

INTERNATIONAL SPECIALIZATION COURSE IN REFRACTIVE, CORNEA, AND LENS SURGERY

6 years of experience and 500 satisfied alumni

2nd period **NEW 7th EDITION**

UNIVERSITY CERTIFIED

▪ Course Director

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1st LEARNING STAGE: THEORETICAL APPROACH

Module 1 REFRACTIVE SURGERY

1. Introduction to the refractive surgery module

PART A: BASIC REFRACTIVE SURGERY COURSE

2. A Short History about Refractive Surgery
3. Refractive Anatomy of the Eye
4. Accommodation of the Eye
5. Methods of studying the Refraction of the eye: Subjective and Objective methods (I) y (II).
6. Methods of studying the eye in Refractive Surgery. Corneal Topography
7. Epithelial thickness mapping in Refractive Surgery screening
8. Refractive errors: causes and associated comorbidities
9. Methods for the correction of Ametropia: Optical compensation and contact lenses

10. The Correction of High Myopia and High Hyperopia Refractive Errors
11. Outcomes in Refractive Surgery
12. Complications of Refractive Surgery
13. Ocular Aberrations
14. Refractive Surgery and Quality of life

PART B: ADVANCED CONCEPTS OF REFRACTIVE COURSE (CORNEAL REFRACTIVE SURGERY)

15. The Sociology of Refractive Surgery
16. Refractive Mentality
17. Excimer Laser and Photoablation: Basic concepts
18. Surface Excimer Laser Ablation Surgery (PRK)
19. Modern Myopic PRK
20. Laser in Situ Keratomileusis (LASIK) (I)
21. LASIK: Surgical Technique (II)
22. The practice of LASIK and PRK: Surgical Videos
23. LASIK: Reoperation Enhancements
24. Myopic Lasik and Astigmatic Lasik
25. Hyperopic Lasik
26. Complications of Lasik
27. Customized Excimer Laser Surgery
28. Femtosecond Laser Small Incision Lenticule Extraction (SMILE)
29. Presbyopia Surgery
30. Laser Refractive Surgery for Presbyopia: PresbyLASIK
31. Monovision: How to Approach Presbyopia Correction
32. Intracorneal Inlays in the correction of Presbyopia
33. Dry Eye in Refractive Surgery (I): Clinical Relevance and Diagnosis
34. Dry Eye in Refractive Surgery (II): Treatment

PART C: ADVANCED REFRACTIVE COURSE (INTRAOCULAR REFRACTIVE SURGERY)

35. Phakic intraocular lenses (I): An introduction
36. Phakic s (II): How to March Patients with Lenses for A Successful Outcome
37. Phakic IOLs: (III) The Artilens IOLs
38. Phakic IOLs (IV): The ICL IOL
39. Complications of Phakic IOLs
40. Modern Multifocal IOLs (I): What do they offer, what can we get
41. Modern Multifocal IOLs (II): Complications and their management
42. Extended Depth of focus (EDOF) Intraocular lenses

PART D:

END OF MODULE EVALUATION

- a. Case study Evaluation
- b. MCQ Test



Module 2

FUNDAMENTALS OF CORNEAL SURGERY

1. Introduction to the corneal module

PART A: FUNDAMENTALS OF CORNEAL IMAGING AND TREATMENT MODALITIES

2. Basics of Corneal Imaging
3. Application of Aberrometry in the Clinical Practice
4. Anterior Segment OCT
5. Corneoplastic Surgery
6. Modern Trends in Corneal Grafting Surgery
7. Post-operative follow up and Complications in Keratoplasty
8. Keratoconus Management and General Guidelines for Diagnosis and Treatment (I)
9. Keratoconus Management and General Guidelines for Diagnosis and Treatment (II)
10. ICRS: Fundamentals and Current Applications
11. Guide of Actions in Keratoconus
12. Crosslinking
13. Corneal Biomechanics
14. Corneal Collagen Crosslinking
15. Crosslinking in Corneal Infectious

PART B: MODERN CORNEAL TRANSPLANTATION SURGERY

16. Corneal Basic Suturing techniques
17. Corneal Surgical Instruments tutorial
18. Corneal Lamellar Techniques:
19. DALK – Big Bubble Technique
20. Manual Technique
21. DMEK
22. DSAEK
23. Bowmann Layer Transplantation
24. Penetrating Keratoplasty (PKP)
25. Femtosecond Laser Corneal Surgery
26. Introduction to Fs Laser Corneal Surgery
27. Femtosecond Lasik
28. Femtosecond laser assisted Keratoplasty
29. Femtosecond laser Corneal Excision
30. Femtosecond laser assisted Keratopigmentation and other applications
31. Glaucoma in Corneal Graft Procedures: Therapeutic approaches

END OF MODULE EVALUATION

- a. End of Module Case Study Evaluation
- b. MCQ Test



Module 3 ADVANCED KERATOCONUS COURSE

- 1. Introduction to the Module: Modern treatment alternatives of keratoconus**
2. Keratoconus: Diagnosis, Grading and Advanced Treatment alternatives
3. Paediatric Keratoconus
4. Intracorneal rings and segments – new & current applications
5. Cross-Linking In Keratoconus - CXL (I)
6. Advanced concepts in Collagen Cross Linking (CXL) (II)
7. Advanced Keratoconus treatment with combined customised PRK and CXL
8. Summary: Treatment of Keratoconus guided for HOA
9. Corneal grafting in Keratoconus
10. Cataract surgery in Keratoconus

END OF MODULE EVALUATION

- a. End of Module Case study Evaluation
- b. MCQ Test



Module 4 LENS SURGERY

1. Introduction to the module.

PART A: SURGICAL MODALITIES

2. Basic Phacoemulsification Course
3. Introduction and Basic Concepts
4. Elements of Phacoemulsification
5. Starting Up the Surgery
6. Viscoelastics in Phacoemulsification
7. Phacoemulsification Surgery: Stepwise Approach (PART 1)
8. Phacoemulsification Surgery: Stepwise Approach (PART 2)
9. Complications in Phacoemulsifications
10. **Interim Course Evaluation Quiz (I)**
11. Minimal Invasive Lens Surgery Course
12. MILS: Part 1
13. MILS: Part 2
14. **Interim Course Evaluation Quiz (II)**
15. Refractive Lens Exchange: Indications and Outcomes
16. Refractive Lens Exchange

17. Femtosecond Assisted Cataract Surgery
18. Refractive Surgery after Cataract Surgery
19. Incisional surgery and astigmatic keratotomy: astigmatism correction during lens surgery
20. Cataract Surgery following Corneal surgery
21. Bilensectomy: Indications, surgical techniques and outcome
22. **Interim Course Evaluation Quiz (III)**

PART B: INTRAOCULAR LENSES

22. Intraocular lenses in Refractive lens Surgery
23. IOL Calculation
24. IOL Calculation following Corneal Refractive Surgery
25. Aspheric IOLs
26. Toric IOLs
27. Modern Multifocal IOLs (I): What do they offer, what can we get
28. Modern Multifocal IOLs (II): Complications and their management
29. Accommodative IOLs

End of the Module Evaluation

- a. End of Module Case study Evaluation
- b. MCQ Test



1st LEARNING STAGE: FINAL EVALUATION

1. **Epilogue** : The full history of Refractive Surgery and future innovations to come
2. **1st learning stage final evaluation:**
 - a. Clinical Cases
 - b. Final Project (Optional)

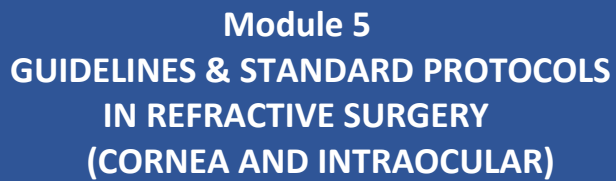


2nd LEARNING STAGE: PRACTICAL IMPLEMENTATION



CONTENTS:

- **Guidelines and Standard Protocols** in Refractive, Cornea and Intraocular Surgery
- **Good Clinical Practices** complete course with certification issued by the
National Institute on Drug Abuse (NIDA) Center for Clinical Trials
- **75 hours of clinical internship**



Module 5 **GUIDELINES & STANDARD PROTOCOLS** **IN REFRACTIVE SURGERY** **(CORNEA AND INTRAOCULAR)**

1. Introduction to the module

2. Guidelines and standards in Refractive Surgery
3. Guidelines and standards in Cataract Surgery
4. Guidelines and standards in Cornea Surgery

End of the Module Evaluation

- a. End of Module Case study Evaluation
- b. MCQ Test



Module 6 GOOD CLINICAL PRACTICES

1. Introduction to the module

2. External Educational Service link

Topics:

1. Introduction
2. Institutional review boards
3. Informed consent
4. Confidentiality and privacy
5. Participant safety and adverse events
6. Quality assurance
7. The research protocol
8. Documentation and record keeping
9. Research misconduct
10. Roles and responsibilities
11. Recruitment and retention
12. Investigational new drugs

3. Module Course Evaluation

4. How to understand the outcomes of refractive and lens surgery: standard indexes and graphs for reporting refractive surgery

End of Module evaluation



Module 7 CLINICAL INTERNSHIP

- Intensive schedule of practice (8 A.M to 8 P.M) in Vissum Ophthalmic Institute (Miranza Group) in Alicante, Spain
- Practical experience as **first assistant in Refractive, Corneal, and Lens Surgeries**
 - Instruction in **office consultation** and medical schedule organization
 - Observation and practice in the **operating room**



2nd LEARNING STAGE: FINAL EVALUATION

1. 2nd learning stage: Final Evaluation
2. Final Report of the Course