Professional Master's Degree

Clinical Genetics

tech global university

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Professional Master's Degree

Clinical Genetics

- Modality: **online**
- Duration: **12 months**
- Certificate: **TECH Global University**
- Credits: **60 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Website: **www.techtitute.com/us/medicine/professional-master-degree/master-clinical-genetics**

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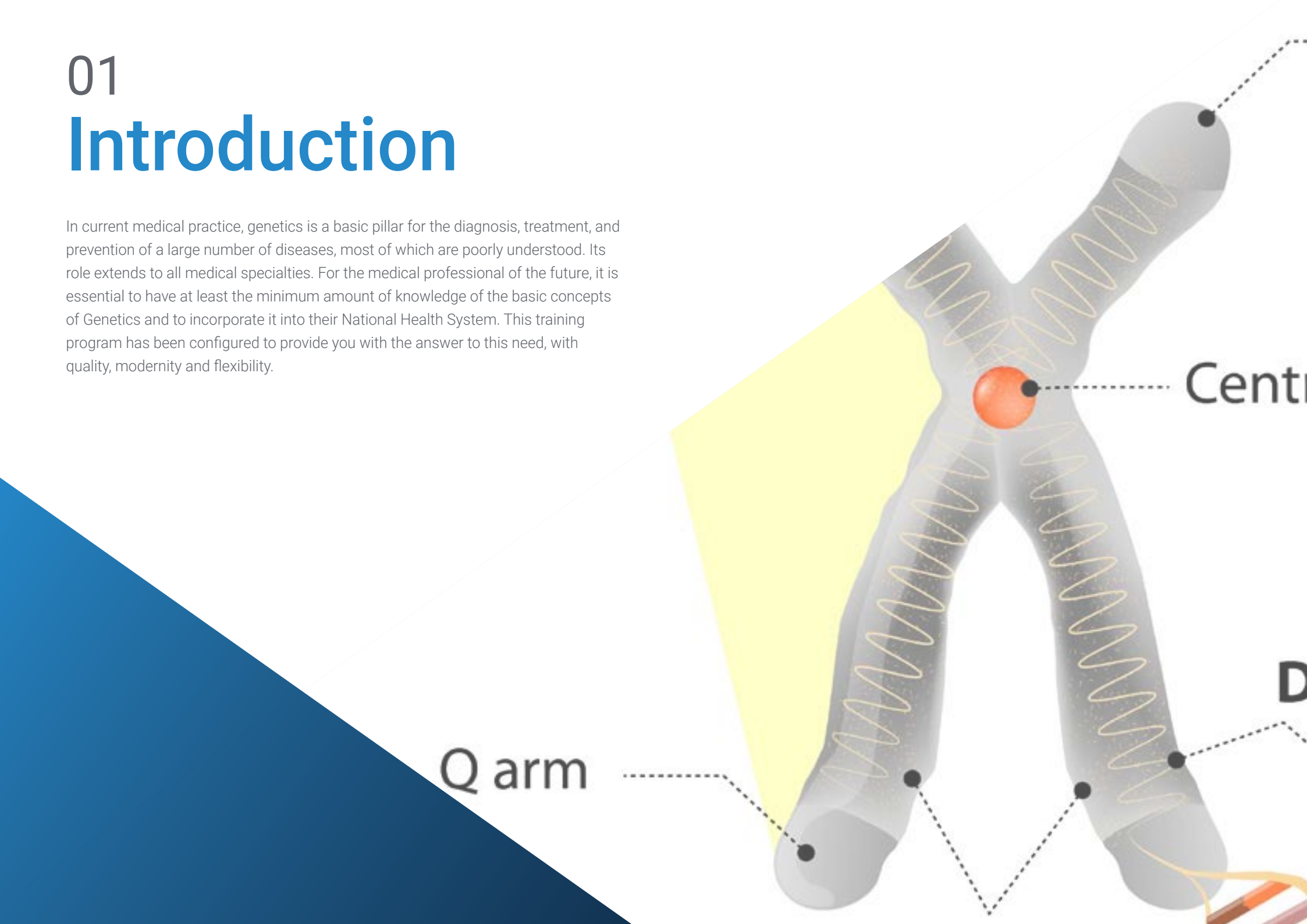
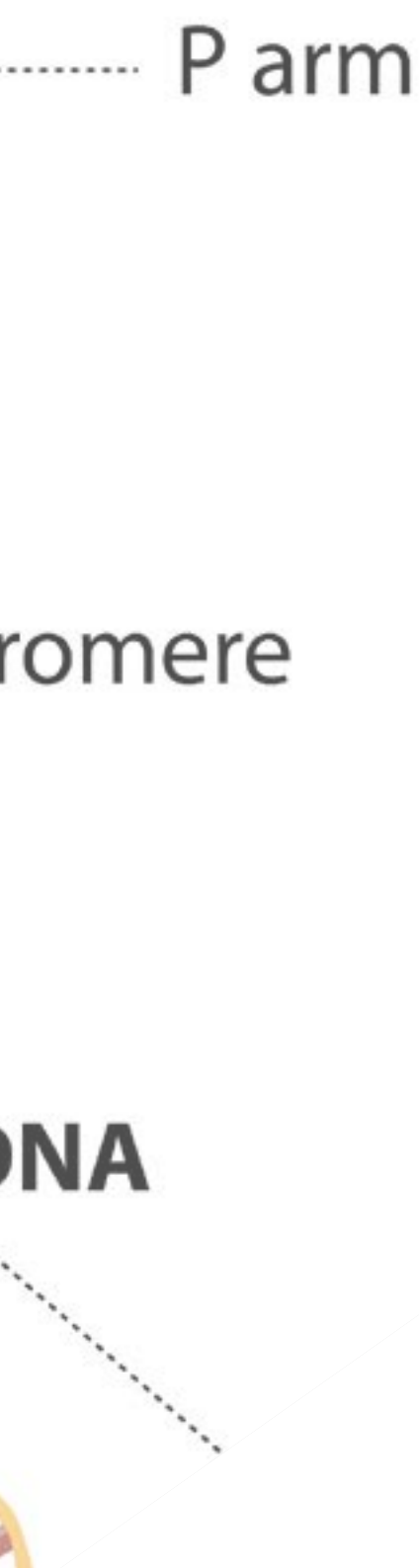
01

Introduction

In current medical practice, genetics is a basic pillar for the diagnosis, treatment, and prevention of a large number of diseases, most of which are poorly understood. Its role extends to all medical specialties. For the medical professional of the future, it is essential to have at least the minimum amount of knowledge of the basic concepts of Genetics and to incorporate it into their National Health System. This training program has been configured to provide you with the answer to this need, with quality, modernity and flexibility.





An exceptional program, created to provide medical professionals with the necessary specialization in clinical genetics, with the most comprehensive and up-to-date knowledge in the field"

In current medical practice, genetics is a basic pillar for the diagnosis, treatment and prevention of a large number of diseases, most of which are poorly understood. Its role extends to all medical specialties. It is, therefore, essential for the specialists to know and update their knowledge in clinical genetics, since this is an area in constant growth and with developments that affect multiple medical specialties.

This is why this TECH program has been created, bringing together the experience and expertise of a teaching team with extensive experience in leading clinical genetics practice. Thus, the most current developments in genetic diagnostic techniques, hereditary cancer, genetics of endocrine diseases, variable primary immunodeficiency and many other issues of great interest to the specialist are addressed throughout the entire syllabus. All with an eminently practical focus, providing numerous examples and real clinical cases that help to contextualize the contents.

The program addresses in its different modules the advanced and up-to-date knowledge for the management of patients and their diseases in the clinical genetics practice. It offers a practical approach to the different techniques most commonly used for the diagnosis of hereditary diseases, as well as the interpretation of their results. Likewise, the diseases that cause the greatest number of consultations in daily practice are also discussed in depth, with an up-to-date approach adapted to the highest clinical level.

Its online format makes it possible to combine it with the most demanding professional and personal activity, as it has eliminated the need for on-site classes and fixed schedules. All the content is available from day one, and can be downloaded from any device with an internet connection. This provides a unique flexibility and comfort to combine it with the most demanding professional and personal activity.

This **Professional Master's Degree in Clinical Genetics** offers you the advantages of a high-level scientific, teaching, and technological academic program. These are some of its most notable features:

- The latest technology in online teaching software
- A highly visual teaching system, supported by graphic and schematic contents that are easy to assimilate and understand
- Practical cases presented by practising experts
- State-of-the-art interactive video systems
- Teaching supported by telepractice
- Continuous updating and recycling systems
- Autonomous learning: full compatibility with other occupations
- Practical exercises for self-evaluation and learning verification
- Support groups and educational synergies: questions to the expert, debate and knowledge forums
- Communication with the teacher and individual reflection work
- Availability of content from any fixed or portable device with internet connection
- Supplementary documentation databases are permanently available, even after the academic program

A specialty of notable interest to the medical professional, and one which can be efficiently acquired through this pedagogically superior Professional Master's Degree"

Training that will show you the practical methodology for the gathering of necessary information for the construction of the genogram, exposing the symbology and graphic representation of such information"

Do not hesitate, take this training with us. You will find the best teaching along material with top quality virtual lessons.

This 100% online Professional Master's Degree will allow you to combine your studies with your professional work while increasing your knowledge in this field.

This program has been developed by professionals from different clinical genetics clinics in which they contribute the experience they have gained through daily practice in the care of patients and families with a variety of hereditary disorders, both in genetic counseling and in prevention programs and prenatal and preconception counseling. The faculty involved in the Professional Master's Degree also carries out important research work in the field of Genetics.

The Professional Master's Degree addresses in its different modules the basic and necessary knowledge for the management of patients and their diseases in a clinical genetics practice. It offers a practical approach to the different techniques most commonly used for the diagnosis of hereditary diseases, as well as the interpretation of the results of the same and, additionally, an approach to the diseases that motivate the largest number of consultations in daily practice in the field of a Clinical Genetics service.

Each module addresses a theoretical text on the subject along with practical examples extracted from clinical cases that will help deepening the student's understanding and broaden their knowledge.

02

Objectives

Currently, not all hospitals have genetics units, although however, it is foreseeable that all healthcare centers will have genetics units in the coming years. Students in this program will deepen their knowledge of the work required as a clinical geneticist both in the field of diagnosis and counseling in these units. Additionally they will understand what it is to be part of multidisciplinary groups of medical services, where patients with hereditary diseases are treated.

A comprehensive and fully up-to-date approach to the diseases that cause the greatest number of consultations in daily practice in the field of a Clinical Genetics service"

General Objectives

- Know the historical evolution of knowledge in the area of genetics
- Learn the use of genetic analysis for diagnostic purposes
- Approach to cardiogenetics
- Learn about all known hereditary cancer syndromes
- Recognize genetic diseases affecting the sensory organs and know how to manage them
- Detail the molecular basis and mechanisms for the diagnosis of endocrine diseases
- Know the genetic diseases affecting the central and peripheral nervous system
- Learn about genetic nephrourological diseases, such as Fabry disease or Alport syndrome
- Address the different major pediatric diseases
- Review hematological, metabolic and deposit, cerebral, and small vessel diseases

Take this opportunity and take the step to get up-to-date on the latest developments in the management of Clinical Genetics"

Specific Objectives

Module 1. Introduction to Genetics

- Update on the history and evolution of knowledge in Clinical Genetics
- Knowledge of fundamental concepts about the structure and organization of the human genome
- Delve into the different models of inheritance of hereditary diseases
- Genetic counseling in clinical practice
- Recurrence risk calculation
- Prenatal, preimplantational and preconceptional genetic counseling
- Ethical and legal aspects in Genetics/Genomics
- Resolution of practical cases

Module 2. Genetic Diagnostic Techniques

- Update on currently available techniques for cytogenetic and molecular diagnostics
- Request optimization strategies and diagnostic interpretation in genetics. Resolution of practical cases

Module 3. Cardiovascular Diseases

- Acquire knowledge about the importance of familial heart disease in the context of cardiovascular disease
- Delve into the aspects of familial heart disease: basic genetics, relevant aspects on diagnosis and prognosis of the different hereditary cardiomyopathies: hypertrophic, dilated, noncompaction, and arrhythmogenic
- Delve into relevant aspects of aortic syndromes

Module 4. Hereditary Cancer

- Provide the student with the necessary tools for the acquisition of knowledge of the criteria for the identification of families with susceptibility to the different hereditary cancer syndromes
- Identification of individuals at risk
- Plan protocols with early prevention programs, as well as the different risk-reducing surgery techniques and areas of application
- Specialize in the risk of transmission to offspring
- Develop preimplantation genetic diagnosis in cancer

Module 5. Genetics of Diseases of the Sensory Organs

- Comprehensive and up-to-date learning on retinal dystrophies and sensorineural hearing loss
- In-depth understanding of the genetic causes and inheritance models
- Develop information about diagnosis and prognosis, as well as the risk of disease transmission

Module 6. Genetics of Endocrine Diseases

- Update and learn about the characteristics of endocrine diseases, both in adults and children, associated with hereditary patterns
- Use of clinical and analytical data to establish the differential diagnosis, from the point of view of genetics, before making the decision on the study to be performed

Module 7. Genetics of Neurological Diseases

- Provide strategies for a global approach to the patient with neurological pathology of genetic origin, to guide a clinical diagnosis considering previous explorations, both analytical, immunohistochemical, and electrophysiological studies already performed and well as other complementary explorations

Module 8. Genetics of Nephrourological Diseases

- Provide global information on the most common nephrological and urological pathologies
- Comprehensive approach for its identification and clinical diagnosis considering previous explorations, both analytical and anatomo-pathological studies already performed and other complementary explorations

Module 9. Genetics of Pediatric Diseases

- Understand in depth the concepts in dysmorphology
- Delve into a dysmorphological exploration
- In-depth understanding of congenital malformations
- Study the main pediatric syndromes
- Detect inherited disorders of metabolism

Module 10. Miscellaneous

- Provide theoretical information and practical cases of other pathologies that motivate a significant number of patients in Clinical Genetics services
- Achieve greater knowledge and skill in their identification and handling

03

Skills

Medicine is a constantly evolving and developing field. This means that professionals in the field must be truly passionate about their work: continuously retraining and updating yourself is one of the essential requirements in order to remain at the forefront and provide the quality service that medical practice requires. This Professional Master's Degree will allow you to acquire the skills required in this regard with a comprehensive approach it is the high-level academic program that makes the difference.

The objective of this training is to delve into the knowledge necessary to practice as clinical geneticists in both the diagnostic and genetic counseling fields"

General Skills

- Perform duties as a clinical geneticist
- Develop the necessary processes for the genetic diagnosis of different diseases
- Work in multidisciplinary teams in the study and approach of genetic diseases

A unique training that will allow you to acquire superior training to develop yourself in this very competitive field"

Specific Skills

- Explain the fundamental concepts of the human genome
- Use existing techniques on genetic diagnosis
- Intervene in cardiovascular diseases considering genetic inheritance
- Identify families at genetic risk for cancer
- Develop diagnosis and prognosis in diseases involving the sensory organs
- Perform a differential diagnosis from a genetic point of view
- Provide a comprehensive approach to neurological disorders of genetic origin
- Perform a comprehensive approach to nephrourological diseases considering their genetic origin
- Act diagnostically in the approach of pediatric genetic diseases
- Be familiar with other genetic pathologies and be skilled in their diagnosis and management

04

Course Management

Within the concept of total quality of our program, we are proud to put at your disposal a Teaching Staff of the highest level, chosen for their proven experience. Professionals from different areas and fields of expertise that make up a complete, multidisciplinary team. A unique opportunity to learn from the best.

A program created and directed by experts in clinical genetics who will take you through the most up-to-date and complete knowledge and give you the real and contextual vision of this area of work"

International Guest Director

With an outstanding scientific career in the field of Molecular Genetics and Genomics, Dr. Deborah Morris-Rosendahl has devoted herself to the analysis and diagnosis of specific pathologies. Based on her excellent results and prestige, she has taken on professional challenges such as directing the NHS South East Genomic Laboratory Hub in London.

The research of this world-class expert has focused on the identification of novel disease-causing genes for both single-gene disorders and complex neuropsychiatric conditions. Her particular interest in neuroevolutionary processes has led her to determine genotype-phenotype associations, various cortical developmental conditions, and to refine genotype-phenotype correlations for Lissencephaly, Primary Microcephaly and Microcephaly Syndromes.

She has also turned her attention to inherited cardiac and respiratory conditions, areas in which her laboratory is charged with specialized testing. On the other hand, her team has been dedicated to designing cutting-edge methodologies to offer innovative genomic diagnostics, consolidating her reputation as a leader in this field globally.

Dr. Morris-Rosendahl began her education in science at the University of Cape Town, where she obtained an honors degree in Zoology. To continue her studies, she joined the Mammalian Research Institute at the University of Pretoria. With the advent of recombinant DNA technology, she immediately redirected her efforts to Human Genetics, completing her PhD in that field at the South African Institute of Medical Research and the University of the Witwatersrand.

However, she has carried out postdoctoral research in South Africa, the United States and Germany. In Germany, she became Director of the Diagnostic Laboratory of Molecular Genetics at the Institute of Human Genetics, University Medical Center Freiburg. Recently, she has been collaborating with several multidisciplinary teams in the UK.

Dra. Deborah Morris-Rosendahl

- Scientific Director of the NHSE South East Genomic Laboratory Hub, London, UK
- Asmarley Principal Investigator in the Molecular Genetics and Genomics Group at the British Heart and Lung Institute
- Scientific Director, Genomic Innovation Unit, Guy's and St. Thomas' NHS Foundation Trust, UK
- Head of Clinical Genetics and Genomics Laboratory, Royal Brompton and Harefield Hospitals Clinical Group, UK
- Head of the Molecular Genetics Diagnostic Laboratory at the Institute of Human Genetics, University Medical Center Freiburg, Germany
- Research Fellow at the Institute of Mammalian Research, University of Pretoria
- Postdoctoral Fellow at Baylor College of Medicine, Houston, Texas, United States
- Postdoctoral stay awarded the Alexander von Humboldt Research Fellowship
- Doctorate in Human Genetics at the South African Institute of Medical Research and the University of the Witwatersrand
- B.Sc. in Zoology at the University of Cape Town

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

Management

Dr. S. Tahsin Swafiri Swafiri, M.D.

- Degree in Medicine and General Surgery (University of Extremadura- Badajoz)
- Specialist in Clinical Biochemistry and Molecular Pathology (Puerta de Hierro University Hospital, Majadahonda)
- Master's Degree in Rare Diseases (University of Valencia)
- Attending physician in Clinical Genetics at the University Hospitals of Infanta Elena, Rey Juan Carlos I, Fundación Jiménez Díaz and General de Villalba
- Associate Professor of Genetics at the Francisco de Vitoria University School of Medicine (Pozuelo de Alarcón- Madrid)
- Health Research Institute - Fundación Jiménez Díaz University Hospital.

Professors

Dr. Fernández San José, Patricia

- Pharmacist Specialized in Clinical Biochemistry
- She works as an Area Specialist in the Genetics Service of the Ramón y Cajal University Hospital in Madrid.
- Specialized in the diagnosis of diseases of genetic origin, including familial heart disease, erythropathology and autoinflammatory syndromes.
- As a collaborator, she belongs to CIBERER unit U728, to the RareGenomics Network and has her own line of research in Autoinflammatory Diseases within the framework of the Ramón y Cajal Institute of Health Research (IRYCIS)

Dr. Lorda Sánchez, Isabel María

- Degree in Medicine and Surgery from the University of Zaragoza. 1988
- Doctor of Medicine from the University of Zurich. 1991
- Validated in 1993
- Personal Professional Accreditation in Human Genetics (AEGH)
- Member of the Spanish Association of Human Genetics (AEGH).
- Member of the European Cytogenetics Association (ECA)

Dr. Almoguera Castillo, Berta

- D. in Genetics and Cell Biology. Juan Rodés Researcher (JR17/00020; ISCIII) at the Genetics Service of the Jiménez Díaz Fundation. Madrid
- 2011: D. in Genetics and Cell Biology. Autonomous University of Madrid. Thesis Title: "Utility of pharmacogenetics to predict the efficacy and safety of risperidone in the treatment of schizophrenia." Directors: Dr. Carmen Ayuso and Dr. Rafael Dal-Ré
- 2009: Specialized Health Training (FSE) in Clinical Biochemistry. Puerta de Hierro University Hospital, Madrid
- 2007: Diploma of Advanced Studies with the title "Molecular characterization of mitochondrial diseases with predominant phenotypic expression in cardiac muscle" directed by the Dr. Belén Bornstein Sánchez. Complutense University of Madrid
- 2018-Present: Juan Rodés Researcher (JR17/00020; ISCIII) at the Genetics Service of the Jiménez Díaz Fundation. Madrid
- 2015 - 2018: Research Scientist at the Center for Applied Genomics, The Children's Hospital of Philadelphia (USA)

Dr. Blanco Kelly, Fiona

- Adjunct physician of the genetics service of the Jiménez Diaz Foundation University Hospital. Institute for Health Research-FJD
- Adjunct Physician (Area Specialist) of the Genetics Service of the Jiménez Diaz Foundation University Hospital.
- Degree in Medicine and Surgery from the Faculty of Medicine of the Complutense University of Madrid (2004)
- Area Specialist in Clinical Biochemistry since 2009.
- Doctorate in Medicine in 2012
- Master's Degree in Rare Diseases, University of Valencia, Valencia, Spain 2017
- Postdoctoral Course: University Expert in Clinical Genetics of the University of Alcalá de Henares, Madrid, Spain 2009
- Honorary Research Associate at the Institute of Ofthalmology (IoO), University College London (UCL), London, UK (01/2016-31/12/2020)
- Secretary of the Training and Dissemination Commission of the Spanish Association of Human Genetics

Dr. Rodríguez Pinilla, Elvira

- Attending Physician. Genetics Service. Jiménez Diaz Foundation University Hospital. Madrid. 2017-2020
- Degree in Medicine and General Surgery from the Complutense University of Madrid (1972-1979)
- Doctor of Medicine and Surgery, Complutense University of Madrid (1992)
- Diploma: "Epidemiology in Action: a course for public health professional". U.S. Department of Health and Human Services. Public Health Service. Centers for Disease Control. Atlanta, Georgia (USA) (1988)
- Accredited in Human Genetics by the Spanish Association of Human Genetics. (2005).
- Puericulturist Medical Doctor. Diploma in Puericulture and Preventive Pediatrics. School of Puericulture of the Spanish Society of Puericulture: Course XXVII (87th Promotion). Course 2011- 2012

05

Structure and Content

The contents of this training have been developed by different experts, with a clear purpose: to ensure that our students acquire each and every one of the skills necessary to become true experts in this field.

A complete and well-structured program that will take you to the highest standards of quality and success. Expert participated in the preparation of the program, which adds a very original and close perspective, with real cases and situations that are not only clinical but also social. It has a holistic perspective, not just a medical one, making it of interest to healthcare professionals of any kind.

A complete review of the indispensable aspects for a comprehensive knowledge of Clinical Genetics, created to efficiently train medical professionals, incorporating the latest news and advances in this field"

Module 1. Introduction to Genetics

1.1. Introduction
1.2. Basic Structure of DNA
  1.2.1. The Gene
  1.2.2. Transcription and Translation
  1.2.3. Regulation of Gene Expression
1.3. Chromosomopathies
1.4. Numerical Alterations
1.5. Structural Alterations
  1.5.1. Phases of Mendelian Genetics
1.6. Autosomal Dominant Inheritance
1.7. Recessive Autosomal Inheritance
1.8. X-linked Inheritance
  1.8.1. Mitochondrial Genetics
  1.8.2. Epigenetics
  1.8.3. Genetic Imprinting
  1.8.4. Genetic Variability and Disease
1.9. Genetic Counseling
  1.9.1. Genetic Counseling Pre-test
  1.9.2. Genetic Counseling Post-test
  1.9.3. Preconception Genetic Counseling
  1.9.4. Prenatal Genetic Counseling
  1.9.5. Preimplantation Genetic Counseling
1.10. Ethical and Legal Aspects

Module 2. Genetic Diagnostic Techniques

2.1. Fluorescence In Situ Hybridization (FISH)
2.2. Quantitative Fluorescent Polymerase Chain Reaction (QF-PCR)
2.3. Comparative Genomic Hybridization (CGH Array)
2.4. Sanger Sequencing
  2.4.1. Digital PCR
2.5. Massive Next-Generation Sequencing (NGS)
2.6. Multiplex Ligation-Dependent Probe Amplification (MLPA)
2.7. Microsatellites and TP-PCR in DNA Repeat Expansion Diseases
2.8. Fetal DNA Study in Maternal Blood

Module 3. Cardiovascular Diseases

3.1. Familial Hypertrophic Cardiomyopathy
3.2. Arrhythmogenic Cardiomyopathy of the Right Ventricle
3.3. Familial Dilated Cardiomyopathy
3.4. Left Ventricular Non-Compaction Cardiomyopathy
3.5. Aortic Aneurysms
  3.5.1. Marfan Syndrome
  3.5.2. Loeys-Dietz Syndrome
3.6. Long QT Syndrome
3.7. Brugada Syndrome
3.8. Catecholaminergic Polymorphic Ventricular Tachycardia.
  3.8.1. Idiopathic Ventricular Fibrillation.
3.9. Short QT Syndrome
3.10. Genetics of Congenital Malformations in Cardiology

Module 4. Hereditary Cancer

4.1. Hereditary Breast and Ovarian Cancer Syndromes
  4.1.1. High-Pedisposition Genes
  4.1.2. Intermediate Risk Genes
4.2. Nonpolyposis Colorectal Cancer Syndrome (Lynch Syndrome)
4.3. Immunohistochemical Study of DNA Repair Proteins
4.4. Microsatellite Instability Study
4.5. MLH1 and PMS2 Genes
4.6. MSH2 and MSH6 Genes
4.7. Lynch-Like Syndrome
4.8. Familial Adenomatous Polyposis Syndrome
4.9. APC Gene
4.10. MUTYH Gene
4.11. Other Polyposis
  4.11.1. Cowden Syndrome
  4.11.2. Li-Fraumeni Syndrome
  4.11.3. Multiple Endocrine Neoplasms
  4.11.4. Neurofibromatosis
  4.11.5. Tuberous Sclerosis Complex
  4.11.6. Familial Melanoma
  4.11.7. Von Hippel-Lindau Disease

Module 5. Genetics of Diseases of the Sensory Organs

5.1. Peripheral Retinal Dystrophies
5.2. Central Retinal Dystrophies
5.3. Syndromic Retinal Dystrophies
5.4. Optic Atrophy
5.5. Corneal Dystrophies.
5.6. Ocular Albinism
5.7. Ocular Malformations
5.8. Sensorineural Hearing Loss due to Autosomal Dominant Recessive Inheritance
5.9. Sensorineural Hearing Loss due to Mitochondrial Inheritance
5.10. Syndromic Hearing Loss

Module 6. Genetics of Endocrine Diseases

6.1. Monogenic Diabetes.
6.2. Primary Hypoparathyroidism.
6.3. Familial Short Stature and Achondroplasia
6.4. Acromegaly
6.5. Hypogonadism
  6.5.1. Kallmann Syndrome
6.6. Congenital Adrenal Hyperplasia
6.7. Genetics of Phosphocalcium Metabolism
6.8. Familial Hypocholesterolemia
6.9. Paraganglioma and Pheochromocytoma
6.10. Medullary Thyroid Carcinoma

Module 7. Genetics of Neurological Diseases

7.1. Hereditary Peripheral Neuropathies
7.2. Hereditary Ataxias
7.3. Huntington's Disease
7.4. Hereditary Dystonia
7.5. Hereditary Paraparesis
7.6. Muscular Dystrophies
  7.6.1. Dystrophinopathies
  7.6.2. Facioscapulohumeral Dystrophy
  7.6.3. Steinert's Disease
7.7. Myotonia Congenita
7.8. Dementia
  7.8.1. Alzheimer's Disease.
  7.8.2. Frontotemporal Dementia
7.9. Amyotrophic Lateral Sclerosis
7.10. CADASIL Disease

Module 8. Genetics of Nephrourological Diseases

8.1. Polycystic Kidney Disease
8.2. Hereditary Tubulopathies
8.3. Hereditary Glomerulopathies
8.4. Atypical Hemolytic Uremic Syndrome
8.5. Congenital Renal and Urothelial System Congenital Malformations
8.6. Malformation Syndromes with Associated Renoureteral Malformation
8.7. Gonadal Dysgenesis
8.8. Hereditary Kidney Cancer

Module 9. Genetics of Pediatric Diseases

9.1. Dysmorphology and Syndromology
9.2. Intellectual Disability
  9.2.1. Fragile X Syndrome
9.3. Epilepsy and Epileptic Encephalopathies
9.4. Genetics of Neurodevelopment
  9.3.1. Maturational Delays
  9.3.2. Autism Spectrum Disorder
  9.3.3. General Developmental Delay
9.5. Lysosomal Storage Disorders
9.6. Congenital Metabolopathies
9.7. Rasopathies
  9.7.1. Noonan Syndrome
9.8. Osteogenesis Imperfecta
9.9. Leukodystrophies
9.10. Cystic fibrosis

Module 10. Miscellaneous

10.1. Hemophilia
10.2. Thalassemias
10.3. Hemochromatosis
10.4. Porphyrias
10.5. Variable Primary Immunodeficiency
10.6. Genetics of Autoimmune Diseases
10.7. Cavernomatosis
10.8. Wilson's Disease
10.9. Fabry Disease
10.10. Hereditary Hemorrhagic Telangiectasia
  10.10.1. Rendu-Osler-Weber Disease

06

Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning.**

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

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

At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

With TECH you will experience a way of learning that is shaking the foundations of traditional universities around the world.

According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions in the physician's professional practice.

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:

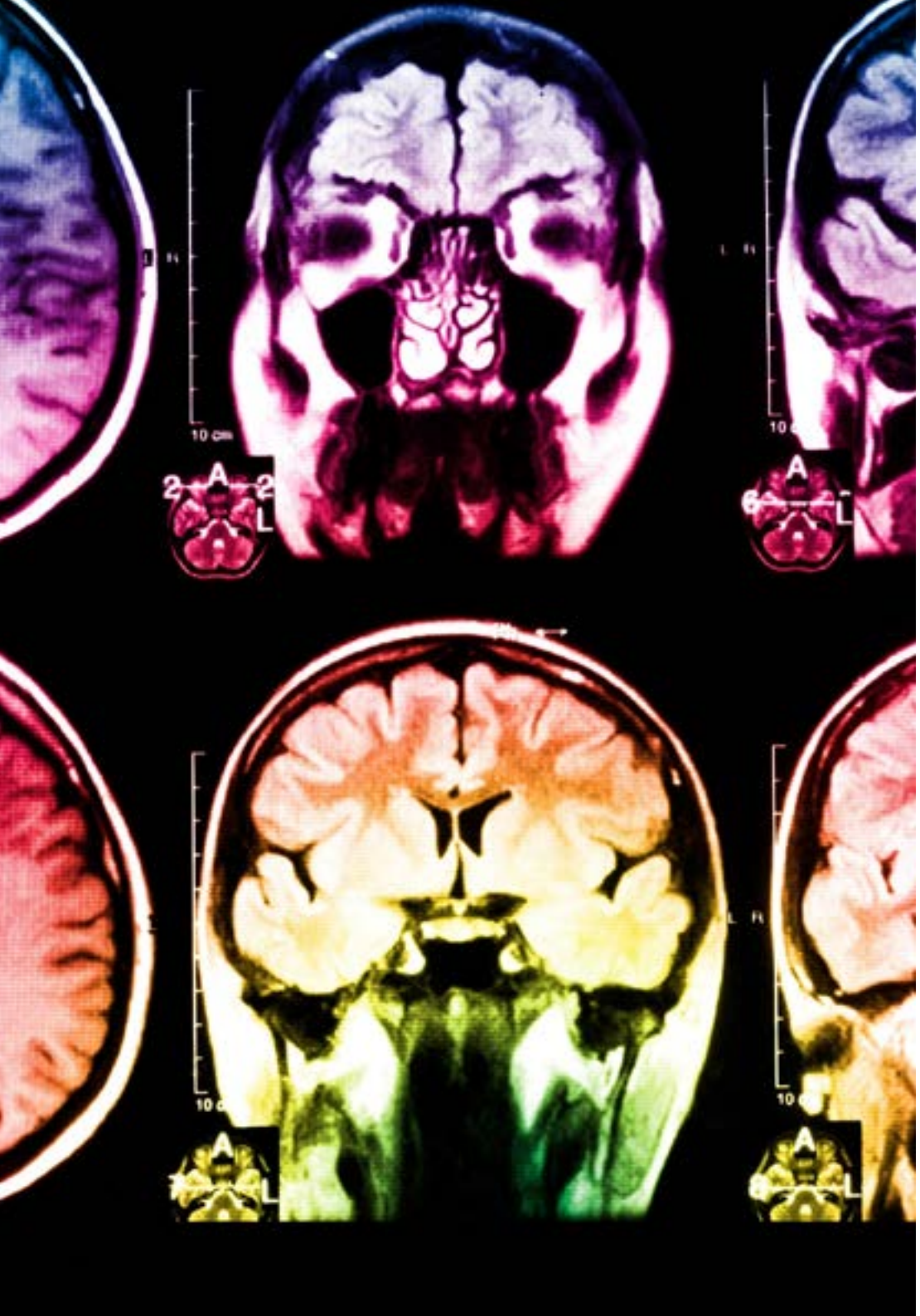
1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
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.

This university is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.

Professionals will learn through real cases and by resolving 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, more than 250,000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

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 TECH's 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 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.

Surgical Techniques and Procedures on Video

TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many times as you like.

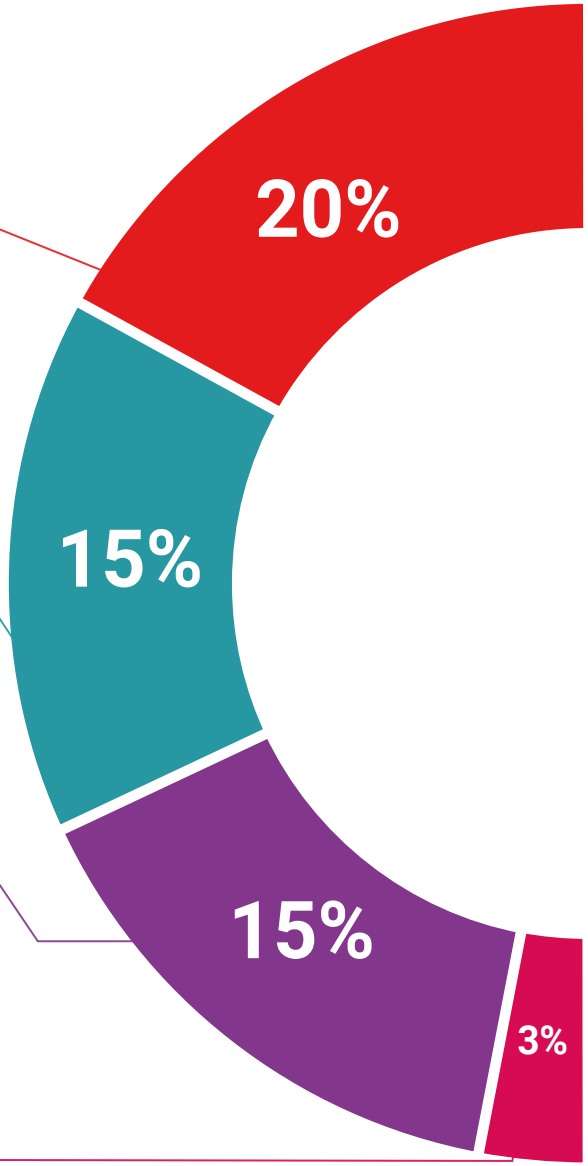
Interactive Summaries

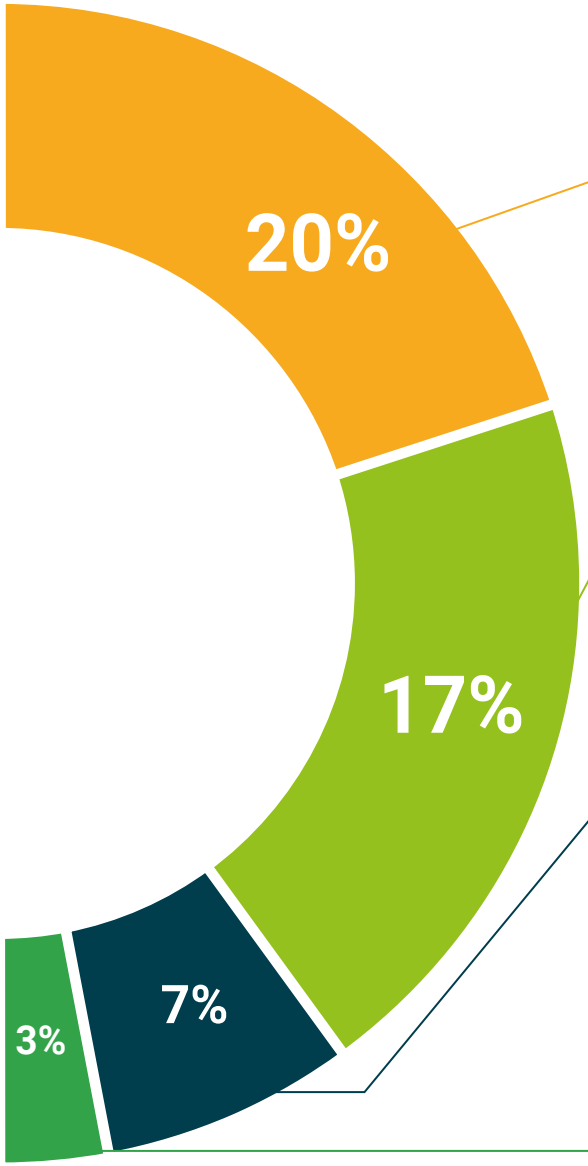
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive educational system for presenting multimedia content 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 their goals.

Classes

There is scientific evidence on the usefulness of learning by observing experts. The system known as 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.

07

Certificate

The Professional Master's Degree in Clinical Genetics guarantees you, in addition to the most rigorous and up-to-date training, access to a certificate issued by TECH Global University.

Successfully complete this program and receive your university degree without travel or laborious paperwork”

This program will allow you to obtain your **Professional Master's Degree diploma in Clinical Genetics** 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: **Professional Master's Degree in Clinical Genetics**

Modality: **online**

Duration: **12 months**

Accreditation: **60 ECTS**


tech global university

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

Professional Master's Degree in Clinical Genetics

This is a program of 1,500 hours of duration equivalent to 60 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024

Dr. Pedro Navarro Illana
Rector

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. Unique TECH Code: AFWORD23S techtitute.com/certificates


Professional Master's Degree in Clinical Genetics

Subject type	ECTS
Compulsory (CO)	60
Optional (OP)	0
External Work Placement (WP)	0
Master's Degree Thesis (MDT)	0
Total	60

General Structure of the Syllabus

Year	Subject	ECTS	Type
1º	Introduction to Genetics	6	CO
1º	Genetic Diagnostic Techniques	6	CO
1º	Cardiovascular Diseases	6	CO
1º	Hereditary Cancer	6	CO
1º	Genetics of Diseases of the Sensory Organs	6	CO
1º	Genetics of Endocrine Diseases	6	CO
1º	Genetics of Neurological Diseases	6	CO
1º	Genetics of Nephrourological Diseases	6	CO
1º	Genetics of Pediatric Diseases	6	CO
1º	Miscellaneous	6	CO

Dr. Pedro Navarro Illana
Rector

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*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH Global University will make the necessary arrangements to obtain it, at an additional cost.

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Professional Master's Degree

Clinical Genetics

- Modality: **online**
- Duration: **12 months**
- Certificate: **TECH Global University**
- Credits: **60 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Professional Master's Degree

Clinical Genetics

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