Brief Therapy and Learning Difficulties in Children



Take the opportunity to learn about the latest advances in this field in order to apply it to your daily practice"





## tech 18 | Structure and Content

#### Module 1. Genetic Syndromes

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- 1.1.1. Introduction to Unit
- 1.1.2. Genetics
  - 1.1.2.1. Concept of Genetics
  - 1.1.2.2. Genes and Chromosomes
- 1.1.3. The Evolution of Genetics
  - 1.1.3.1. Basis of Genetics
  - 1.1.3.2. The Pioneers of Genetics
- 1.1.4. Basic Concepts of Genetics
  - 1.1.4.1. Genotype and Phenotype
  - 1.1.4.2. The Genome
  - 1.1.4.3. DNA
  - 1.1.4.4. RNA
  - 1.1.4.5. Genetic Code
- 1.1.5. Mendel's Laws
  - 1.1.5.1. Mendel's 1st Law
  - 1152 2nd Mendel's Law
  - 1.1.5.3. 3rd Mendel's Law
- 1.1.6. Mutations
  - 1161 What are Mutations?
  - 1.1.6.2. Levels of Mutations
  - 1.1.6.3. Types of Mutations
- 1.1.7. Concept of Syndrome
- 1.1.8. Classification
- 1.1.9. The Most Frequent Syndromes
- 1.1.10 Final Conclusions
- 1.2. Down Syndrome
  - 1.2.1. Introduction to Unit
    - 1.2.1.1. History of Down Syndrome
  - 1.2.2. Concept of Down Syndrome
    - 1.2.2.1. What is Down Syndrome?
    - 1.2.2.2. Genetics of Down Syndrome

1.2.2.3. Chromosomal Alterations in Down Syndrom	1.2.2.3.	Chromosomal	Alterations in	Down Syndrome
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- 1.2.2.3.1. Trisomy 21
- 1.2.2.3.2. Chromosomal Translocation
- 1.2.2.3.3. Mosaicism or Mosaic Trisomy
- 1.2.2.4. Prognosis of Down Syndrome
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- 1.2.4. Prevalence
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- 1.2.5. Characteristics of Down Syndrome
  - 1.2.5.1. Physical Characteristics
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  - 1.2.5.3. Motor Developmental Characteristics
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  - 1.2.6.1. What is Comorbidity?
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  - 1.2.8.4. Resources to be Used

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	1.3.2.3. Prognosis of Hunter Syndrome
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	1.9.5.	Main Impacts								
		1.9.5.1. Introduction								
		1.9.5.2. Clinical Manifestations of Duchenne Disease								
		1.9.5.2.1. Speech Delay								
		1.9.5.2.2. Behavioral Problems								
		1.9.5.2.3. Muscle Weakness								
		1.9.5.2.4. Stiffness								
		1.9.5.2.5. Lordosis								
		1.9.5.2.6. Respiratory Dysfunction								
		1.9.5.3. Most common Symptoms of Duchenne Disease								

1.9.6. Comorbidity of Duchenne Disease 1.9.6.1. What is Comorbidity? 1.9.6.2. Comorbidity of Duchenne Disease 1963 Associated Disorders 1.9.7. Diagnosis and Evaluation of Duchenne Disease 1.9.7.1. The Diagnosis of Duchenne Disease 1.9.7.1.1. Where is it performed? 1.9.7.1.2. Who performs it? 1.9.7.1.3. When it can be performed? 1.9.7.2. Speech Therapy Evaluation of Duchenne Disease 1.9.7.2.1. Medical History 1.9.7.2.2. Areas to Consider 1.9.8. Speech Therapy Based Intervention 1.9.8.1. Aspects to take into account 1.9.8.2. Setting Objectives for the Intervention 1.9.8.3. Material for Rehabilitation 1.9.8.4. Resources to be Used 1.9.9. Guidelines 1.9.9.1. Guidelines to the Person with Duchenne Disease to Consider 1.9.9.2. Guidelines to for the Family to Consider 1.9.9.3. Guidelines for the Educational Context 1.9.9.4. Resources and Associations 1.9.10. The Interdisciplinary Team 1.9.10.1. The Importance of the Interdisciplinary Team 1.9.10.2. Speech Therapy 1.9.10.3. Occupational Therapy 1.9.10.4. Physiotherapy

1.10. Usher Syndrome 1.10.1. Introduction to Unit 1.10.1.1. History of Usher Syndrome 1.10.2. Concept of Usher Syndrome 1.10.2.1. What is Usher Syndrome? 1.10.2.2. Genetics of Usher Syndrome 1.10.2.3. Typology of Usher Syndrome 1.10.2.3.1. Type I 1.10.2.3.2. Type I 1.10.2.3.3. Type III 1.10.2.4. Prognosis of Usher Syndrome 1.10.3. Etiology 1.10.3.1. The Origin of Usher Syndrome 1.10.4. Prevalence 1.10.4.1. Usher Syndrome in Other Countries 1.10.5. Main Impacts 1.10.5.1. Introduction 1.10.5.2. Frequent Manifestations of Usher Syndrome 1.10.5.3. Rare Manifestations 1.10.6. Comorbidity of Usher Syndrome 1.10.6.1. What is Comorbidity? 1.10.6.2. Comorbidity in Usher Syndrome 1.10.6.3. Associated Disorders 1.10.7. Diagnosis and Evaluation of Usher Syndrome 1.10.7.1. The Diagnosis of Usher Syndrome 1.10.7.1.1. Where is it performed? 1.10.7.1.2. Who performs it? 1.10.7.1.3. When it can be performed?

## tech 24 | Structure and Content

1.10.7.2. Speech Therapy Evaluation of Usher Syndrome

1.10.7.2.1. Medical History

1.10.7.2.2. Areas to Consider

1.10.8. Speech Therapy Based Intervention

1.10.8.1. Aspects to take into account

1.10.8.2. Setting Objectives for the Intervention

1.10.8.3. Material for Rehabilitation

1.10.8.4. Resources to be Used

1.10.9. Guidelines

1.10.9.1. Guidelines to the Person with Usher Syndrome to Consider

1.10.9.2. Guidelines to for the Family to Consider

1.10.9.3. Guidelines for the Educational Context

1.10.9.4. Resources and Associations

1.10.10. The Interdisciplinary Team

1.10.10.1. The Importance of the Interdisciplinary Team

1.10.10.2. Speech Therapy

1.10.10.3. Occupational Therapy

1.10.10.4. Physiotherapy







Enroll in this program to access the most updated didactic material on the market in Genetic Syndromes"





## tech 30 | Methodology

#### 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.



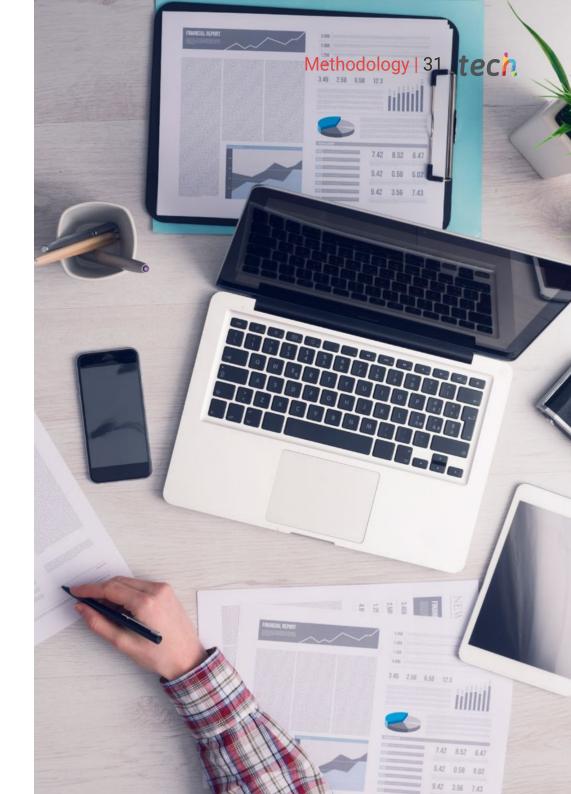
It is a technique that develops critical skills and prepares educators to make decisions, defend their arguments, and contrast opinions.



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:

- 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.



## tech 32 | Methodology

## 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.



## Methodology | 33 tech

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.

## tech 34 | Methodology

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**

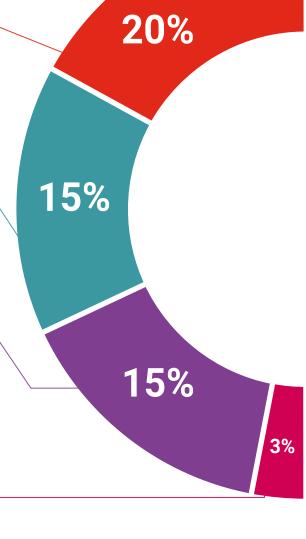
TECH introduces students to the latest techniques, with the latest educational advances, and to the forefront of Education. All this, first-hand, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



#### **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 extual. Therefore, TECH presents real cases in cousing on and solving the different situations:

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.



There is scientific evidence suggesting that observing third-party experts can be useful.

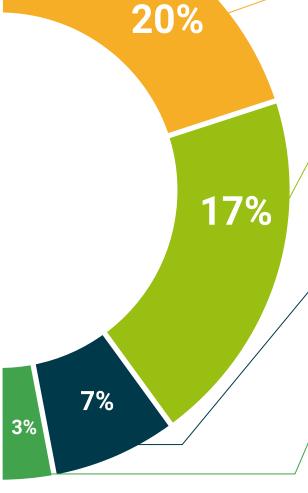
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



#### **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.









## tech 36 | Certificate

This **Postgraduate Certificate in Genetic Syndromes** 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 diploma issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Certificate, and meets the requirements commonly demanded by labor exchanges, competitive examinations and professional career evaluation committees.

Title: Postgraduate Certificate in Genetic Syndromes



<sup>\*</sup>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.

technological university

# Postgraduate Certificate Genetic Syndromes

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

