

# Postgraduate Certificate Therapeutic Apheresis





## Postgraduate Certificate Therapeutic Apheresis

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

Website: [www.techtute.com/us/medicine/postgraduate-certificate/therapeutic-apheresis](http://www.techtute.com/us/medicine/postgraduate-certificate/therapeutic-apheresis)

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# 01

# Introduction

Apheresis is a moderately invasive procedure performed by the hematology service and sometimes also by the nephrology service, from which many specialties can benefit. These are rare techniques, but they should be comprehensively known by physicians, knowing what this therapy consists of and its different modalities, taking into account its side effects and possible complications. Therefore, this program details the clinical indications of this procedure in hematology more specifically, apheresis for the collection of hematopoietic progenitors, plasma exchange and altruistic donation of the different blood components that can be performed by apheresis, making it a unique program.



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*This Postgraduate Certificate in Therapeutic Apheresis delves into this technique like no other in the educational market, a guarantee of excellence from a prestigious university: TECH”*

Apheresis procedures are infrequent techniques but they should be known by physicians in a comprehensive manner, hence the need for specialists in this field. It is a moderately invasive procedure performed by the hematology service, sometimes also by the nephrology service, but from which many specialties can benefit, of interest to the development of this specialty.

In this program, we will go in depth into how this therapy is performed and what it consists of and its different modalities. In addition, its side effects and possible complications are reviewed. The clinical indications of this procedure in hematology, apheresis for the collection of hematopoietic progenitors, plasma exchange and altruistic donation of blood components that can be done by apheresis will be developed specifically.

Finally, indications in other specialties in which this procedure is gaining importance, such as renal and neurological disorders, are addressed. Therefore, the main objective of this program in Therapeutic Apheresis is to provide an in-depth knowledge of this technique, its purpose and usefulness in clinical practice, with its different clinical indications. Likewise, the qualification to perform it or to know which patients can benefit from this procedure considering the side effects and complications.

In this way, it is a 100% online program, so students have the ease of being able to take it comfortably, wherever and whenever they want. All they need is a device with an Internet connection to take their career one step further. In addition, an additional Masterclass has been incorporated, led by an expert of international prestige in the field of Transfusion Medicine. This specialist will guide students to acquire the essential knowledge and skills, backed by the most up-to-date scientific evidence.

This **Postgraduate Certificate in Therapeutic Apheresis** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ◆ The development of case studies presented by experts in Transfusion Medicine, specialized in Therapeutic Apheresis
- ◆ 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
- ◆ Practical exercises where the self-assessment process can be carried out to improve learning
- ◆ With a special emphasis on evidence-based medicine and research methodologies in the field of Transfusion Medicine
- ◆ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ◆ The availability of access to content from any fixed or portable device with an Internet connection



*TECH will allow you to participate in a complementary Masterclass, developed by an internationally renowned expert in Transfusion Medicine. A future investment for your career!"*

“

*You will get to know the apheresis technique in depth, its purpose and its usefulness in clinical practice, with its different clinical indications, improving the diagnosis of your patients”*

*Balance this program with your professional and personal life, it is 100% online!*

*You will learn which patients can benefit from Therapeutic Apheresis taking into account side effects and complications.*

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.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive education programmed to learn in real situations.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the course. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned and experienced experts.



# 02 Objectives

The purpose of this Postgraduate Certificate is for students to achieve the proposed objectives, in order to broaden their knowledge in therapeutic apheresis, a new technique of Transfusion Medicine indicated for specific cases. To this end, a team of medical professionals has shared its knowledge and experience in the development of the points of this syllabus, which will drive the professional from an innovative approach, with full specialization for the achievement of their professional goal thanks to a quality content. Therefore, students are well on their way to excellence in their daily medical work in the field of blood transfusions through the apheresis technique, knowing how to proceed according to the case, always from the contrasted scientific approach.





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*It is time for you to invest in yourself and your future, it is time for you to specialize with a program like this one offered by TECH”*



## General Objectives

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- ◆ Know everything about the process of blood donation and blood components
- ◆ Understand hemovigilance as a transversal process involving the entire transfusion chain, from donor to patient



*You will have a thorough knowledge of the legislation and quality standards that concern blood transfusion procedures”*





## Specific Objectives

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- ◆ Know the apheresis technique, its purpose and usefulness in clinical practice, with its different clinical indications Learn to perform the procedure or at least know which patients can benefit from this procedure taking into account side effects and complications.
- ◆ Be familiar with the legislation and quality standards that apply to this type of procedure

# 03

## Course Management

TECH counts on prestigious experts in the medical field of hematology so that the student acquires a solid knowledge in the specialty of Transfusion Medicine focused on Therapeutic Apheresis, guided by true professionals in the field. Therefore, this Postgraduate Certificate has a highly qualified teaching staff, whose extensive experience in this medical field brings quality to the program, thereby providing the student with the best tools for the development of their skills during the program. In this way, the future professionals have the guarantees they require to specialize with the best and boost their academic career in an innovative and developing sector.





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*Specialists in hematology and hemotherapy will give you the keys to master therapeutic apheresis with success and rigor”*

## International Guest Director

Dr. Aaron Tobian is one of the great international references in the area of blood transfusion, being **director of Transfusion Medicine at the Johns Hopkins Hospital**. He is also Associate Director of Medical Affairs in the Pathology Department of the same clinical center.

In the academic field, Dr. Tobian has **published more than 250 scientific articles related to Transfusion Medicine** in the most prestigious journals, as a result of his global studies on diseases such as HIV.

In this sense, he also develops an important work as a member of several editorial boards. Therefore, he is **associate editor of the Journal of Clinical Apheresis**, as well as being the editor-in-chief and founder of the Transfusion News portal, a reference in the dissemination of news on Transfusion Medicine.

All this, combined with his teaching work, which he develops in prestigious centers, being professor of **Pathology, Oncology and Epidemiology** at the Johns Hopkins University School of Medicine and at the Bloomberg School of Public Health.



## Dr. Tobian, Aaron

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- ◆ Director of Transfusion Medicine at The Johns Hopkins Hospital, Baltimore, United States
- ◆ Associate Director of Clinical Affairs in the Pathology area of The Johns Hopkins Hospital
- ◆ Doctor of Medicine by the Case Western Reserve University
- ◆ Graduate in Medicine by the Case Western Reserve University
- ◆ Professor of Pathology, Medicine, Oncology and Epidemiology at the Johns Hopkins University School of Medicine
- ◆ Associate Editor of the Journal of Clinical Apheresis
- ◆ Editor-in-Chief and founding member of the website Transfusion News
- ◆ Editorial member of the Transfusion journal

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

## Management



### Dr. Alcaraz Rubio, Jesús

- ◆ Specialist in Hematology and Expert in Regenerative Therapy
- ◆ Co-director of the Regenerative Therapy Unit of the Vithas Madrid La Milagrosa University Hospital
- ◆ Medical Specialist in Hematology and Hemotherapy at the Quirónsalud de Murcia Hospital
- ◆ Medical Specialist in Hematology and Hemotherapy at the Mesa del Castillo de Murcia Hospital
- ◆ Medical Specialist in Hematology and Hemotherapy at the Policlínico Virgen de Alcázar
- ◆ Medical Specialist in Hematology and Hemotherapy at Milenium Medical Center
- ◆ Lecturer in university studies and Medical courses
- ◆ National XXI Century Medicine Award in Hematology





# 04

## Structure and Content

The structure of the contents of this Postgraduate Certificate has been designed based on the knowledge of Transfusion Medicine focused on Therapeutic Apheresis, in order for the professional to delve and update their knowledge in this technique, specializing successfully and rigorously. In this way, the teaching team of this program has developed a syllabus whose content offers a broad perspective of everything involved in this blood transfusion procedure, its complications and adverse effects, as well as the indications to carry it out. In this way, the student will acquire the skills to develop professionally in this area of medicine with confidence and guarantee, thanks to a quality content and the best teaching methodology.





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*In this TECH Postgraduate Certificate you will learn more about the complications and adverse effects related to the apheresis technique”*

## Module 1. Therapeutic Apheresis

- 1.1. Apheresis Techniques
  - 1.1.1. Techniques and Types of Replacement
  - 1.1.2. Apheresis in Pediatrics
- 1.2. Complications and Adverse Effects:
  - 1.2.1. Complications Related to the Technique
  - 1.2.2. Adverse Effects Related to the Anticoagulant Used and Venous Accesses
  - 1.2.3. Adverse Effects Related to the Replenishment Volume
- 1.3. General Apheresis Procedure
  - 1.3.1. Types of Venous Access
- 1.4. Patient Assessment for Apheresis
  - 1.4.1. Donor/Patient Assessment
  - 1.4.2. Informed Consent
- 1.5. Therapeutic Apheresis in Hematology: Progenitor Transplantation
  - 1.5.1. Apheresis for Hematopoietic Progenitor Donation, for Autologous and Allogeneic Transplantation
  - 1.5.2. Donor Lymphocyte Apheresis
- 1.6. Therapeutic Apheresis in Hematology: Plasma Exchange
  - 1.6.1. Thrombotic Thrombocytopenic Purpura
- 1.7. Therapeutic Apheresis in Hematology: Other Situations
  - 1.7.1. Erythroapheresis
  - 1.7.2. Leukoapheresis
  - 1.7.3. Platelet Apheresis
- 1.8. Therapeutic Apheresis in Solid Organ Rejection
  - 1.8.1. Indications for Solid Organ Transplants
- 1.9. Therapeutic Apheresis in Neurological Pathology
  - 1.9.1. Indications in Neurological Pathology
- 1.10. Therapeutic Apheresis in Renal Pathology
  - 1.10.1. Indications in Neurological Pathology





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*You will learn all about apheresis for hematopoietic progenitor donation, for autologous and allogeneic transplantation”*

05

# Study Methodology

TECH is the world's first university to combine the **case study** methodology with **Relearning**, a 100% online learning system based on guided repetition.

This disruptive pedagogical strategy has been conceived to offer professionals the opportunity to update their knowledge and develop their skills in an intensive and rigorous way. A learning model that places students at the center of the educational process giving them the leading role, adapting to their needs and leaving aside more conventional methodologies.



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*TECH will prepare you to face new challenges in uncertain environments and achieve success in your career”*

## The student: the priority of all TECH programs

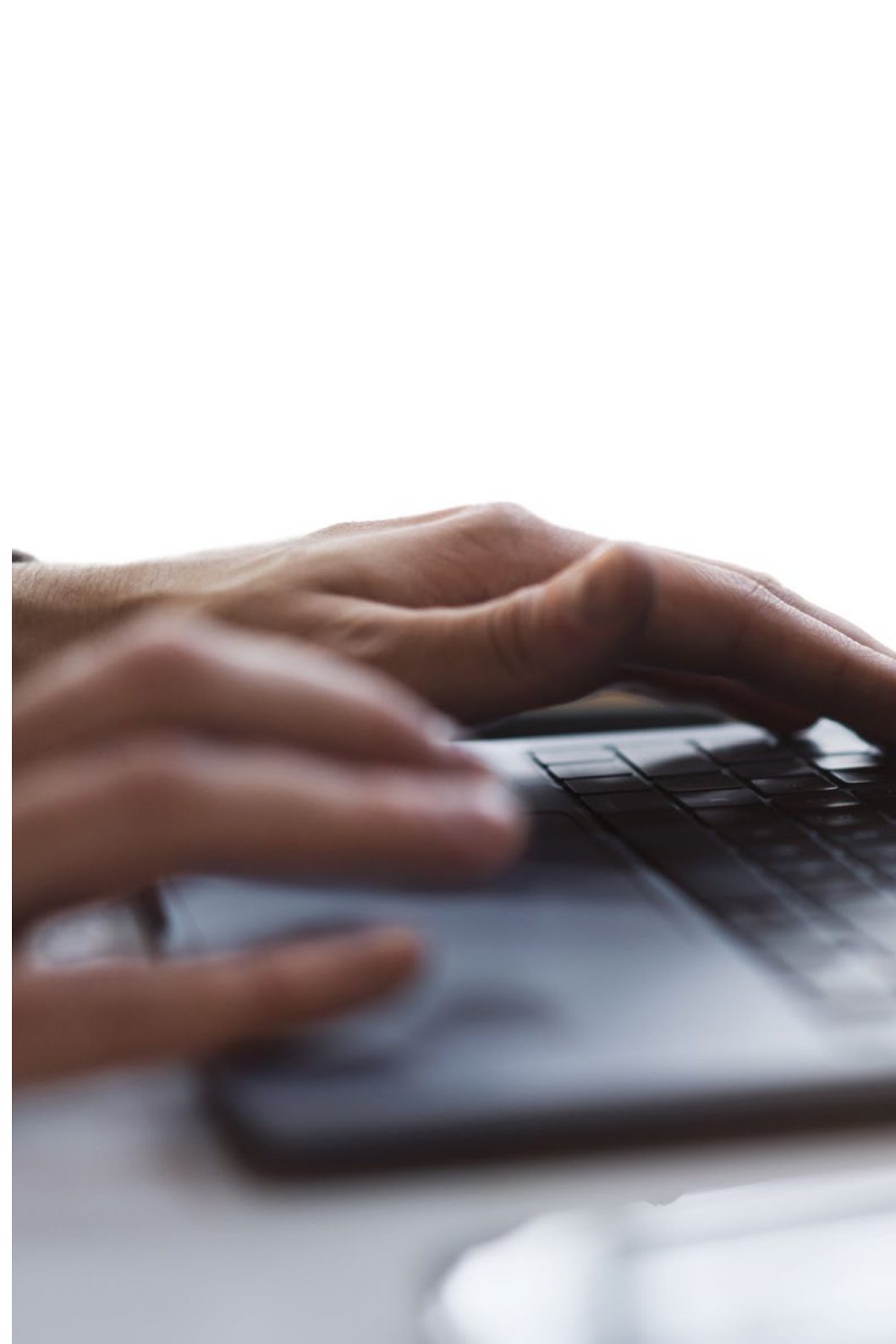
In TECH's study methodology, the student is the main protagonist.

The teaching tools of each program have been selected taking into account the demands of time, availability and academic rigor that, today, not only students demand but also the most competitive positions in the market.

With TECH's asynchronous educational model, it is students who choose the time they dedicate to study, how they decide to establish their routines, and all this from the comfort of the electronic device of their choice. The student will not have to participate in live classes, which in many cases they will not be able to attend. The learning activities will be done when it is convenient for them. They can always decide when and from where they want to study.

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*At TECH you will NOT have live classes  
(which you might not be able to attend)”*





### The most comprehensive study plans at the international level

TECH is distinguished by offering the most complete academic itineraries on the university scene. This comprehensiveness is achieved through the creation of syllabi that not only cover the essential knowledge, but also the most recent innovations in each area.

By being constantly up to date, these programs allow students to keep up with market changes and acquire the skills most valued by employers. In this way, those who complete their studies at TECH receive a comprehensive education that provides them with a notable competitive advantage to further their careers.

And what's more, they will be able to do so from any device, pc, tablet or smartphone.

“*TECH's model is asynchronous, so it allows you to study with your pc, tablet or your smartphone wherever you want, whenever you want and for as long as you want*”

## Case Studies and Case Method

The case method has been the learning system most used by the world's best business schools. Developed in 1912 so that law students would not only learn the law based on theoretical content, its function was also to present them with real complex situations. In this way, they could make informed decisions and value judgments about how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

With this teaching model, it is students themselves who build their professional competence through strategies such as Learning by Doing or Design Thinking, used by other renowned institutions such as Yale or Stanford.

This action-oriented method will be applied throughout the entire academic itinerary that the student undertakes with TECH. Students will be confronted with multiple real-life situations and will have to integrate knowledge, research, discuss and defend their ideas and decisions. All this with the premise of answering the question of how they would act when facing specific events of complexity in their daily work.



## Relearning Methodology

At TECH, case studies are enhanced with the best 100% online teaching method: Relearning.

This method breaks with traditional teaching techniques to put the student at the center of the equation, providing the best content in different formats. In this way, it manages to review and reiterate the key concepts of each subject and learn to apply them in a real context.

In the same line, and according to multiple scientific researches, reiteration is the best way to learn. For this reason, TECH offers between 8 and 16 repetitions of each key concept within the same lesson, presented in a different way, with the objective of ensuring that the knowledge is completely consolidated during the study process.

*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.*



## A 100% online Virtual Campus with the best teaching resources

In order to apply its methodology effectively, TECH focuses on providing graduates with teaching materials in different formats: texts, interactive videos, illustrations and knowledge maps, among others. All of them are designed by qualified teachers who focus their work on combining real cases with the resolution of complex situations through simulation, the study of contexts applied to each professional career and learning based on repetition, through audios, presentations, animations, images, etc.

The latest scientific evidence in the field of Neuroscience points to the importance of taking into account the place and context where the content is accessed before starting a new learning process. Being able to adjust these variables in a personalized way helps people to remember and store knowledge in the hippocampus to retain it in the long term. This is a model called Neurocognitive context-dependent e-learning that is consciously applied in this university qualification.

In order to facilitate tutor-student contact as much as possible, you will have a wide range of communication possibilities, both in real time and delayed (internal messaging, telephone answering service, email contact with the technical secretary, chat and videoconferences).

Likewise, this very complete Virtual Campus will allow TECH students to organize their study schedules according to their personal availability or work obligations. In this way, they will have global control of the academic content and teaching tools, based on their fast-paced professional update.



*The online study mode of this program will allow you to organize your time and learning pace, adapting it to your schedule”*

### 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 assess 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.

## The university methodology top-rated by its students

The results of this innovative teaching model can be seen in the overall satisfaction levels of TECH graduates.

The students' assessment of the quality of teaching, quality of materials, course structure and objectives is excellent. Not surprisingly, the institution became the best rated university by its students on the Trustpilot review platform, obtaining a 4.9 out of 5.

*Access the study contents from any device with an Internet connection (computer, tablet, smartphone) thanks to the fact that TECH is at the forefront of technology and teaching.*

*You will be able to learn with the advantages that come with having access to simulated learning environments and the learning by observation approach, that is, Learning from an expert.*



As such, the best educational materials, thoroughly prepared, will be available in this program:



#### 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.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



#### Practicing Skills and Abilities

You will carry out activities to develop specific competencies and skills in each thematic field. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop within the framework of the globalization we live in.



#### Interactive Summaries

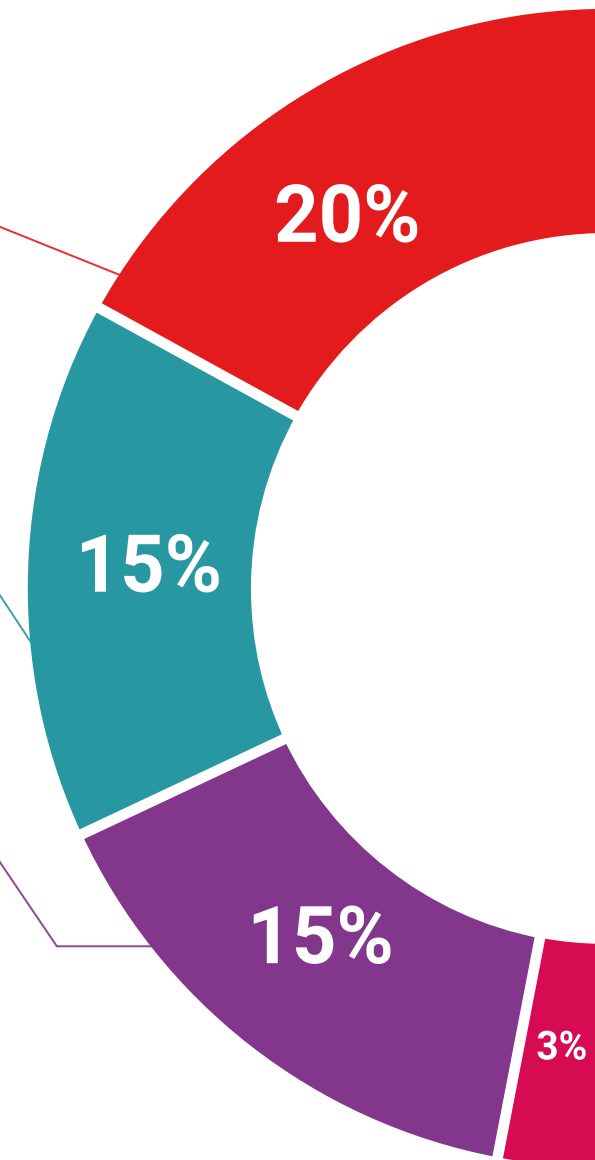
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

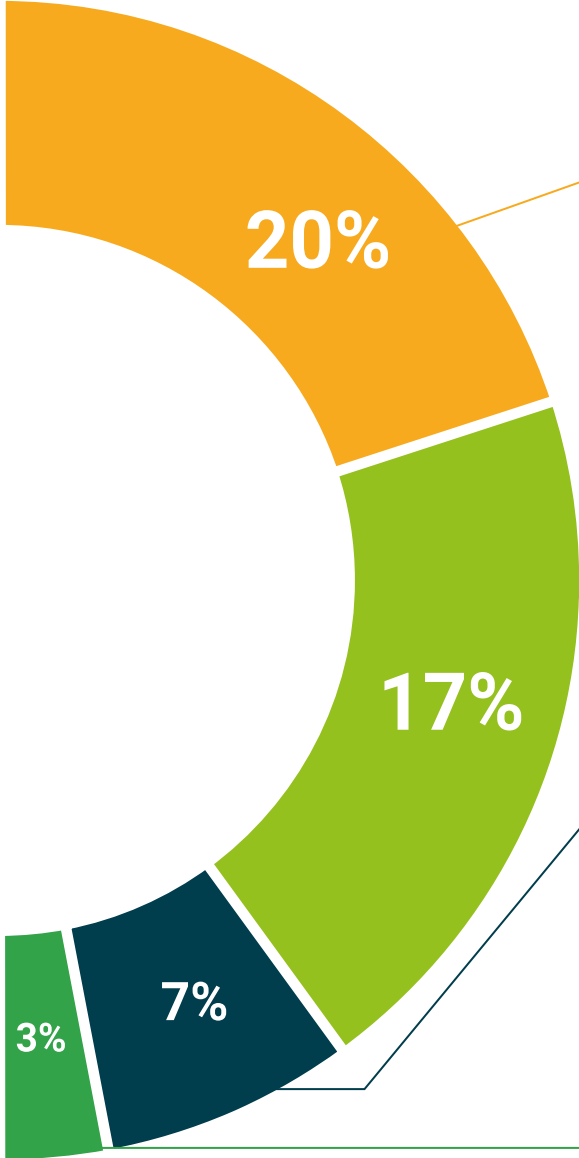
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### Additional Reading

Recent articles, consensus documents, international guides... In our virtual library you will have access to everything you need to complete your education.





**Case Studies**

Students will complete a selection of the best case studies in the field. Cases that are presented, analyzed, and supervised by the best specialists in the world.



**Testing & Retesting**

We periodically assess and re-assess your knowledge throughout the program. We do this on 3 of the 4 levels of Miller's Pyramid.



**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 for future difficult decisions.



**Quick Action Guides**

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



# 06 Certificate

The Postgraduate Certificate in Therapeutic Apheresis 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 private qualification will allow you to obtain a **Postgraduate Certificate in Therapeutic Apheresis** 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** private qualification 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 Therapeutic Apheresis**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



\*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.



## Postgraduate Certificate Therapeutic Apheresis

- » Modality: online
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- » Schedule: at your own pace
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