

Autonomous
University of
Barcelona
Postgraduate School



Continuing Education in Ophthalmology Programme 2027

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Presentation by the Director

As Director of the Instituto de Microcirugía Ocular (IMO) Grupo Miranza in Barcelona, I am pleased to present this Continuing Education in Ophthalmology Program. It describes the different masters and postgraduate courses organized by the Autonomous University of Barcelona and the IMO Foundation.

As you know, the field of Ophthalmology has made significant progress in recent years, with the constant appearance of new technologies that perfect diagnostic methods and treatments, whether medical or surgical. Only constant research and continuous medical training can lead us to improve our quality of care.

The Instituto de Microcirugía Ocular (IMO) Grupo Miranza was founded by a group of ophthalmologists in their different specialties who, after several years working together, decided to join forces to achieve greater progress and the highest level of technical equipment in their healthcare activities. The aim of this Continuing Education Program is to train ophthalmology professionals and graduates in nursing, optics and optometry, with some previous experience, who are interested in updating their knowledge of new technologies and their application in Ophthalmology.

Dr. Rafael Navarro
Medical Director

Master in Orbital and Ophthalmic Plastic Surgery

Continuing Education in Ophthalmology Programme

The training will take place onsite, at the Instituto de Microcirugía Ocular (IMO) Grupo Miranza of Barcelona, located at Josep Maria Lladó street, number 3, of Barcelona (Spain).

Organized by

IMO Grupo Miranza Barcelona

Course objective

This program is aimed at ophthalmologists with some previous experience and interested in acquiring specialized knowledge in Orbital and Ophthalmic Plastic Surgery.

The selected students will participate in both theoretical and practical aspects of daily practice. They will also have 90 practicums in the Wetlab included in the training program (additional practicums will have a supplementary charge).

Lecturers

Dr Joan Oliveres

Dr Rebeca Roses

Dr Maravillas Abia

Dr Miguel González Candial

ECTS credits

90 ECTS

Assessment method

The evaluation of the students will be done on a continuous basis, by means of a rotation established with each of the specialists in the department. Attendance and participation in the drafting, review and/or monitoring of clinical guidelines are compulsory.

Start date

10 January 2027

End date

22 December 2027

Course fees

The registration fee is €10.525. It must be paid by bank transfer.

General principles:

- Patient examination in consultation rooms.
- Performance of supplementary tests.
- Assistance in surgeries.
- Emergency care
- Participation in research work.
- Presence and participation in teaching activities.
- Participation in all training sessions offered by Grupo Miranza for its specialists.
- Participation in the preparation and monitoring of clinical guidelines.

Conjunctiva and surface pathology:

- Management of conjunctival diseases and chalazion: pterygium, symblepharon, chalazion, ocular rosacea, conjunctival tumours, etc.
- Clinical presentation of palpebral lesions: malignant and benign tumours.

Introduction to the methodology of Research

- Introduction to the methodology of research
- Drafting of research protocols
- Institutions and documentation for the Presentation of projects research to ethics committees and regulators
- Analysis of results and dissemination

Orbitofacial trauma:

- Management of ocular adnexal trauma: general principles, repair of eyelid damage and repair of canthal trauma.
- Study and management of thermal, chemical and radiation burns, including acute management, intermediate treatment and reconstruction of eyelids and appendages, and study of possible complications.
- Orbital and periorbital fractures: imaging studies, facial fractures, lateral orbital fractures, supraorbital fractures, etc.
- Fractures of the orbital floor: study of the clinically relevant structures, diagnosis, associated damage, etc.

Eyelid malpositions:

- Management of entropion, ectropion, trichiasis, distichiasis, ptosis, lagophthalmos and retraction, tissue loss, etc.
- Study and surgery of eyebrow ptosis and blepharoplasty: assessment, correction surgery, blepharoplasty techniques, etc.
- Study and management of entropion and trichiasis: classification, principles of surgical correction, treatment, etc.
- Classification and correction of ectropion: mechanical, cicatricial, atonic, in anophthalmic cavity, etc.
- Classification of palpebral ptosis: classification and preoperative assessment, principles of surgical correction, etc.
- Management of eyelid retraction surgery in patients with Graves' disease and other causes of eyelid retraction.
- Study and current techniques for the treatment of blepharospasm and related conditions.
- Treatment and surgical techniques, etc.
- Diagnosis and management of facial paralysis: differential diagnoses, clinical examination, etc.

Eyelid reconstruction:

- Surgical reconstruction of partial and total lower and upper eyelid defects.
- Reconstruction of canthal defects: medial canthus, lateral canthus and late reconstruction of canthal defects.
- Alternative treatments for periocular neoplasms, chemotherapy, cryotherapy, etc.

Orbital Surgery:

- Evaluation and spectrum of orbital diseases.
- Exploration and surgical study of orbit.

- Optic nerve sheath decompression techniques.
- Craniofacial and periorbital surgery.
- Enucleation surgery, evisceration and study of orbital implants.
- Treatment of complications.
- Exenteration surgery: indications, surgical techniques, etc.
- Management of anophthalmia cavity deformities including enophthalmos and contraction.
- Care and management of ocular prostheses.
- Evaluation of the lacrimal system and clinical diagnosis.
- Evaluation of the drainage of the lacrimal system, lacrimal irrigation, different tests used for diagnosis and diagnostic imaging techniques.
- Tear problems in pediatrics: diagnosis, treatment, etc.
- Surgery of the lacrimal system: techniques and results. Dacryocystorhinostomy techniques, treatment of canalicular anomalies, surgery for congenital obstruction of the lacrimal-nasal duct.

Master in Cornea and Refractive Surgery

Continuing Education in Ophthalmology Program

The training will take place onsite, at the Instituto de Microcirugía Ocular (IMO) Grupo Miranza of Barcelona, located at Josep Maria Lladó street, number 3, of Barcelona (Spain).

Organized by

IMO Grupo Miranza Barcelona

Course objective

This program is aimed at ophthalmologists with some previous experience and interested in acquiring specialized knowledge in Cornea and Refractive Surgery.

The selected students will participate in both theoretical and practical aspects of daily practice. They will also have 90 practicums in the Wetlab included in the training program (additional practicums will have a supplementary charge).

Lecturers

Dr Carlos Martín

Dr Daniel Elies

Dr Oscar Gris

Dr José L. Güell

ECTS credits

90 ECTS

Assessment method

The evaluation of the students will be done on a continuous basis, by means of a rotation established with each of the specialists in the department. Attendance and participation in the drafting, review and/or monitoring of clinical guidelines are compulsory.

Start date

10 January 2027

End date

22 December 2027

Course fees

The registration fee is € 10.525. It must be paid by bank transfer.

General principles:

- Patient examination in consultation rooms.
- Performance of supplementary tests.
- Assistance in surgeries.
- Emergency care
- Participation in research work.
- Presence and participation in teaching activities.
- Participation in all training sessions offered by Grupo Miranza for its specialists.
- Participation in the preparation and monitoring of clinical guidelines.

Introduction to the methodology of Research

- Introduction to the methodology of research
- Drafting of research protocols
- Institutions and documentation for the Presentation of projects research to ethics committees and regulators
- Analysis of results and dissemination

Cornea:

- Basic sciences.
- Physiology, morphology and pathological response, immunology, microbiology, cell culture, complementary examinations (impression cytology, specular microscopy, anterior OCT, ORA, pachymetry, topography, etc.).
- Quality of vision OQAS
- Tear assessment test

Cornea, clinical aspects. Ocular surface surgery:

- Clinical aspects: infectious diseases, immunological diseases, corneal manifestations of systemic and nutritional diseases, dystrophies and degenerations, congenital and metabolic diseases, oncology.
- Corneal trauma: diagnosis, monitoring and treatment.
- Surgical techniques: indications, complications and results.
- Conjunctival surgery.

- Sclerocorneal limbus surgery.
- Corneal surgery: lamellar and penetrating keratoplasty, endothelial keratoplasty, corneal cross-linking, amniotic membrane transplant.
- Related palpebral surgery.
- Femtosecond laser-assisted corneal surgery.

Dry eye:

- Assessment and treatment methods: clinical aspects.
- Diagnostic methods (Schimer test, Rose Bengal/Lysamine Green and Osmolarity test).
- Topical medical treatment and oral medical treatment.
- Surgical procedures.

Refractive surgery:

- Assessment methods: basic principles: refraction (objective, automatic subjective).
- Corneal topography methods (projection and elevation), pachymetry, confocal microscopy, optical quality assessment methods (OQCAS, wavefront, OCT, other methods).
- Visual acuity, age, pachymetry, topography, aberrometry, pupillometry, refraction.

Corneal Refractive Surgery:

- Basic principles and surgical techniques: corneal refractive surgery: corneal biomechanics, morphological response, laser technology applied to the cornea.
- Incisional surgery (astigmatism), lamellar surgery (LASIK), PRK, intracorneal rings, intracorneal lenses.
- Indications and results.

Intraocular Refractive Surgery:

- Basic principles: refraction (objective, automatic subjective).
- Corneal topography methods (projection and elevation), pachymetry, confocal microscopy, optical quality assessment methods

(OQAS, wavefront, OCT and other methods).

- Surgical techniques:
 - Crystalline lens surgery
 - Indications and results
- Crystalline lens surgery, phakic anterior and posterior chamber lenses
- Indications and results.

Ocular Surface Tumors:

- Methods of diagnosis, follow-up and medical and surgical treatment.
- Indications and results.
- Histochemical and other non-invasive assessment tests.

Master in Strabismus and Pediatric Ophthalmology

Continuing Education in Ophthalmology Program

The training will take place onsite, at the Instituto de Microcirugía Ocular (IMO) Grupo Miranza of Barcelona, located at Josep Maria Lladó street, number 3, of Barcelona (Spain).

Organized by

IMO Grupo Miranza Barcelona

Course objective

This program is aimed at ophthalmologists with some previous experience and interested in acquiring specialized knowledge in Strabismus and Pediatric Ophthalmology.

The selected students will participate in both theoretical and practical aspects of daily practice. They will also have 90 practicums in the Wetlab included in the training program (additional practicums will have a supplementary charge).

Lecturers

Dr Josep Visa

Dr Ana Wert

Dr Charlotte Wolley-Dod

ECTS credits

90 ECTS

Assessment method

The evaluation of the students will be done on a continuous basis, by means of a rotation established with each of the specialists in the department. Attendance and participation in the drafting, review and/or monitoring of clinical guidelines are compulsory.

Start date

10 January 2027

End date

22 December 2027

Course fees

The registration fee is €10.525. It must be paid by bank transfer.

General principles:

- Patient examination in consultation rooms.
- Performance of supplementary tests.
- Assistance in surgeries.
- Emergency care
- Participation in research work.
- Presence and participation in teaching activities.
- Participation in all training sessions offered by Grupo Miranza for its specialists.
- Participation in the preparation and monitoring of clinical guidelines.

Strabismus:

- Fundamentals in strabology: Anatomy of the extraocular and orbital musculature.
- Organization of the oculomotor system.
- Concept of diplopia.
- Visual direction.
- Confusion.
- Sensory adaptations.
- Motor value.
- Fusion and fusion amplitude.
- Clinical history.
- Objective examination and subjective examination.

Childhood strabismus:

- Examination.
- Diagnosis and management of the patient with strabismus in the pediatric age group.
- Endotropias.
- Exotropia.
- Alphabetic syndromes.
- Oblique muscle hyperaction.
- Cranial nerve palsies.

Introduction to the methodology of Research

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Strabismus in adults:

- Surgery for childhood-onset strabismus in adulthood.
- Strabismus due to sensory causes: management and surgery.
- Strabismus secondary to ocular surgery: strabismus secondary to retinal surgery with special attention to retinal detachment surgery.
- Strabismus secondary to cataract surgery.
- Strabismus secondary to refractive surgery.
- Risk assessment of diplopia and/or oculomotor deviation in patients undergoing refractive surgery.
- Strabismus secondary to orbital surgery.
- Strabismus secondary to glaucoma surgery.
- Strabismus secondary to ocular surface surgery.

Pediatric neuro-ophthalmology:

- Attitude towards the erased papilla in the child, cranial nerve palsies.

Diplopia:

- Pathophysiological basis of diplopia.
- Examination of the patient with diplopia.
- Clinical history.
- Aetiological diagnosis and clinical attitude.
- Prismotherapy.
- Surgical management.

Pediatric Ophthalmology:

- Early detection of diseases and comprehensive management of pediatric patients with ophthalmological pathology.
- Amblyopia: concept, physiopathological bases and classification.
- Refraction technique and prescription of glasses, prescription of occlusion therapy, evolution and follow-up.
- Embryonic developmental anomalies: congenital cataract: classification, associated anomalies, clinical and surgical management, when and how to

operate, surgical approach and techniques.

- Visual rehabilitation and follow-up.
- Microphthalmia.
- Coloboma.
- Anterior segment dysgenesis.

Retinal pathology in the pediatric age group:

- Clinical management and therapeutic approach to different pathologies: retinal detachment in the pediatric age group, retinopathy of prematurity, retinal dysplasia and

dystrophies, persistent hyperplastic primary vitreous.

Eyelid and lacrimal duct disorders:

- Differential diagnosis of epiphora in children.
- Management of lacrimal duct obstruction.
- Classification and management of congenital ptosis.

Ocular pathology associated with systemic disease:

- Ophthalmological involvement in different systemic diseases.

Master in Glaucoma

Continuing Education in Ophthalmology Program

The training will take place onsite, at the Instituto de Microcirugía Ocular (IMO) Grupo Miranza of Barcelona, located at Josep Maria Lladó street, number 3, of Barcelona (Spain).

Organized by

IMO Grupo Miranza Barcelona

Course objective

This program is aimed at ophthalmologists with some previous experience and interested in acquiring specialized knowledge in Glaucoma.

The selected students will participate in both theoretical and practical aspects of daily practice. They will also have 90 practicums in the Wetlab included in the training program (additional practicums will have a supplementary charge).

Lecturers

Dr Elena Arrondo

Dr Natalino Giuliano

Dr Maribel Acuña

ECTS credits

90 ECTS

Assessment method

The evaluation of the students will be done on a continuous basis, by means of a rotation established with each of the specialists in the department. Attendance and participation in the drafting, review and/or monitoring of clinical guidelines are compulsory.

Start date

10 January 2027

End date

22 December 2027

Course fees

The registration fee is €10,525. It must be paid by bank transfer.

General principles:

- Patient examination in consultation rooms.
- Performance of supplementary tests.
- Assistance in surgeries.
- Emergency care
- Participation in research work.
- Presence and participation in teaching activities.
- Participation in all training sessions offered by Grupo Miranza for its specialists.
- Participation in the preparation and monitoring of clinical guidelines.

Anatomy and Pathophysiology of Glaucoma:

- Anatomy of the irido-corneal angle and aqueous humour drainage pathways.
- Anatomy of the ciliary body.
- Anatomy of the optic nerve.
- Aqueous physiology.
- Pathogenetic mechanisms of congenital glaucoma.
- Pathogenetic mechanisms of primary open angle glaucoma.
- Pathogenetic mechanisms of primary angle-closure glaucoma.
- Pathogenetic mechanisms of secondary glaucoma.

Primary glaucoma:

- Epidemiology and risk factors.
- Clinical features of congenital glaucoma.
- Clinical features of primary open-angle glaucoma.
- Clinical features of primary angle-closure glaucoma.
- Clinical features of normotensional glaucoma.

Introduction to the methodology of Research

- Introduction to the methodology of research
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- Analysis of results and dissemination

Secondary glaucoma:

- Aetiopathology and classification.
- Clinical pictures of secondary open angle glaucoma's (acute and chronic).
- Clinical pictures of secondary angle-closure glaucoma's (acute and chronic).

Diagnostic techniques:

- Biomicroscopy of the anterior segment.
- Biomicroscopy of the posterior segment.
- Biomicroscopy of the optic papilla.
- Direct, indirect and dynamic gonioscopy.
- Direct and indirect ophthalmoscopy of the optic papilla.
- Campimetry: white/white perimetry, blue/yellow perimetry, full threshold perimetry and perimetry with fast techniques.
- Analysis of retinal nerve fibres and papilla: HRT, GDx, OCT.
- Pachymetry and ultrasonic biomicroscopy.
- Ocular Response Analyser (ORA).

Medical Treatment:

- Ocular hypotensive drugs: aqueous production inhibitors and aqueous deflux enhancers.
- Mechanisms of action and adverse effects of different drugs.
- Monotherapies and fixed combinations.

Laser treatments:

- Laser types: argon laser, diode laser, Nd: YAG laser
- Treatments: Peripheral iridotomy with Nd: YAG laser, peripheral iridoplasty and trabeculoplasty with argon or diode laser.
- Suturolysis with argon laser and goniotomy with Nd: YAG laser.

- Cyclophotocoagulation and endocyclophotocoagulation with diode laser.

Surgical Treatment:

- Perforating filtering surgery: Trabeculectomy.
- Non-perforating filtering surgery: deep sclerectomy.
- Drainage implants: Ahmed valve, and Molteno drainage device.
- Antimetabolites: 5FU and mitomycin C.

Master in Anterior Segment

Continuing Education in Ophthalmology Program

The training will take place onsite, at the Instituto de Microcirugía Ocular (IMO) Grupo Miranza of Barcelona, located at Josep Maria Lladó street, number 3, of Barcelona (Spain).

Organized by

IMO Grupo Miranza Barcelona

Course objective

This program is aimed at ophthalmologists with some previous experience and interested in acquiring specialized knowledge in Anterior Segment.

The selected students will participate in both theoretical and practical aspects of daily practice. They will also have 90 practicums in the Wetlab included in the training program (additional practicums will have a supplementary charge).

Lecturers

Dr Elena Arrondo
Dr Daniel Elies
Dr Natalino Giuliano
Dr Oscar Gris
Dr José L. Güell
Dr Maribel Acuña

ECTS credits

90 ECTS

Assessment method

The evaluation of the students will be done on a continuous basis, by means of a rotation established with each of the specialists in the department. Attendance and participation in the drafting, review and/or monitoring of clinical guidelines are compulsory.

Start date

10 January 2027

End date

22 December 2027

Course fees

The registration fee is €10.525. It must be paid by bank transfer.

General principles:

- Patient examination in consultation rooms.
- Performance of supplementary tests.
- Assistance in surgeries.
- Emergency care
- Participation in research work.
- Presence and participation in teaching activities.
- Participation in all training sessions offered by Grupo Miranza for its specialists.
- Participation in the preparation and monitoring of clinical guidelines.

Cornea:

- Diagnostic methods.
- Basic tests for the examination of corneal pathologies.
- Clinical cases: presentation and assessment, treatment schemes.
- Refractive surgery, Lasik, phakic lenses, intracorneal procedures.
- Indications and contraindications.
- Early and late postoperative complications of refractive surgery.
- Lamellar and/or penetrating keratoplasty.
- Keratoprosthesis.
- Limbal surgery.
- Types of transplants.
- Outpatient consultation.
- Collection of documentation for research and publications.

Crystalline lens:

- Opacities and malformations.
- Artificial implants.
- Basic tests for the diagnosis and treatment of cataract: biometry, contrast sensitivity.
- Macular function tests.
- Topography.
- Biometry in special situations.
- Clinical cases: presentation and assessment.
- Intraocular lenses: surgical techniques.
- Phacoemulsification technique.
- Cataract surgery in special cases: diabetic retinopathy, indications and contraindications.

- Femtosecond laser assisted surgery.

Glaucoma:

- General concepts: glaucomatous optic neuropathy.
- Anatomy and physiology of the cameral angle, ciliary body, dynamics and aqueous humour elimination pathways.
- Intraocular pressure, method of quantification.
- Intraocular pressure and glaucoma.
- Diagnosis of glaucoma: early detection. Basic tests for glaucoma detection: visual fields.
- Technique and interpretation.
- Other diagnostic and follow-up methods.
- Pharmacology: agents, pharmacodynamics, side effects.
- Combinations.
- General principles of treatment.
- Surgical treatment.
- Perforating techniques.
- Non-perforating techniques.
- Clinical cases: presentation and assessment.
- Other non-surgical treatments for glaucoma.
- Outpatient consultation.
- Collection of documentation for research and publications.

Introduction to the methodology of Research

- Introduction to the methodology of research
- Drafting of research protocols
- Institutions and documentation for the Presentation of projects research to ethics committees and regulators
- Analysis of results and dissemination

Master in Vitreous / Retina

Continuing Education in Ophthalmology Program

The training will take place onsite, at the Instituto de Microcirugía Ocular (IMO) Grupo Miranza of Barcelona, located at Josep Maria Lladó street, number 3, of Barcelona (Spain).

Organized by

IMO Grupo Miranza Barcelona

Course objective

This program is aimed at ophthalmologists with some previous experience and interested in acquiring specialized knowledge in Vitreous / Retina.

The selected students will participate in both theoretical and practical aspects of daily practice. They will also have 90 practicums in the Wetlab included in the training program (additional practicums will have a supplementary charge).

Lecturers

Dr Anniken Burés
Dr Claudia García Arumí
Dr José García-Arumí
Dr Carlos Mateo
Dr Cristina Bohórquez
Dr Rafael Navarro
Dr Cecilia Salinas

ECTS credits

90 ECTS

Assessment method

The evaluation of the students will be done on a continuous basis, by means of a rotation established with each of the specialists in the department. Attendance and participation in the drafting, review and/or monitoring of clinical guidelines are compulsory.

Start date

10 January 2027

End date

22 December 2027

Course fees

The registration fee is €10,525. It must be paid by bank transfer.

General principles:

- Patient examination in consultation rooms.
- Performance of supplementary tests.
- Assistance in surgeries.
- Emergency care
- Participation in research work.
- Presence and participation in teaching activities.
- Participation in all training sessions offered by Grupo Miranza for its specialists.
- Participation in the preparation and monitoring of clinical guidelines.

Retinal detachment in its various forms

- Rhegmatogenous and secondary.
- Clinical study, differential diagnosis and treatment.
- Assessment of the patient in the consultation room and surgical treatment.
- Complementary tests for a better understanding of retinal detachment: biomicroscopy, uni and two-dimensional b-mode ultrasound examination, panoramic photography of the back of the eye and optical coherence tomography.

Introduction to the methodology of Research

- Introduction to the methodology of research
- Drafting of research protocols
- Institutions and documentation for the Presentation of projects research to ethics committees and regulators
- Analysis of results and dissemination

Retinal vascular disorders

- Diabetic retinopathy will be covered in detail both in its diagnosis with angiography and tomography as well as the intraretinal and proliferative forms.
- Surgical indications and their treatment with photocoagulation or vitrectomy.
- Ongoing trials for the treatment of this disease.

- Study and collection of documentation and participation in clinical trials.
- Other retinal vasculopathies will be studied such as central and branch vein obstruction and new treatments.

Macular disorders

- Degeneration of the macula, assessment of its different forms by fluorescein angiography, indocyanine green angiography and other methods.
- Treatments using thermal photocoagulation, transpupillary thermotherapy, photodynamic therapy, and macular translocation.
- Treatments using intravitreal anti-VEGF.
- Macular hole.
- Accurate re-assessment of its diagnosis with OCT and other methods.
- Macular hole surgery.
- Macular epiretinal membrane and internal limiting membrane dissection, indications, and technique.

Intraocular tumors

- Particular attention is paid to melanoma, its diagnostic and therapeutic aspects.
- Different treatments will be demonstrated in practice using new photocoagulation techniques, plaque radiotherapy and tumor resections.
- Participation in multi-centre studies and pilot studies on different types of tumours.

Intraocular inflammations

- Posterior uveitis, its classification, medical and surgical treatment.
- Study of patients with chronic inflammation and new trials in progress with intraocular devices to control inflammation.
- Indications for surgery in inflammatory processes.

Retinal dystrophies

- Diagnosis and differential diagnosis.
- The role of ocular electrophysiology in fundus pathology today.
- Current genetic studies.

Master in Ophthalmic Surgery Nursing

Continuing Education in Ophthalmology Program

The clinical practice will take place at the Instituto de Microcirugía Ocular (IMO) Grupo Miranza of Barcelona, located at Josep Maria Lladó street, number 3, of Barcelona (Spain).

Organized by

IMO Grupo Miranza Barcelona

Course objective

This program is aimed at Diploma graduates/Qualified in Nursing, with some previous experience and interest in incorporating and updating knowledge related to new technologies and their application in surgical ophthalmology.

Lecturers

Coordinator: Marta Oller

Mrs Nuria Durán

Mrs Mónica Guardia

Mrs Verónica Guiu

Mrs Noemí Martínez

Mrs Ana Molina

Mrs Mar Palomares

ECTS credits

60 ECTS

Assessment method

The evaluation of the student will be done on a continuous basis and with the presentation of final postgraduate work. Attendance and the final project are compulsory.

Start date

10 January 2027

End date

22 December 2027

Course fees

The registration fee is €6.000. It must be paid by bank transfer.

General principles:

- Ocular anatomy and physiology: anterior pole, posterior pole, ocular appendages and optic pathways.
- Most prevalent ocular pathology: anterior pole, posterior pole and ocular appendages.
- Most used drugs in ophthalmology.
 - Preparation and specific concentrations.
 - Routes of administration.
- Laser in ophthalmological surgery.
 - Safety measures.

Nursing care in the clinical area.

Evaluation of the patient in the ophthalmological consultation. Tests

Complements for ocular diagnosis:

- History in an ophthalmological patient and recording of the data that are collected to the clinical history with a diagnostic objective. Informed consent.
- Types of complementary tests in ophthalmology.

Instrumentation and nursing

collaboration in ophthalmic surgery:

- Most frequent surgical techniques that are developed to the posterior segment posterior eye and how to prepare the necessary material for these procedures.
- Retinal detachment with or without scleral procedure, hemorrhage, vitreous and laser treatments, eye trauma, Ocular tumors and intraocular pressure management during the operation; basic instruments; Bufferers and How to prepare them.

Photograph of the anterior segment with Slit lamp:

- Features of photographic crack light
- Accessories, lighting techniques and instructions, protocols according to pathologies, angle photography.

Nursing care in the surgical area - Instrumentation and anterior segment Surgeries Collaboration:

- Know the surgical techniques more frequent that develop on anterior segment of the eye and prepare the necessary material by these procedures; Falls with phacoemulsification, technique extracapsular, Femto laser, type of Viscoelastic; basic instruments
- Deep nonpenetrating sclerectomy, implant of valve, cyclophotocoagulation with Laser, basic instruments
- LASIK, FEMTO and equipment for refractive surgery, basic instruments.
- Corneal transplant and all its variants, basic instruments.

Nursing care in the surgical area: - Laser in ophthalmology

- Different types of lasers for Ophthalmological use, security measures for the patient and personnel healthcare.
- Management and cure of the different ophthalmology equipment, both Anterior segment and posterior segment
- Type of intraocular lenses, handling and basic instruments.
- Type of implants in glaucoma and preparation thereof, Basic instruments.
- Type of implants in Retinal surgery and preparation of them, basic instruments.
- Type of implants in oculoplastic surgery, preparation and Basic instruments

Nursing care in the Surgical area: - Instrumentation and Collaboration in eyelid surgeries and ocular appendages

- Most frequent surgical techniques that develop to the eyelids, lacrimal apparatus, orbit and extraocular musculature; Technique of correction of eyelid ptosis and its variants, basic instrumentation; Blepharoplasty with and without laser, basic instruments and patient cures.
- Orbital tumors, basic instruments and management in the assembly of

engines Dacryocystorhinostomy, tear reconstructions, Basic instruments and management of the endoscopy equipment; Eviscerations and enucleations, Basic instruments

- Resection and reversal of rectify, transposition of muscles, surgeries of the oblique muscle, basic instrumental.

Fundus photography and optical coherence tomography:

- Retinography, features, color retinography, autophooresceinic retinography, fluorescein and fluorescein angiography Indocyanine green, retinography Stereoscopic and panoramic
- Adverse effects of contrasts, Indications and protocols according to Pathologies
- Anterior segment OCT, high resolution posterior segment OCT.
- Ultrasound techniques: o Ultrasonic Biomicroscope. o Ultrasound B Posterior segment
- Information. Preparation of the Patient. Possible complications. Prevention. post-technical cures. Angiographic. Recommendations.

Nursing care in the clinical area:

Invasive acts:

- Know how to realize the Preparation of a patient undergoing invasive treatment in consultation area.
- Type of intravitreal injections, Basic instruments.
- Types of oculofacial aesthetics treatments, preparation and cure of the patient during the technique, basic instruments.
- Type of treatments for dry eye, preparation and cure of the patient, basic instruments.

Introduction to the methodology of Research

- Introduction to the methodology of research
- Drafting of research protocols
- Institutions and documentation for the Presentation of projects research to ethics committees and regulators
- Analysis of results and dissemination

Master's in clinical optometry and imaging techniques in ophthalmology

Continuing Education in Ophthalmology Program

The course consists of 2 periods: 3-4 months of clinical practice at the center, and a period of elaboration of the postgraduate final project. The clinical practice will take place at the Instituto de Microcirugía Ocular (IMO) Grupo Miranza of Barcelona, located at Josep Maria Lladó street, number 3, of Barcelona (Spain).

Organized by

IMO Grupo Miranza Barcelona

Course objective

This course is aimed at Diploma Graduates / Graduates in Optics and Optometry, Diploma Graduates/Graduates in Nursing and Graduates in Medicine, with some previous experience and an interest in updating their knowledge of new technology and its application in ophthalmology.

Lecturers

Coordinator: Mrs Silvia Funes Avila

Mrs Paulina Hernández

Mr Alfons T. Margalef

Mr David Pesantes

Mr Álvaro Terroba

Mrs Anna Vaquero

ECTS credits

60 ECTS

Assessment method

The evaluation of the student will be done on a continuous basis and with the presentation of final postgraduate work. Attendance and the final project are compulsory.

Start date

10 January 2027

End date

22 December 2027

Course fees

The registration fee is € 6.000. It must be paid by bank transfer.

General principles:

- Ocular anatomy and physiology: anterior pole, ocular appendages, posterior pole and optic pathways.
- Ocular pathology: most prevalent pathologies of the anterior pole, ocular appendages, posterior pole.
- Surgery in Ophthalmology:
 - Indications.
 - Previous tests.
- Surgery on eyelids, lacrimal apparatus, orbit, cornea, crystalline lens and retina.
- Types of lasers in ophthalmology.
- Safety measures.
- Most used drugs in ophthalmology:
 - Types. Indications.
 - Routes of administration.

Medical history and basic examinations:

- Anamnesis.
- Visual acuity.
- Tonometry.
- Refraction.
- Corneal biomicroscopy
- Evaluation of the anterior camera
- Pupillary reflexes
- Binocular vision assessment:
 - Cover-Test, Ocular Motility, Fusion, Stereopsis

Contactology

- Adaptation of contact lenses in irregular corneas (keratoconus, ectasia, keratoplasties, etc).
- Special adaptations (Contact lenses)

Low vision:

- Low vision: features and classification. Different therapies in patients: Indications and tests by Visual rehabilitation, aids visual (magnifying glasses, filters), acuity visual.
- Evaluation of specific visual acuity due to low vision (different types of tests).

Practical optometry and vision therapy.

External eye photography:

- Pediatric optometry. Differences between pediatric patients. Protocols and treatments.
- Vision therapy of different types of pediatric patients and visual training.

Anterior segment slit-lamp photography:

- Characteristics of the photographic slit lamp.
- Accessories, illumination techniques and indications, protocols according to pathology, angle photography.
- Evaluation of vision in the pediatric population with specific tests and tests. Introduction to vision therapy (visual training practices).

Surgery in ophthalmology:

- Indications and previous tests. Type of laser in ophthalmology. Type of surgery for each specialty.
- Type, indications and ways of administration.

Introduction to the methodology of Research

- Introduction to the methodology of research
- Drafting of research protocols
- Institutions and documentation for the Presentation of projects research to ethics committees and regulators
- Analysis of results and dissemination

Refractive Surgery: Complementary and preoperative Tests:

- LASIK technique, FEMTO and management of refractive surgery equipment, basic instruments.
- Biometrics, topography, endothelial count, tear tests, Lancaster test, Video oculography

External photograph of the eye:

- Basic concepts in photography and protocols according to pathologies.
- Types of cameras

Photograph of the anterior segment with slit lamp:

- Features of photographic crack light
- Accessories, lighting techniques and indications, protocols according to pathologies, angle photography

Fundus photography and Optical coherence tomography:

- Fundus photography, characteristics, color fundus photography, fundus autofluorescence photography, fluorescein angiography and with indocyanine green, stereoscopic and panoramic fundus photography, adverse effects of contrast, indications and protocols according to disorder.
- Anterior segment OCT, high resolution posterior segment OCT.
- HRT.
- Ultrasound techniques:
 - Ultrasonic Biomicroscope.
 - Ultrasound B Posterior segment.

General information and Registration

To access any of the **master's programs**, the attached application form must be sent in digital format, together with the documentation detailed below, to the attention of Mss. Gemma Luaña, Secretary of the Teaching Committee, **before 15 June 2026**.

- Certified photocopy of a valid DNI or NIE (identity card).
- Detailed and up-to-date curriculum vitae, including a recent photograph.
- Degree in Medicine and Surgery, legalized and officially attested.
- Official legalized and certified Ophthalmology Specialist qualification.
- Academic Certificate of origin of both qualifications
- Certificate of English. For foreign students, accreditation of proficiency level in Spanish.

For those candidates who wish to undertake paid on-call duty at the center during the master's degree, the following documentation is required, in addition to that indicated above:

- Certified photocopy of the degree in Medicine and Specialist in Ophthalmology, approved by the Spanish Ministry of Education and Professional Training.
- Certified copy of full membership to the Barcelona Physicians Association
- Proof of origin of both qualifications (Medicine and Surgery, and Ophthalmology).
- Valid work permit for the period of the course.
- For foreign students, accreditation of proficiency level in Spanish.

In the case of foreign degrees, it is necessary to have the degree homologated or to have the Hague Apostille (for those countries that have signed the international agreement).

Once this documentation has been received, the Teaching Committee will evaluate the candidatures and the acceptance or denial of them will be communicated in writing. At that time, the teaching secretary must be provided with a certified copy of all the documentation. **This documentation will not be returned.**

Once the candidates have been admitted to the **Master's and Postgraduate courses**, they must pay the **enrolment fee** for the course **from 25 October to 8 November 2026**, by bank transfer, for the amount indicated for each course.

Admission Application

Master's in:

- ☐ Orbital and Ophthalmic Plastic Surgery
- ☐ Cornea and Refractive Surgery
- ☐ Strabismus and Pediatric Ophthalmology
- ☐ Glaucoma
- ☐ Anterior Segment
- ☐ Vitreous / Retina
- ☐ Ophthalmic Surgery Nursing
- ☐ Clinical Optometry and imaging techniques in ophthalmology Clinical

Mark your preferences and fill in your personal details and the documentation required for admission. Send in digital format via e-mail to:

secretaria.docencia@imo.es

For any further information, please contact us by phone (+34) 934 000 700

Name and surnames

Postal address

Locality

Country

Postal Code

Phone number

Mobile phone number

Email

We inform you that the personal data provided will be processed by the Fundació de Recerca del l'Institut de Microcirurgia Ocular (IMO Foundation) with NIF number G65299950 located at C / Josep Maria Lladó, 3, 08035, Barcelona, Spain, Tel. 93 400 07 00 and email info@fundacionimo.org. You can contact the data protection officer by e-mail at dpd.rgpd@fundacionimo.org.

Your personal data will be processed for the purpose of carrying out the necessary administrative procedures, such as enrolment, monitoring and verification of compliance with the conditions established for the development of the proposed training activity. If you do not provide the data contained in the form, we will not be able to process your application. If you give your consent, you will be kept informed of other activities, products and services offered by Instituto de Microcirurgia Ocular Dos, S.L.U. and the Fundació de Recerca de l'Institut de Microcirurgia Ocular (IMO Foundation). The legal basis for the processing is the execution of pre-contractual and contractual measures, as well as the express consent for the sending of information relating to our activities.

The personal data provided will be kept for the time necessary to comply with legal and contractual obligations in accordance with current legislation. The legal basis for sending communications is your express consent. The legal basis for the use of your image is your express consent.

The data will be communicated to Instituto de Microcirurgia Ocular DOS S.L.U. (IMO Dos) located at C / Josep Maria Lladó 3, 08035, Barcelona, Spain, Tel. 93 400 07 00 and email address informacion@imo.es. You may contact the Data Protection Officer by email at dpd.rgpd@imo.es.

You are informed that you may exercise your rights of access, rectification, deletion, limitation, portability, opposition, withdrawal of the consent you have given and not to be subject to automated individual decision-making. You can obtain more information about your rights on the website of the Spanish Data Protection Agency, as well as file a complaint with this body if you consider it appropriate. Likewise, in accordance with the provisions of the right to image, recognised in article 18.1 of the Spanish Constitution and regulated by Organic Law 1/1982, of 5 May, on the right to honour, personal and family privacy and one's own image. We inform you that the Organisation processes and disseminates these images in different media and applications for the purposes.

☐ I hereby authorize IMO and the IMO Foundation to communicate with me by any means in order to provide me with news about other activities, products and services offered by IMO Dos and the IMO Foundation.

Name and surnames

Date

Signature

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Aesthetics and Oculofacial
Rejuvenation Department

Maribel Acuña

Glaucoma Department

Elena Arrondo

Glaucoma Department

Anniken Bures

Vitreous / Retina Department
Head of teaching department

Neus Calvet

Optometry and Refraction
Department
Low Vision Department

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