

# **AAID Boston MaxiCourse Curriculum**

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## **Implant Dentistry: Introduction**

Course overview and objectives:

- Diagnosis and treatment planning
- Case presentations- Basic Surgical and Restorative Concepts
- Single unit
- Multi-unit
- Full Arch
  - Removable -OD-CDI
  - Removable- OD-SDI

Fixed:

- FP 1/2
- FD- Fixed Detachable

Principles of Oral Implantology and Surgery:

- Define Osseo integration- clinically/histologically
- Discuss Site Preservation rational and protocols
- Basic endosseous root form surgical principles
- Instrumentation
- Consent forms
- Post/Pre-Operative instructions

Videos - Site preservation- socket grafting/ Endosseous Surgery

Hands on: Site Preservation/Basic Endosseous Root Form Techniques

## **The Scope of Implant Dentistry**

Course overview and objectives:

- Comprehend the scope of implant dentistry through extensive case presentations
- Be able to understand the biological, histological and clinical concept of osseointegration
- Learn the history of dental implants

- Learn basic concepts for endosseous implant surgery and prosthetics
- Be able to perform initial diagnostic records
- Perform “hands on” model surgery for endosseous implant surgery and socket grafting
- Understand pre- and post-operative instructions associated with implant surgery
- Comprehend diagnostic, case treatment sequences and decision trees for fixed and removable implant treatment

-Single tooth replacement

-Prosthetic aspect- Protocol, materials and instrumentation

Videos - Case presentation- Fixed and Removable Approach

## **Pharmacology and Platelet Concentrates for the Implant Patient**

Course overview and objectives:

1. Scientific basis for platelet concentrates (PRP/PRF)
2. Management of Medical Emergencies
3. Pharmacology for the Dental Patient
4. Pre/post-surgery: medication concerns
5. Discussion on importance of preparation of scientific papers in clinical dentistry

Hands on: Venipuncture techniques, PRP, PRF development

## **Prosthetic Reconstruction – FP 1/2 approach**

Course overview and objectives:

- Comprehend a medical assessment for the implant patient
- Learn how to perform a neurological evaluation for post-surgical altered sensation
- Comprehend the pharmacology essential for the dental implant patient
- Learn how platelet concentrates (PRP/PRF) enhance the healing process
- Understand what PRP/PRF is?
- Learn to perform “hands on” standard phlebotomy technique and PRP/PRF development
- Comprehend and learn to manage medical emergencies in the dental office
- Participate in a “Hands on” implant prosthetic procedure for the fixed prosthesis
- Learn advanced implant treatment planning: Fixed cases
- Develop an understanding of 2D/3D radiographic anatomy and how it relates to clinical implant surgery
- Comprehend root form surgical techniques and principles

Hands on: Fixed single/multi-unit restoration

# **Basic Surgery and Treatment Planning for Implant Reconstruction**

Implant Surgery- Staged approach

- Flap design
- Implant surgery
- Treatment planning- Implant position, numbers and considerations
- Instrumentation
- Biologics and suturing materials
- Implant Surgery- “step by step approach”
- Case presentations-fixed and removable implant approach

## **Treatment planning: IPO Principles and Prosthetics**

Course overview and objectives:

- Comprehend advanced surgical techniques for implant placement
  - Learn how guided surgery can enhance surgical outcomes
  - Understand 3d planning software and how to design and fabricate surgical guides
  - Able to perform prosthetic stages for a fixed and removable prosthesis
  - Become familiar with implant surgical instrumentation, basic surgical and prosthetic instrumentation
  - Learn “hands on” principles for suturing
  - Learn “hands on” osteotomy and implant placement
  - Observe case presentations to enhance understanding of implant treatment sequencing
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- Implant occlusal principles and biomechanics
  - Treatment planning- Partially edentulous patient- Fixed
  - Bone classification
  - Overdentures
  - Videos

Hands on: Implant placement and osteotomy technique

Hands on: Prosthetic- Fixed cement/screw retained restorative “All on X” and

## **Maxillary Sinus Augmentation- Lateral/Crestal Approach**

Course overview and objectives:

- Comprehend advanced surgical procedures via CBCT analysis
- Learn various bone grafting materials and utilization in maxillary sinus augmentation
- Perform “hands on” sinus surgery (lateral/crestal) on model
- Be able to determine when to utilize lateral vs crestal approach for sinus augmentation
- Comprehend implant occlusal principles and biomechanics for the fixed prosthesis
- Understand key considerations in regard to patient medical history
- Review case presentations to reinforce implant concepts

Treatment Planning and Tx- Posterior Maxilla:

- Posterior Maxilla- treatment considerations
- Treatment planning and prosthetic considerations
- Prosthetic protocols and materials
- Sinus augmentation- Crestal/Lateral Approach

Hard and Soft tissue Grafting:

- Implant Dentistry in the Esthetic Zone
- Guided bone regeneration principles
- Advanced bone grafting
- Soft tissue grafting, science and techniques
- Basis for referral and clinical decision making

Hands on: Sinus surgery- Lateral approach (model, sheep head)

## **Edentulous Patient: The Fixed conventional: Abutment ceramic metal Implant Approach (FP 1/2)**

Course overview and objectives:

- Learn soft tissue grafting techniques, indications, and contraindications
- Perform “hands on” sub epithelial connective tissue graft on pig jaws

- Understand the principles of guided bone regeneration
  - Learn various bone grafting materials: indications, advantages and disadvantages
  - Understand the basis for referral after patient evaluation
  - Learn advanced bone grafting procedures
  - Learn the treatment options, advantages, disadvantages and limitations of the overdenture
  - Comprehend how conventional and small diameter implants can be utilized in the overdenture patient
  - Perform “hands on” overdenture prosthetic procedures on models
  - Perform “hands on” PRP/PRF venipuncture and development on live participants
  - View case presentations to enhance the understanding of implant therapy
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- Radiology assessment/clinical evaluation
  - Tx planning considerations: Maxillary/mandibular arch
  - Surgical placement
  - Jaw relationship records
  - Prosthetic aspect- Impression techniques
  - Laboratory, materials, time
  - Case Presentations

Hands-on GBR techniques, soft tissue grafts and suturing (Pig jaw)

Hands-on- Overdentures (Prosthetic aspect)

## **Cadaver Session: Anatomy and Surgical Skill Development (Travel to site)**

Course overview and objectives:

- Gross anatomy for the implant dentist
- Anatomical structures: Maxilla and Mandible
- Maxillary sinus
- Mandibular nerve (ION)
- Anterior/Posterior maxilla (nerve, artery)
- Anterior/Posterior mandible (nerve, artery)

#### Techniques:

- Suturing techniques
- Sinus augmentation protocol
- Block grafts protocol + soft tissue harvesting
- Immediate Implant Placement with Provisionalization
- Socket Grafting
- Full Arch “All on X”
- Dissection of the mental foramen
- Buccal plate loss + tenting screws

#### Advanced Bone Grafting:

- Gross anatomy: Key relationships to implant surgery
- Sinus augmentation
  - o Crestal and lateral approach
- Surgical management- complications
- Implant surgical techniques - Maxilla
- Advanced bone grafting- horizontal and vertical techniques

#### Course overview and objectives:

- Learn critical anatomic structures for basic and advanced implant surgery
- Perform “hands on” cadaver sinus surgery, socket grafts, nerve repositioning, block grafts, ridge expansion and osteotomy procedures
- Comprehend surgical techniques for various regions of mouth and how it relates to implant density
- Perform dissection of cadaver specimen to locate critical landmarks for implant dentistry
- Discuss and learn surgical complications associated with anatomical structures

Hands on: Cadaver (2-day event)

## **Edentulous Patient- The Fixed and Removable Implant Approach**

Course overview and objectives:

Fixed Prosthesis-

1. Conventional- cement/ abutment/ceramo-metal (FP 1/2)
2. Conventional- screw retained “all on X”

Removable prosthesis:

1. OD-Conventional Diameter Implants (CDI)
2. OD-Small Diameter Implants (SDI)

Case Presentations- Full arch: (Fixed: FP 1/2) and removable overdentures

Prosthetic techniques- Full arch

Hands on: Surgical techniques- Full arch “All on X”

## **Advanced Treatment- 3D, CAD/CAM guided approach**

Course overview and objectives:

- Comprehend the fixed and removable implant approach for the edentulous patient
- Learn the areas of discussion for the removable overdenture fixed abutment and fixed detachable prosthesis
- View the fixed and removable treatment sequence for reconstruction “step by step” flow sheet
- Discuss implant occlusal principles, prognosis, progressive bone loading and treatment considerations for long term success
- Attend advanced treatment planning session
- Participate in a “hands on” exercise on models for full arch removable and full denture prosthesis
- Learn advanced treatment cases utilizing CBCT, CAD/CAM
- Participate on “Hands on” guided surgery
- Understand what a full guided surgery is from diagnosis to prosthetic placement
- Learn how to integrate implants into your practice

Topics:

- 1) Surgical guides with CBCT and CAD/CAM dentistry
- 2) Fully guided surgery from placement to restoration
- 3) Implant placement and provisional stage
- 4) Integrating implants into your practice

Hands on: Full arch and single tooth guided Surgery

# **Comprehensive Treatment Planning: Surgery/Prosthetics**

Treatment plan: Review of maxilla/mandible

Diagnosis

Max/Mandibular relationship

Treatment plan considerations

Surgery

Prosthetics considerations

Removable vs. fixed prosthetic approach

Overdentures, FD, Conventional FP 1/2

**Lunch and Learn: Treatment planning session**

## **Immediate Implant Placement Restoration (IIPP)**

- Protocol
- Implant occlusal principles
- Immediate load
- Immediate provisionalization
- IIPP- single tooth approach
- Verification jigs
- Evidence based decision trees
- Implant maintenance

## **Preparation of associate fellow exam**

Case Presentations- “Single to Full Arch”

## **Hands-On: Fixed single/Multi unit prosthesis**

## **Course Overview**

### **Hands on: IIPP**

**Objectives:** At the end of the module, the participants will:

- Learn how to manage complications: simple and complex
- Comprehensive treatment planning of advanced cases-full arch with bone deficiencies
- Learn protocols, science and advantages of immediate implant placement with provisionalization (IIPP)
- Participate in a “hands on” procedure on models for IIPP
- Discuss immediate implant placement with type I and type II sockets
- Learn management of IIPP in infected sites

- Learn IIPP protocols in sinus augmentation
- Understand orthodontic considerations in implant dentistry for partial and fully edentulous arch
- Learn the management of surgical and prosthetic complications
- Learn preventive maintenance for an implant prosthesis

### **Implant Complications: Prevention and Management**

- Basic surgical
- Implant surgical
- Implant restorative
- Comprehensive treatment ease

Case Presentations- Case based learning

**Objectives:** At the end of the module, the participants will:

- Be able to evaluate and navigate potential implant complications based on clinical and medical examination
- Manage basic surgical complications
- Manage implant surgical complications
- Manage implant restorative complications
- View videos to reinforce techniques for restorative and surgical complications
- Develop critical thinking skills to enhance treatment outcomes based on risk assessment