

# Master of Science in Oral Implantology (M.Sc.) 60 ECTS

*This Master program is divided into 8 obligatory modules, four days each, that will be held in Paris, and 2 exams modules to be presented at the University delivering the master's degree.*

*Two Years Program - 60 Ects*

*One Year Program Leads to University Diploma in Oral Implantology – 30 Ects*

**FIRST YEAR:** “From simple single tooth to complex requirements of edentulous patient and aesthetic assess.”

## Module 1 **Fundamental Knowledge**

### **Principles and basis of oral implants**

- Overview on the development of dental implantology
- Anatomy and physiology
- Risk factors in implant dentistry
- Case analysis and planification
- Periodontal aspects in implantology: implants in PCP and soft tissues evaluation
- Wound healing of bone, soft tissues and defects
- Patient evaluation: anamnesis.
- Absolute and relative contra-indications
- Pharmacology
- Conventional Tooth rehabilitation (endodontics/periodontics) versus extraction and Implant placement

## Oral diagnosis

- Indications, classifications and guidelines
- Oral hygiene and pre-implant treatment (periodontal / tooth rehabilitation)
- Static and Dynamic Occlusion: function analysis (bite, TMJ...)
- Picture diagnostics (X-rays and CT)
- 3-D bone analysis (standard, CT supported, digital surgical)
- Wax-up/set-up, involvement of dental laboratory

## Detailed guidelines for case presentation

- Intra-Oral Photography Guidelines
- Photographic documentation and written descriptions of clinical cases will be submitted online, using a preformatted template file for assessment purposes.

## Workshop 1 :

- LIVE SURGERY
- Hands-on CT and Radiographic analysis
- Hands-on Software and planning Guided Surgery (simple case planification)

# Module 2 Surgical and Prosthetic requirements

## Preparation to the surgery

- Required instruments and equipment
- Hygiene regulations and their implementation
- Surgical room, patient and team preparation
- Anesthetic and medications

## Implant systems

- Implant design (macrostructure)
- Implant surfaces (microstructure)
- Dental implant abutment, indexed / non-indexed abutment
- Prosthetic components
- International Market of implant Systems

## Standard surgical procedures (I)

- Flap design, transfer of implant position, flapless surgery
- Implant placement protocol
- Alternative tools for the implant site preparation
- Suturing techniques

## Methods of scientific work (I)

- Literature research via electronic media
- Introduction for the Preparation of Master's thesis

## Workshop 2

- LIVE SURGERY
- Hands-on Flap and Sutures
- Hands-on Implant Placement Protocol

# Module 3 Variant Surgical procedures and guided surgery

## Standard surgical procedures (II)

- Extraction Immediate Implantation
- Healing periods, timing (early, late, immediate treatment records)
- Soft tissue management around Implant
- Immediate Loading or Temporization
- Limited GBR
- Membranes ( Resorbable Vs non-Resorbable)

## Prosthetically driven and Guided Surgery

- From wax-up to prosthetic conventional guide
- Digital Work-flow from 1st Drill to full guided surgery.

## Aftercare (post-operative treatment)

- Pre and post Medication
- Documentation and recall
- Maintenance
- Statistics: success and survival rates, failure rates

## Methods of scientific work (II)

- Assessment of scientific theory using evidence classes
- Data collection, statistics, biometrics
- Construction of scientific studies

## Workshop 3

- LIVE SURGERY
- Hands-on Implant Placement and Soft Tissue Management around implant
- Hands-on Extraction Immediate Implantation

## Module 4 Prosthetic restorations, Surgical complications and follow-up

### Prosthetic Work-flow

- Temporary restorations
- Techniques for the forming of emergence profiles
- Prosthetic workflow with conventional and digital tools
- Taking of impressions / registration / fabrication of models / articulator
- Choice of abutment and individualization. Abutment transfer model-mouth
- Sealed Vs Screw retained protheses
- Occlusal anatomy and transfer of load
- Dental laboratory workflow and solution analysis

### Management of complications

- Immediate and delayed post-operative complications
- Mucositis and peri-implantitis: diagnosis
- Non surgical and surgical treatments
- Laser therapy for the management of complications

### Workshop 4

- LIVE SURGERY
- Hand- on Impression Techniques : Open Vs Closed Tray
- Hands-on Digital Work-Flow (STL matching and plannifictaion for guided surgery)
- Hands-on Guided surgery on models

## **SECOND YEAR:** “ From moderate to severe atrophy: surgical management and aesthetic outcome.”

### Module 5 Management of moderate to severe atrophy of Premaxillae and anterior mandible

#### **Biological exploration of patients and Pathologies in relation with Phospho-Calcic metabolism.**

- Bone remodeling
- Bone Healing
- Tissue Induction
- Cell Bio-Mimicry
- Bone Substitutes and membranes
- Mechanism of remodeling of harvested bone and substitutes

#### **Atrophy of Anterior Maxilla and Mandible**

- Normal anatomy and tissue resorption
- Surgical risks and complications in relation with modified anatomy
- Identifying reasonable treatments and targets
- Aesthetic evaluation
- Soft Tissue evaluation
- Hard Tissue evaluation

#### **Autogenous Bone Graft**

- Donor site
- Bone Quality and Quantity
- Soft Tissue Management
- Bone Bloc and Particulated Bone.
- Techniques Literature review: Short, medium and long-term remodeling and results
- Indications / Contraindications

#### **Transversal Segmental Osteotomy (TSOTM)**

- Biological Principles
- Techniques
- Soft Tissue Management
- Literature review: Short medium- and long-term remodeling and results
- Indications / Contraindications

## **Vertical Segmental Osteotomy (VSOTM)**

- Biological Principles
- Techniques
- Soft Tissue Management
- Literature review: Short, medium and long-term remodeling and results
- Indications / Contraindications

## **Guided Bone Regeneration**

- Biological Principles
- Techniques (Resorbable and Non-resorbable membranes, Meshes and template)
- Soft Tissue Management
- Biology, Clinical Application and Regenerative Potential of Platelet Derivatives
- Literature review: Short, medium and long-term remodeling and results
- Indications / Contraindications

## **Workshop 5**

- LIVE SURGERY
- Hands-on Advanced Soft Tissue Management: Pedicle flap soft tissue transplants, Free connective tissue transplants etc.
- Hands-on Bone Harvesting, graft apposition
- Hands-on Blood Sample & PRF Preparation

# **Module 6 Management of moderate to severe atrophy of posterior maxillae**

## **Crestal resorption**

- Normal anatomy and tissue resorption
- Surgical risks and complications in relation with modified anatomy
- Identifying reasonable treatments and targets
- Aesthetic evaluation
- Soft Tissue evaluation
- Hard Tissue evaluation

## **Sinus Floor modifications**

- Normal anatomy and sinus modifications
- Sinus Physiology
- Sinus Pathology
- Surgical risks and complications in relation with modified anatomy
- Identifying reasonable treatments and targets
- Soft Tissue evaluation
- Hard Tissue evaluation

### **Crestal approach for sinus elevation**

- Bone Quality and Quantity
- Techniques
- Literature review: Short, medium and long-term remodeling and results
- Indications / Contra-indications

### **Lateral approach for sinus elevation**

- Bone Quality and Quantity
- Techniques
- Literature review: Short, medium and long-term remodeling and results
- Indications / Contra-indications

### **Basal Implant**

- Techniques
- Indications / Contraindications
- Surgical Protocol
- Literature review: Short, medium and long-term remodeling and results

### **Autogenous Bone Graft of the crest**

- Bone Quality and Quantity
- Bone Bloc and Particulated Bone.
- Techniques
- Soft Tissue Management
- Literature review: Short, medium and long-term remodeling and results
- Indications / Contraindications

### **Transversal Segmental Osteotomy (TSOTM)**

- Techniques.
- Soft Tissue Management
- Literature review: Short medium- and long-term remodeling and results
- Indications / Contraindications

### **Vertical Segmental Osteotomy (VSOTM)**

- Techniques
- Soft Tissue Management
- Literature review: Short, medium and long-term remodeling and results
- Indications / Contraindications



## Guided Bone Regeneration

- Techniques (Resorbable and Non-resorbable membranes, Meshes and template)
- Soft Tissue Management
- Literature review: Short, medium and long-term remodeling and results
- Indications / Contraindications

## Workshop 6

- LIVE SURGERY
- Hands-on Sinus Elevation : Crestal and Lateral approach
- Hands-on Principles of Guided Bone Regeneration
- Hands-on Basal Implant Placement

# Module 7 Management of moderate to severe atrophy of posterior mandible

## Anatomy of Posterior Mandible

- Normal anatomy and tissue resorption
- Surgical risks and complications in relation with modified anatomy
- Identifying reasonable treatments and targets
- Soft Tissue evaluation
- Hard Tissue evaluation

## Autogenous Bone Graft

- Local and exo-buccal donor sites
- Bone Quality and Quantity
- Bone Bloc and Particulated Bone.
- Techniques
- Literature review: Short, medium and long-term remodeling and results
- Indications / Contraindications

## Transversal Segmental Osteotomy (TSOTM)

- Techniques
- Literature review: Short medium- and long-term remodeling and results
- Indications / Contraindications

## Vertical Segmental Osteotomy (VSOTM)

- Techniques
- Literature review: Short, medium and long-term remodeling and results



- Indications / Contraindications

### **Guided Bone Regeneration**

- Techniques (Resorbable and Non-resorbable membranes, Meshes and template)
- Literature review: Short, medium and long-term remodeling and results
- Indications / Contraindications

### **Workshop 7**

- LIVE SURGERY
- Hands-on Segmental Osteotomy : vertical & horizontal
- Hands-on Modified Guided Bone Regeneration : (Membranes and templates)

## **Module 8 Cadaver Courses, Advanced Hands-on, Live Surgeries, Clinical Training**

- **Cadaver Courses:**  
Hands-on GBR and soft tissue management.  
Hands-on Sinus surgeries  
Hands-on bone harvesting  
Hands-on Osteotomies,
- **Full arch reconstruction and loading Guided Surgery**
- **IV sedation in daily office**
- **Management of advanced complications of bone augmentations and implants (Sinusitis, Sinus cysts, Advanced bone resorption around implant)**
- **Complex cases management and psychological approach of patients**
- **Master Thesis and Exam preparation**
- **Cases Presentation**