

# Postgraduate Diploma

## Myelodysplastic Syndromes and Chronic Leukemia





## Postgraduate Diploma Myelodysplastic Syndromes and Chronic Leukemia

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

Website: [www.techtitute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-myelodysplastic-syndromes-chronic-leukemia](http://www.techtitute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-myelodysplastic-syndromes-chronic-leukemia)

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# 01

# Introduction

Each step taken in the study of Oncohematology is a great advance for the health of patients suffering from Myelodysplastic Syndromes or Chronic Leukemia. In this sense, specialists must be aware of everything from the generalities of MDS to the difficulties involved in the new diagnostic classifications to the drugs under study. Based on the most current and rigorous information, TECH has designed this academic proposal that will take students through an intensive updating process with a first class teaching team. Undoubtedly, a unique opportunity to update with a 100% online teaching methodology and multiple teaching materials accessible 24 hours a day, from any digital device with internet connection.





A close-up photograph of a petri dish containing a bacterial culture on a red agar medium. The culture shows several distinct, white, irregular colonies of varying sizes, some with a more defined, circular shape and others more spread out. The background is a blurred laboratory setting.

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*A 6-month 100% online academic experience  
with the most advanced syllabus in MDS,  
Myeloproliferative Neoplasms and CLL”*

In recent years there has been an important evolution in the field of oncohematology as a result of the of Oncohematology as a result of continuous work in the scientific field. A work that has that has made it possible to understand the etiology of myelodysplastic syndromes and to develop new drugs according to the risk and progression of the disease.

A scenario that leads medical professionals to be in a continuous updating of their knowledge in both diagnostic and therapeutic procedures. In this line, TECH has decided to create this Postgraduate Diploma of 6 months of duration with the most advanced syllabus, elaborated by real specialists in this area.

It is a program with a theoretical-practical approach that will allow the graduate to be up to date in the management of low and high risk MDS, the results with hypomethylating agents and with HSCT, as well as Chronic Lymphocytic Leukemia with the advantages and disadvantages of the different therapeutic alternatives. In addition, thanks to the multimedia pills and the numerous pedagogical material, the graduate will delve into Myeloproliferative Neoplasms and their difficult differential diagnosis.

Likewise, the Relearning method will lead the professional to consolidate the most important concepts in a simple way, reducing concepts in a simple way, thus reducing the long hours of study and memorization of study and memorization.

Thus, the physician is faced with a first class academic experience that adapts to their needs for updating and their daily activities. And the fact is that, without the need to attend centers in person, or have classes with fixed schedules, the graduate will be able to better self-manage access to this university program.

This **Postgraduate Diploma in Myelodysplastic Syndromes and Chronic Leukemia** 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 Hematology and Hemotherapy
- ♦ The graphic, schematic, and practical contents which provide scientific and 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 work
- ♦ Content that is accessible from any fixed or portable device with an Internet connection



*A university degree adapted to your needs. Flexible and with content easily accessible from your digital device with internet connection”*

“

*Delve whenever you wish into the latest therapeutic advances in Myeloproliferative Neoplasms through the syllabus prepared by distinguished specialists in Oncohematology”*

The program's teaching staff includes professionals from the sector who bring to this program the experience of their work, in addition to recognized specialists from prestigious reference societies and universities.

The multimedia content, developed with the latest educational technology, will provide professionals with situated and contextual learning, i.e., a simulated environment that will provide immersive training, designed for training oneself in real situations.

The design of this program focuses on Problem-Based Learning, by means of which the professional must try to solve the different professional practice situations that are presented throughout the academic course. For this , purpose students will be assisted by an innovative interactive video system developed by renowned experts.

*With this university degree you will be aware of the clinical development of promising new drugs for high-risk MDS.*

*The multiple didactic resources of this degree will facilitate your update in Myelodysplastic Syndromes and Chronic Leukemia.*



02

# Objectives

The purpose of this Postgraduate Diploma is to provide the Hematologist specialist with a complete update on Myelodysplastic Syndromes and Chronic Leukemia with a content based on scientific evidence-based medicine. For this purpose, innovative pedagogical material and simulations of clinical study cases clinical study simulations that will allow you to integrate the latest advances in diagnostic procedures and advances in diagnostic and therapeutic procedures in this field.







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*Integrate into your clinical practice the most current diagnostic methodology in MDS and the international prognostic indexes in use”*



## General Objectives

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- ♦ Delve into the etiopathogenesis, diagnosis and prognosis of myelodysplastic syndromes
- ♦ Update the pharmacological knowledge used in Oncohematology
- ♦ Investigate the most recent scientific publications on the most appropriate treatments in LAL
- ♦ Delve into the growing problem of resistant microorganisms
- ♦ Assess the evidence and current recommendations on prophylaxis
- ♦ Deepen in the routine care of oncohematological patients affected by SARS-CoV2



*Get a global vision far from away from industry interests and focused on the real long-term benefits long-term benefits for patients in Chronic Lymphocytic Leukemia”*





## Specific Objectives

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### Module 1. Myelodysplastic Syndromes

- ♦ Review generalities regarding the etiopathogenesis, diagnosis and prognosis of this heterogeneous group of myeloid neoplasms
- ♦ Review the new diagnostic classifications, as well as the international prognostic indices in use
- ♦ Investigate in a practical way the management of low-risk MDS, the use of erythropoiesis-stimulating agents, the relevance of adequate iron chelation, and the role of new drugs such as Luspatercept
- ♦ Delve into the results with hypomethylating agents and with HSCT, as well as the clinical development of promising new drugs

### Module 2. Chronic myeloproliferative neoplasms

- ♦ Analyze etiopathogenesis and prognosis up to treatment, including the experience with different TK inhibitors, as well as the controversial point of discontinuation
- ♦ Delve into MPNs such as PV, ET and myelofibrosis, emphasizing their sometimes difficult differential diagnosis, and therapeutic novelties
- ♦ To identify the different prognostic scales in myelofibrosis
- ♦ Develop a critical spirit towards the different levels of evidence for drugs in MPN

### Module 3. Chronic Lymphocytic Leukemia

- ♦ Update practical concepts important for routine practice
- ♦ Determine when to consider initiating treatment with the appropriate use of adjunctive tests at any given time
- ♦ Analyze the advantages and disadvantages of the different therapeutic alternatives
- ♦ Develop a critical spirit towards published studies, know how to discern their methodological limitations and the different levels of evidence
- ♦ Obtain a global vision far from the interests of the industry and focused on the real long-term benefit of the patients

# 03

## Structure and Content

The syllabus of this Postgraduate Diploma provides a current vision on Myelodysplastic Syndromes and Chronic Leukemia, both from its present approach and the existing pharmacological trials. A wide field of action that will lead the graduate to update an update on the differential diagnosis of CML, the latest existing therapeutic alternatives or the most effective complementary tests in patients with Chronic Lymphocytic Leukemia. All this, in addition to a Virtual Library, accessible 24 hours a day, from any digital device with internet connection.



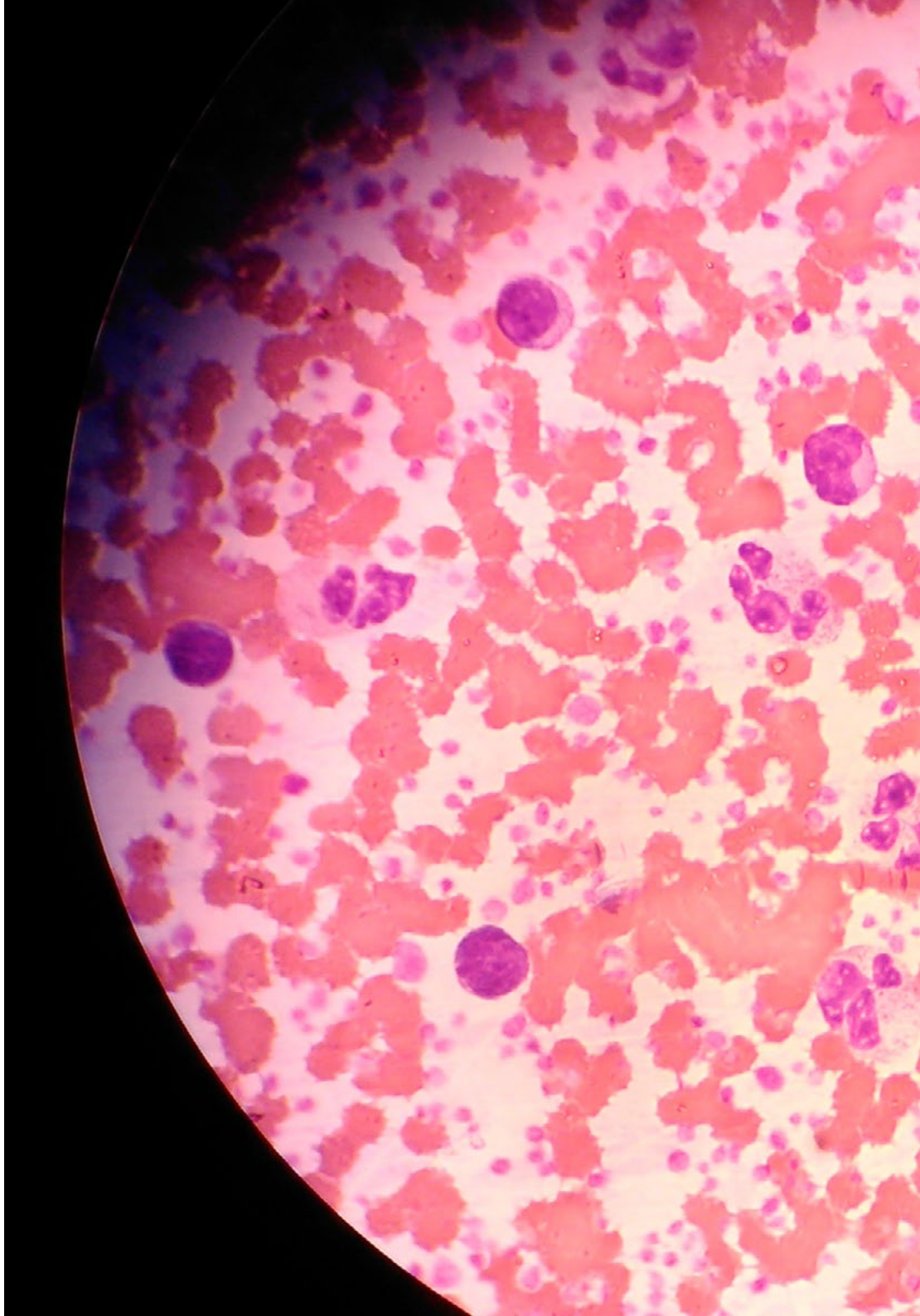


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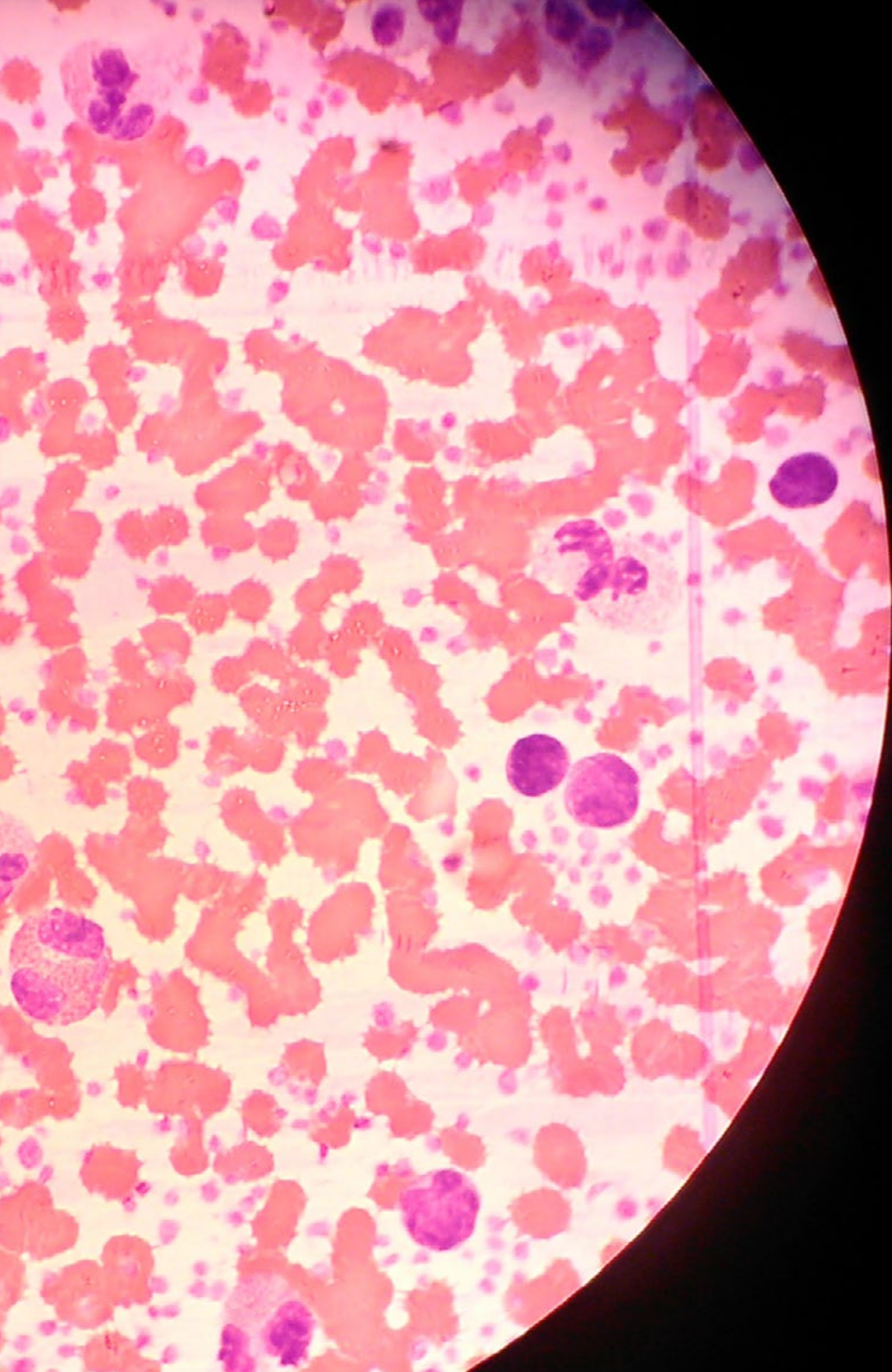
*A study plan that allows you to update and face the future challenge of dealing with the main chronic myeloproliferative neoplasms”*

## Module 1. Myelodysplastic Syndromes

- 1.1. General Aspects
  - 1.1.1. Pathogenesis. CHIP, CCUS, ICUS
  - 1.1.2. Epidemiology. Clinical Symptoms
  - 1.1.3. Novo SMD vs. Secondary to treatment
- 1.2. Diagnostic
  - 1.2.1. Cytology
  - 1.2.2. Genetic and molecular alterations
  - 1.2.3. Flow Cytometry
- 1.3. Classification. MDS/NMP
  - 1.3.1. WHO
  - 1.3.2. Chronic Heart Failure (CHF)
  - 1.3.3. MDS/NMP
- 1.4. Prognostic indices
  - 1.4.1. IPSS
  - 1.4.2. IPSS-R
  - 1.4.3. Molecular IPSS
- 1.5. Management of low-risk MDS
  - 1.5.1. Use of erythropoietic stimulants
  - 1.5.2. Iron chelating agents
  - 1.5.3. MDS del(5q). Lenalidomide
  - 1.5.4. Hypoplastic MDS
- 1.6. New medications in low-risk MDS
  - 1.6.1. Luspatercept
  - 1.6.2. Pharmaceuticals under development
- 1.7. Treatment of High-risk MDS
  - 1.7.1. Hypomethylating agents
  - 1.7.2. Intensive chemotherapy
- 1.8. New Drugs in SMD
  - 1.8.1. Venetoclax plus hypomethylating agents
  - 1.8.2. IDH1/IDH2 Inhibitors, Imetelstat and others







- 1.9. TPH in SMD
  - 1.9.1. Indications
  - 1.9.2. Modalities and conditioning
- 1.10. Role of comorbidities and geriatric assessment
  - 1.10.1. Comorbidity scales
  - 1.10.2. Quality of life Assessment
  - 1.10.3. Patient-reported outcomes

## Module 2. Chronic myeloproliferative neoplasms

- 2.1. Chronic Myeloid Leukemia. Diagnosis and clinical
  - 2.1.1. Introduction. Epidemiology
  - 2.1.2. Pathogenesis Diagnostic
  - 2.1.3. Prognosis
- 2.2. LMC, Differential Diagnosis
  - 2.2.1. Leukemoid reaction
  - 2.2.2. LMMC
  - 2.2.3. Atypical CML, CNL and others
- 2.3. CML. Treatment
  - 2.3.1. Tirosin Kinasa Inhibitor. Imatinib
  - 2.3.2. Second-generation TKI. Nilotinib. Dasatinib. Bosutinib
  - 2.3.3. Other TKIs: Ponatinib. Asciminib
  - 2.3.4. Other treatments TPH Role
- 2.4. Polycythemia Vera
  - 2.4.1. Diagnosis and clinical
  - 2.4.2. Criterios OMS. Differential Diagnosis
  - 2.4.3. Prognosis. Low Risk Adated Treatment
- 2.5. High-risk polycythemia Vera, treatment
  - 2.5.1. Initial cytoreduction options
  - 2.5.2. Rescue options
  - 2.5.3. Pregnancy Transformation
- 2.6. Essential Thrombocythemia
  - 2.6.1. Diagnosis and clinical
  - 2.6.2. WHO Criteria
  - 2.6.3. Differential Diagnosis

- 2.7. Essential Thrombocythemia: prognosis and treatment
  - 2.7.1. Prognosis
  - 2.7.2. Cyto-reduction indications
  - 2.7.3. Hydroxyurea vs Anagrelide
- 2.8. Primary Myelofibrosis
  - 2.8.1. Clinical Pathogenesis
  - 2.8.2. Diagnosis. WHO Criteria
  - 2.8.3. Prognosis Scales
- 2.9. Myelofibrosis Treatment
  - 2.9.1. Anemia management
  - 2.9.2. JAK Inhibitors
  - 2.9.3. New Drugs in Myelofibrosis
- 2.10. TPH in Myelofibrosis
  - 2.10.1. TPH candidate selection
  - 2.10.2. MF conditioning

### Module 3. Chronic Lymphocytic Leukemia

- 3.1. Diagnostic
  - 3.1.1. Etiopathogenesis
  - 3.1.2. Complementary Tests
  - 3.1.3. Treatment Indications
- 3.2. Prognosis
  - 3.2.1. Prognostic Factors and predictive
  - 3.2.2. Prognostic indices
- 3.3. Role of comorbidities and geriatric Assessment
  - 3.3.1. Comorbidity scales
  - 3.3.2. Geriatric Scores
  - 3.3.3. Quality of life questionnaires. PROMs
- 3.4. First-Line Treatment
  - 3.4.1. Immunochemotherapy
  - 3.4.2. BTK Inhibitors
  - 3.4.3. Bcl2 inhibitor. Combinations







- 3.5. Relapse/refractory treatment
  - 3.5.1. Algorithms
  - 3.5.2. Treatment sequencing
  - 3.5.3. Role of TPH in CLL
- 3.6. Practical handling of BTKi
  - 3.6.1. Hemorrhagic complications
  - 3.6.2. Cardiovascular Complications
  - 3.6.3. Other toxicities
- 3.7. Practical handling of Venetoclax
  - 3.7.1. SLT risk assessment and prophylaxis
  - 3.7.2. Cytopenias management
- 3.8. COVID and LLC
  - 3.8.1. Antivirals Treatment Indications
  - 3.8.2. Pre-exposure prophylaxis indications
  - 3.8.3. Other recommendations and vaccinations in CLL
- 3.9. Richter's syndrome
  - 3.9.1. Pathogenesis and clinical
  - 3.9.2. LDCG and LH. Clonal relation
  - 3.9.3. Treatment Options
- 3.10. New Drugs in LLC
  - 3.10.1. New BTKi
  - 3.10.2. Other drugs under development
  - 3.10.3. CAR T at LLC



*Delves through the most recent scientific studies on the clonal relationship between LDCG and LH”*

04

# 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.



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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 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. Gervas, 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.



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*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.



# 05 Certificate

The Postgraduate Diploma in Myelodysplastic Syndromes and Chronic Leukemia guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Technological University.







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*Successfully complete this program  
and receive your university qualification  
without having to travel or fill out  
laborious paperwork”*

This **Postgraduate Diploma in Myelodysplastic Syndromes and Chronic Leukemia** contains the most complete and up-to-date scientific program on the market.

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

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

Title: **Postgraduate Diploma in Myelodysplastic Syndromes and Chronic Leukemia**

Official N° of hours: **450 h.**



\*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.

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education information tutors  
guarantee accreditation teaching  
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community commitment  
personalized service innovation  
knowledge present  
development languages  
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**tech** technological  
university

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