

# Postgraduate Certificate

## Age-Related Macular Degeneration (AMD)





## Postgraduate Certificate Age-Related Macular Degeneration (AMD)

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Credits: 5 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/medicine/postgraduate-certificate/age-related-macular-degeneration](http://www.techtute.com/us/medicine/postgraduate-certificate/age-related-macular-degeneration)

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# 01

# Introduction

Age-related macular degeneration (AMD) is one of the most frequent pathologies in the consultations of retinologists and ophthalmologists, so it is necessary to have a deep knowledge that allows them to make effective diagnoses and treatments. At TECH we want to train professionals in this field and, to this end, we have designed this Postgraduate Certificate in which all its aspects are explained, from a perfect exploration to the latest treatments that will come in the near future.







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*Ophthalmologists will find in this Postgraduate Certificate the perfect opportunity to increase their training and improve in the care of patients with age-related macular degeneration"*

The objective of this Postgraduate Certificate on Age-Related Macular Degeneration (AMD) is to train professionals in the field of ophthalmology and retinology in one of the main diseases they will encounter in their daily practice.

The genetics of AMD and the environmental factors that may influence its development are undoubtedly a very important point for the knowledge and first diagnosis of these patients. The perfect mastery of exploratory tests and, in particular, of Angio OCT and OCT, will be a differentiating point for the student in terms of diagnosis and better treatment.

Past, present, and future treatments are treated in this Postgraduate Certificate in detail, so that the student can deepen in their therapeutic possibilities. Thus, at the end of this Postgraduate Certificate, the student will have the ability to diagnose, analyze exploratory tests, classification, treatment, and follow-up of this type of diseases.

The training program has a teaching staff specialized in ocular pathology and surgery, and who contribute both their practical experience of their day to day in private practice, as well as their long experience of teaching at national and international level. In addition, it has the advantage of being a 100% online training, so the student can decide from where to study and at what time. This way, you will be able to flexibly self-direct your study hours.

This **Postgraduate Certificate on Age-Related Macular Degeneration (AMD)** contains the most complete and up-to-date educational program on the market. The most important features of the program include:

- ◆ The development of clinical cases presented by experts in ocular pathology and surgery.
- ◆ The graphic, schematic, and eminently practical contents with which they are created provide scientific and practical information on the disciplines that are essential for professional practice.
- ◆ The presentation of practical workshops on procedures and techniques.
- ◆ An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course.
- ◆ Action protocols and clinical practice guidelines, where the most important novelties in the specialty are disseminated.
- ◆ Theoretical lessons, questions to the expert, discussion forums on controversial topics and individual reflection papers.
- ◆ Special emphasis on evidence-based medicine and research methodologies.
- ◆ The availability of access to the contents from any fixed or portable device with Internet connection.



*This Postgraduate Certificate is the best option you can find to increase your knowledge in ocular disease and give a plus to your professional career"*

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*This Postgraduate Certificate is the best investment you can make in a training to update your knowledge in age-related macular degeneration"*

It includes in its teaching staff a team of medical professionals, who bring to this training the experience of their work, in addition to recognized specialists belonging to scientific societies of reference.

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 an immersive training experience designed to train for real-life situations.

The design of this program focuses on Problem Based Learning, by means of which the professional will have to try to solve the different situations of professional practice that will arise throughout the academic Postgraduate Certificate. For this purpose, you will have the help of an innovative interactive video system developed by renowned experts in age-related macular degeneration, with extensive teaching experience.

*This university 100% online course allow you to study from anywhere in the world. All you need is a computer or mobile device with an internet connection.*

*Our innovative teaching methodology will allow you to study as if you were dealing with real cases, and therefore increasing your training.*



02

# Objectives

The Postgraduate Certificate in Age-Related Macular Degeneration (AMD) is oriented to facilitate the performance of the professional dedicated to health with the latest advances and newest treatments in the sector.







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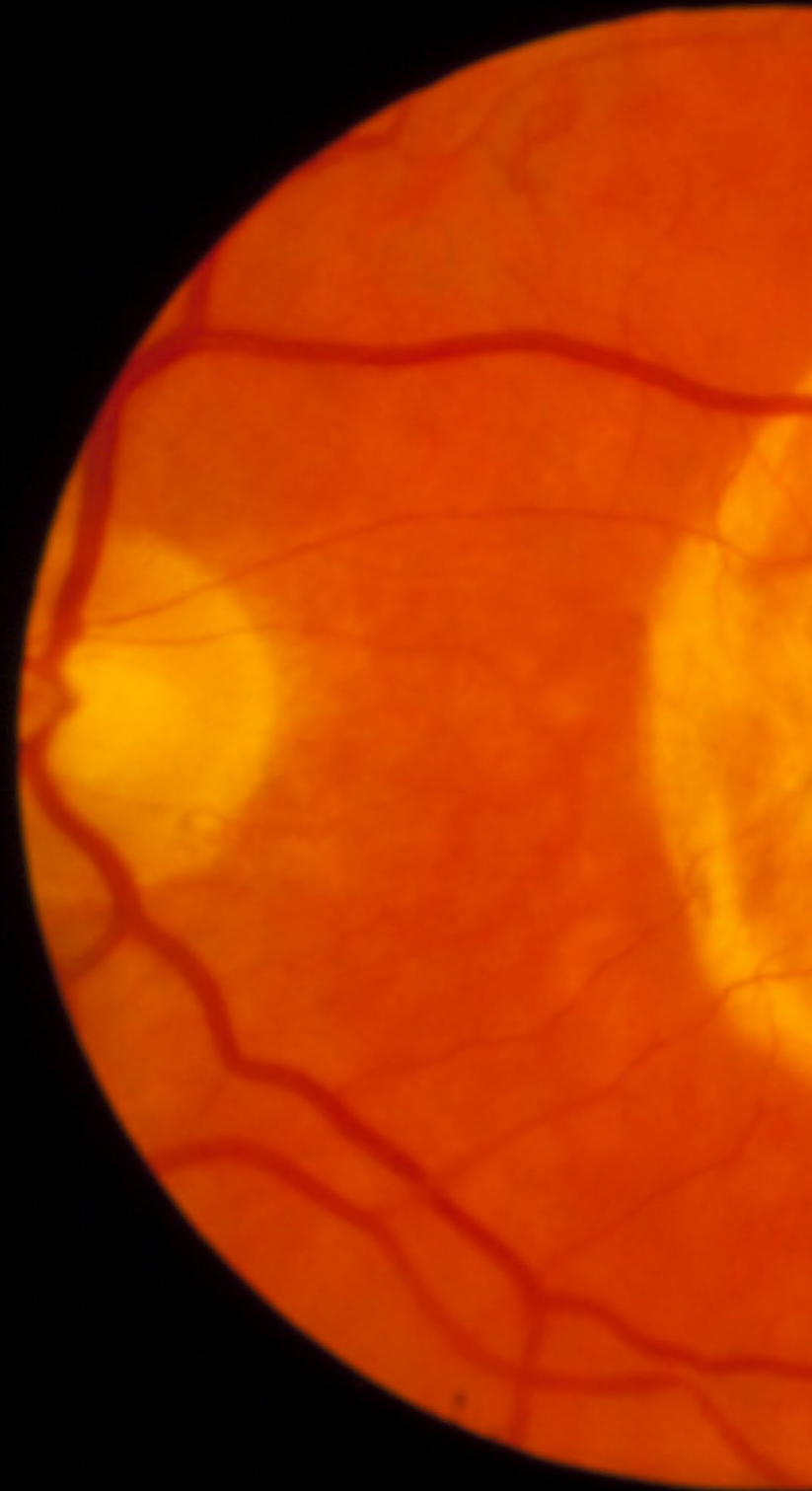
*This training will create a sense of confidence in daily practice and help you to grow professionally”*



## General Objectives

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- ◆ Deepen in a broad way all aspects related to age-related macular degeneration.





## Specific Objectives

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- ◆ Learn about the epidemiology and genetics of AMD.
- ◆ Gain a thorough understanding of the histopathology of AMD.
- ◆ Understand all aspects of clinical examination and consultation findings in AMD.
- ◆ Learn about everything related to OCT, AngioOCT, and AMD.
- ◆ Deepen your understanding of old and current classifications of AMD.
- ◆ Learn about each and every one of the treatments that have been applied and are currently being applied in AMD.
- ◆ Know how to apply the new treatments used in AMD.
- ◆ Understand the unique situations related to AMD.



*Our goal is to achieve academic excellence and to help you achieve it too"*



03

# Course Management

The creation of the materials has been carried out by a team of leading professionals in ophthalmology, who perform their professional activity in the main hospitals in the country, transferring to the program the experience gained in their jobs throughout their careers.







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*The best professionals in this area have joined forces to offer you the most specialised and up-to-date knowledge in the field"*

## International Guest Director

Dr. Gennady Landa is a leading vitreoretinal specialist, recognized for his skill in the surgical and medical treatment of a wide range of diseases affecting the back of the eye. In fact, his expertise encompasses conditions such as Macular Degeneration, Diabetic Retinopathy, Retinal Detachment and various Hereditary and Inflammatory Retinal Diseases. With a particular focus on macular, retinal and vitreous surgery, he has contributed to the advancement of treatments such as laser surgery, intraocular injections and vitrectomy techniques.

Throughout his career, he has played key roles in some of the most prestigious ophthalmological institutions in the United States. In this way, he has been Vice Chair of the Ophthalmology Clinic at Mount Sinai Hospital, as well as Director of the Retina Department at the New York Eye and Ear Hospital (NYEEL), one of the oldest and most renowned ophthalmology hospitals in the country. At the same center, he has also held the positions of Associate Director of the Vitreoretinal Fellowship and Medical Director of the Tribeca Office.

He has also been dedicated to exploring new ways of treatment and prevention of Age-Related Macular Degeneration and other Ocular Diseases. He has published more than 35 scientific articles in peer-reviewed journals and chapters in specialized books, contributing to the development of new retinal imaging techniques.

Internationally, he has been recognized for his contributions to Ophthalmology, receiving a prestigious Honor Award from the American Society of Retina Specialists. This recognition has underscored his leadership in the field of retina, both in clinical practice and research. Likewise, his participation in international congresses and scientific meetings has consolidated his reputation as a globally renowned expert.



## Dr. Landa, Gennady

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- Vice Chair of the Ophthalmology Clinic at Mount Sinai Hospital, New York, United States
- Director of the Retina Service at the New York Eye and Ear Hospital (NYEEH)
- Associate Director of the Vitreoretinal Fellowship at the New York Eye and Ear Hospital (NYEEH)
- Medical Director of the Tribeca Office at New York Eye and Ear Hospital (NYEEH)
- Retina Specialist at the New York Eye and Ear Hospital (NYEEH)
- Doctor of Medicine from the Israel Technion Institute of Technology
- Honorary Award from the American Society of Retinal Specialists

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

## Management



### Dr. Armadá Maresca, Félix

- ♦ Head of Ophthalmology Service, La Paz University Hospital, Madrid.
- ♦ Doctor of Medicine. Autonomous University of Madrid.
- ♦ Degree in Medicine. Alcalá de Henares University.
- ♦ Director of the Department of Ophthalmology at the San Francisco de Asís University Hospital in Madrid.
- ♦ Certified Ophthalmic Photographer, University of Wisconsin, Madison, USA.
- ♦ The Chalfont Project, Chalfont St Giles, HP8 4XU United Kingdom. Year 2002
- ♦ ESADE - Course in Strategic Management of Clinical Services. 2011.
- ♦ IESE - VISIONA course, clinical management in ophthalmology. 2020.
- ♦ Professor of Medicine at the Alfonso X el sabio University.
- ♦ Lecturer in the Master "Expert in Health Management in Ophthalmology" of the Ministry of Health of the Community of Madrid. 2020.
- ♦ Member of the Madrid Society of Ophthalmology.
- ♦ External Collaborator of Several Companies in the Medical Sector.



## Professors

### **Dr. Arias Barquet, Luis**

- ◆ Head of the Retina Section at Bellvitge University Hospital (L'Hospitalet de Llobregat, Barcelona). Since 2012
- ◆ Degree in Medicine and Surgery from the University of Barcelona, 1986 - 1992)..
- ◆ Director of the Ophthalmology Clinic Dr. Lluís Arias (Vilanova i la Geltrú, Barcelona. Since 2010.
- ◆ Collaborating Professor at the University of Madrid.
- ◆ President of the Spanish Society of Retina and Vitreous (SERV).
- ◆ Outstanding Award in her PhD. Autonomous University of Barcelona (2007).
- ◆ Member of the Following Ophthalmological Societies: American Academy of Ophthalmology, EURETINA, Spanish Society of Ophthalmology, Spanish Society of Retina and Vitreous and Catalan Society of Ophthalmology
- ◆ Member of: RETICS OFTARED RD12/0034/0015 Ocular diseases "Prevention, early detection and treatment of prevalent degenerative and chronic ocular pathology". Carlos III Health Institute. Ministry of Economy and Competitiveness. Gobierno de España.



04

# Structure and Content

The structure of the syllabus has been designed by a team of professionals who are knowledgeable regarding the implications of medical training in the approach to patients, aware of the relevance of current training and committed to quality teaching through new educational technologies.







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*This Postgraduate Certificate contains the most complete and up-to-date scientific program on the market”*



## Module 1. Muscular Degeneration Related to Aging (AMD)

- 1.1. Epidemiology of AMD.
  - 1.1.1. Introduction.
  - 1.1.2. International Classification Systems, Classification History.
  - 1.1.3. Incidence.
  - 1.1.4. Prevalence.
  - 1.1.5. Etiopathogenesis.
  - 1.1.6. Risk Factors.
- 1.2. Genetics of Age-related Macular Degeneration.
  - 1.2.1. Introduction.
  - 1.2.2. Genetic Studies Associated with AMD.
  - 1.2.3. Complement H Factors and Loci Involved in AMD.
  - 1.2.4. Other Factors Implicated in AMD.
- 1.3. Histopathology of AMD.
  - 1.3.1. Ocular Ageing, Changes in the Various Retinal Structures.
  - 1.3.2. Histological Changes in the Developmental Form of AMD.
  - 1.3.3. Changes in the Various Retinal Structures and Pigmented Epithelium.
  - 1.3.4. Drusas
  - 1.3.5. Incipient Atrophy
  - 1.3.6. Geographical Atrophy
  - 1.3.7. Neovascular Age-related Macular Degeneration.
- 1.4. Clinical and Angiographic Findings in AMD. AFG and ICG..
  - 1.4.1. Clinical Signs and Symptoms of AMD.
  - 1.4.2. Drusas
  - 1.4.3. Pigment Changes
  - 1.4.4. Geographical Atrophy.
  - 1.4.5. Pigment Epithelium Detachment DEP.
  - 1.4.6. Subretinal Neovascular Complexes.
  - 1.4.7. Disciform Shapes.
  - 1.4.8. Angiographic Study with Fluorescein and Indocyanine Green. Current Applications of the Technique.





- 1.5. Optical Coherence Tomography and AngioOCT in Age-related Macular Degeneration.
  - 1.5.1. OCT and AngioOCT as a Basis for Disease Monitoring.
  - 1.5.2. Initial Information on the Technology.
  - 1.5.3. OCT in Early Stages of the Disease.
  - 1.5.4. OCT and AngioOCT, in Geographic Atrophic Forms of the Disease.
  - 1.5.5. OCT and AngioOCT, in Quiescent Forms.
  - 1.5.6. Exudative AMD and its Examination with OCT and AngioOCT.
  - 1.5.7. OCT in Retinal Pigment Epithelial Detachments.
  - 1.5.8. OCT and AngioOCT, in Other Forms of Presentation of AMD.
  - 1.5.9. Importance of OCT in Clinical Trials for Drug Development and Drug Comparisons in AMD.
  - 1.5.10. Prognostic Factors of OCT and AngioOCT in AMD. Biomarkers
- 1.6. Updated Classification of AMD and its Correspondence with Previous Classifications.
  - 1.6.1. Type 1 Neovascularisation.
  - 1.6.2. Type 2 Neovascularisation.
  - 1.6.3. Type 3 Neovascularisation.
  - 1.6.4. Type 1 Aneurysmal Dilatations or Polypoidal Choroidal Vasculopathy.
- 1.7. Treatment of Atrophic and Degenerative Forms of AMD.
  - 1.7.1. Introduction.
  - 1.7.2. Diet and Nutritional Supplements in AMD Prevention.
  - 1.7.3. The Role of Antioxidants in the Evolutionary Control of the Disease.
  - 1.7.4. What Would be the Ideal Business Combination?
  - 1.7.5. Role of Sun-Protection in AMD.
- 1.8. Disused Treatments for Neovascular Forms of AMD.
  - 1.8.1. Laser Treatment in AMD, Historical Implications.
  - 1.8.2. Types of Lasers for Retinal Treatment.
  - 1.8.3. Mechanism of Action.
  - 1.8.4. Historical Results and Recurrence Rate.
  - 1.8.5. Indications and Instructions for Use.
  - 1.8.6. Complications
  - 1.8.7. Transpupillary Thermotherapy as a Treatment for AMD.
  - 1.8.8. Epiretinal Brachytherapy for the Treatment of AMD.
- 1.9. Current Treatments for Neovascular Forms of AMD.
  - 1.9.1. Photodynamic Therapy for Some Cases of AMD. Historical Recollections of Their Use.
  - 1.9.2. Macugen
  - 1.9.3. Ranibizumab
  - 1.9.4. Bevacizumab.
  - 1.9.5. Aflibercept.
  - 1.9.6. Brolucizumab.
  - 1.9.7. Role of Corticosteroids for some types of AMD.
- 1.10. New Treatments for Exudative AMD.
- 1.11. Combined Therapies for AMD.
- 1.12. Systemic Impact of Intravitreal Medications for AMD.
  - 1.12.1. Cardiovascular Risk Factors in AMD.
  - 1.12.2. Half-life of Different Intravitreal Medications in AMD.
  - 1.12.3. Adverse Effects in Major Studies of Intravitreal Medications.



*A unique, key, and decisive training experience to boost your professional development”*

05

# Methodology

This training program provides you with a different way of learning. Our methodology follows a cyclical learning process: ***Re-learning***.

This teaching system is used 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.



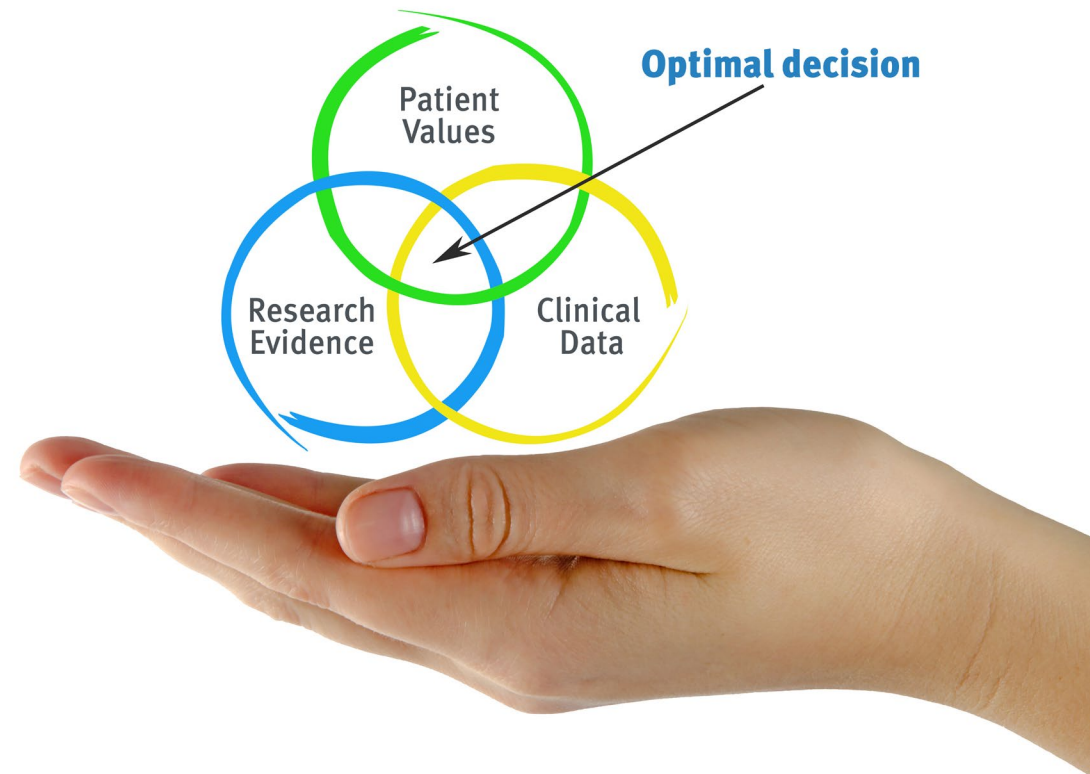
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*Discover Re-learning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## At TECH we use the Case Method

In a given situation, what would you do? Throughout the program you will be presented with multiple simulated clinical cases based on real patients, where you will have to investigate, establish hypotheses and, finally, resolve the situation. There is abundant scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

*With TECH you can 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 potential 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 professional medical 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 grasp concepts, but also develop their mental capacity by evaluating real situations and applying their knowledge.
2. The learning process has a clear focus on 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.



## Re-Learning Methodology

At TECH we enhance the Harvard case method with the best 100% online teaching methodology available: Re-learning.

Our 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, which represent a real revolution with respect to simply studying and analyzing cases.



*The physician will learn through real cases and by solving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.*



At the forefront of world teaching, the Re-learning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best Spanish-speaking online university (Columbia University).

With this methodology we have trained more than 250,000 physicians with unprecedented success, in all clinical specialties regardless of the surgical load. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

*Re-learning 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 (we 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.



In this program you will have access to the best educational material, prepared with you 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.

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.



### Latest Techniques and Procedures on Video

We introduce you to the latest techniques, to the latest educational advances, to the forefront of current medical techniques. All this, in first person, 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

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 unique multimedia content presentation training system 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 training.







**Expert-Led Case Studies and Case Analysis**

Effective learning ought to be contextual. Therefore, we will present you with real case developments in which the expert will guide you through focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



**Testing & Re-testing**

We periodically evaluate and re-evaluate your knowledge throughout the program, through assessment and self-assessment activities and exercises: so that you can see how you are achieving your goals.



**Classes**

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

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



**Quick Action Guides**

We offer you the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help you progress in your learning.



# 06 Certificate

The Postgraduate Certificate in Age-Related Macular Degeneration (AMD) guarantees you, in addition to the most rigorous and up-to-date training, access to a Postgraduate Certificate issued by TECH Global University.



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*Add to your CV a Postgraduate Certificate in Age-Related Macular Degeneration (AMD) and become a highly competitive professional"*



This program will allow you to obtain your **Postgraduate Certificate in Age-Related Macular Degeneration (AMD)** endorsed by **TECH Global University**, the world's largest online university.

**TECH Global University** is an official European University publicly recognized by the Government of Andorra ([official bulletin](#)). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Certificate in Age-Related Macular Degeneration (AMD)**

Modality: **online**

Duration: **6 weeks**

Accreditation: **5 ECTS**





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



## Postgraduate Certificate Age-Related Macular Degeneration (AMD)

- » Modality: online
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- » Certificate: TECH Global University
- » Credits: 5 ECTS
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# Postgraduate Certificate Age-Related Macular Degeneration (AMD)

