In-Depth Course Overview Day 1

Curriculum Outline and Provisional Timetable

Timing	Lecture Program & Curriculum
9 am to 9;30 am	Morning Session: Breakfast & Course Commencement 1. Comprehensive Introduction to Cortico-Basal Implantology 2. Case Presentations and Long term Follow-up Reviews Exploring the Clinical Scope and Applications of the Technique
09:30 to 09:45	Intermission: Coffee Break
9 45 to 12 30 pm	**Learning of Anatomy** Anatomy learning with the help of 3D animated videos provides a strong understanding of clinically relevant anatomy rather than a detailed undergraduate anatomy curriculum. The focus is on anatomy that directly influences implant placement, anchorage, and avoidance of complications. **Applied Maxillofacial Anatomy for Cortico-Basal Implantology** ● **Introduction to Applied Surgical Anatomy** ○ Importance of cortical anchorage. ○ Differences between conventional and corticobasal implant anatomy. ○ Concept of first, second, and third cortical engagement. ● **Maxillary Anatomy** ○ Nasal Floor: Anatomy of nasal cavity, cortical engagement, safe penetration limits, and management of trans-nasal implants. ○ Incisive Canal and Foramen: Anatomy, contents, trans-incisive implant placement, and neurovascular considerations. ○ Maxillary Sinus: Sinus walls, cortical areas, septa, Schneiderian membrane, and pterygoid/tubero-pterygoid anatomy. ○ Zygomatic Bone: Anatomy, biomechanics, safe anchorage zones, and relationship with orbit and infraorbital nerve. ○ Canine Fossa and Piriform Rim: Cortical engagement possibilities and implant angulations. ● **Mandibular Anatomy** ○ Inferior Alveolar Nerve: Course, variations, identification on OPG/CBCT, and injury avoidance. ○ Mental Foramen: Location variations, anterior loop, and placement considerations. ○ Lingual Concavity and Submandibular Fossa: Risk of perforation and recognition on CBCT.

	○ Mandibular Basal Bone: Buccal/lingual cortices and engagement of inferior border. ○ Interforaminal Region: Bone quality and basal implant placement protocols. ○ Retromolar Region: Anatomy for distal anchorage and cortical engagement options. ● **Pterygoid Region** ○ Anatomy of maxillary tuberosity, pterygoid process, and medial/lateral pterygoid plates. ○ Hamular notch, safe angulations, radiographic interpretation, and step-by-step surgical protocol. ● **Radiological Anatomy** ○ Reading OPG and CBCT for cortico-basal implants. ○ Identification of cortical zones, hazards, and measuring bone availability. ● **Complications & Variations** ○ Aberrant nerve positions, sinus septa, large canals, and severe atrophy patterns. ● **Teaching Methods** Dry skulls and CBCT-based anatomy. 3d animated videos **Anticipated Learning Outcomes** Upon concluding this curriculum, clinicians will possess the proficiency to: ● Accurately distinguish significant anatomical landmarks using OPG and CBCT diagnostics. ● Determine and utilize optimal zones for cortical anchorage. ● Develop safe implant strategies for patients with advanced alveolar atrophy. ● Mitigate risks of trauma to neurovascular bundles, sinuses, and nasal cavities. ● Execute pterygoid and strategic placement protocols with clinical assurance. Mastery of this anatomy curriculum provides a foundation for enhancing both the safety and long-term success of corticobasal rehabilitations.

12;30 pm to 2 pm	**Principles of Bone Physiology and Biology** **Fundamental Concepts in Cortico-Basal Implantology** ● Conceptualization of bone as a living, dynamic functional organ rather than a static tissue. ● Application of Wolff's Law and Mechanostat Theory in implant stability. ● Prioritization of bone quality over bone quantity for effective corticobasal anchorage. **Biological Classification and Dynamics**

	● Systematic classification of bone types relevant to implantology protocols. ● The Cutting Cone Mechanism: Dynamics of bone turnover and remodeling. ● Regional Acceleratory Phenomenon (RAP) and its clinical significance. **Physiological Integration** ● Physiological responses to immediate loading protocols. ● Adaptive potential and remodeling capacity of bone around active implants. *"In Cortico-Basal Implantology, we do not merely place implants into bone; we utilize the biology, physiology, remodeling capacity, and adaptive potential of bone to restore function immediately."*
2pm to 2;45 pm	Lunch break
2;45 to 3; 15 pm	Quick revision
3 pm to 5 pm	**Surgical Methodologies and Protocols in Cortico-Basal Implantology** **Core Surgical Concepts** This module provides an advanced analysis of biomechanical implant design, standardized osteotomy protocols, and the fundamental necessity of achieving immediate primary stability through cortical engagement. **Prosthetic Integration and Stabilization** A critical examination of the principles of rigid stabilization and splinting, alongside comprehensive clinical criteria for prosthetic selection and implementation. --- **Anticipated Learning Outcomes** Upon completion of this session, participants will be qualified to: 1. Synthesize the mechanical and biological principles governing cortico-basal implant designs. 2. Execute precise selection of instrumentation and site preparation protocols.

	3. Critically evaluate the role of primary stability in predictable clinical outcomes. 4. Articulate the biomechanical framework for rigid splinting and stabilization. 5. Apply clinical rationale for the selection, timing, and spatial orientation of various prosthetic solutions.
5 pm to 6 pm	**Hands-on Workshop: Surgical & Clinical Application** This practical session provides participants with immersive experience utilizing dry human skulls and high-fidelity 3D-printed anatomical models to bridge the gap between theoretical knowledge and surgical execution. **Practical Learning Objectives** ● Accurate identification of critical anatomical landmarks and cortical anchorage zones on dry specimens. ● Hands-on execution of standardized site preparation and implant placement techniques. Real-time clinical revision and synthesis of surgical protocols through expert-guided practice.
6 pm to 8 pm	**Prosthetic Protocols in Cortico-Basal Implantology: A Comprehensive Introduction** **Anticipated Learning Outcomes** Upon concluding this lecture, clinicians will possess the proficiency to: ● Synthesize the fundamental principles governing prosthetic rehabilitation within corticobasal frameworks. ● Execute precise and accurate impression-taking techniques. ● Master the registration of maxillomandibular relations for immediate loading protocols.(jaw relation) ● Apply clinical rationale for the selection of appropriate restorative materials. ● Establish effective and streamlined communication with laboratory departments. ● Critically evaluate occlusal principles essential for achieving long-term clinical success.

	● Determination of vertical dimension at rest and at occlusion ● Understanding of occlusion types and implant protected occlusion
8 pm to 9 pm	**Evening Synthesis and Clinical Review** This concluding session provides a structured forum for interactive query resolution, surgical case planning for upcoming procedures, and foundational skill development for participants. **Key Focus Areas** ● **Interactive Q&A:** Collaborative discussion addressing clinical doubts and clarifying procedural nuances. ● **Case Planning:** Systematic review of the following day's cases to align surgical objectives with patient-specific needs. ● **Foundations for Beginners:** An introductory overview of CBCT diagnostic interpretation, core surgical terminology, and essential instrumentation. **Anticipated Learning Outcomes** ● Formulate comprehensive treatment plans for scheduled cases.

Note: Comprehensive printed notes, accompanied by key visuals from the presentation, are provided to facilitate study, review, and ongoing clinical reference.

In-Depth Course Overview Day 2

DAY 2 – LIVE SURGICAL HANDS-ON & PROSTHETIC WORKFLOW

Timing	Lecture Program & Curriculum
08:30 AM – 09:00 AM	Surgical & Preparation
09:00 AM – 09:30 AM	**Pre-Surgical Session** Comprehensive review of clinical cases, OPG/CBCT diagnostic analysis, strategic implant planning, and discussion of surgical objectives.
09:30 AM – 01:00 PM	**Hands-on Surgical Session – Part I**

	Participants will: ● Perform flapless surgical approach ● Identify anatomical landmarks ● Perform osteotomy under supervision ● Learn cortical engagement techniques ● Place Corticobasal implants in patients ● Achieve primary stability and evaluate anchorage *Faculty supervision throughout the procedure.*
01:00 PM – 02:00 PM	Intermission: Lunch Break
02:00 PM – 04:00 PM	**Hands-on Surgical Session – Part II** **Continuation of live surgeries: participants will do** ● **Additional implant placement** ● **Correction of implant angulations** ● **Managing difficult anatomical situations** ● **Discussion of intraoperative complications and solutions** ● **Evaluation of implant stability and load distribution**
04:00 PM – 05:00 PM	**Syncrystallization** **Syncrystallization Protocol – Live Demonstration by Mentor** **Topics covered:** ● **Step-by-step intraoral procedure** ● **Tips and tricks for successful syncrystallization** ● **Common mistakes and how to avoid them** ● **Achieving rigid splinting**
05:00 PM – 05:30 PM	**Management of Undercuts and Prosthetic Preparation** Management of Undercuts and Prosthetic Preparation ● Identification of undercuts ● Techniques for removal and modification ● Creating a prosthetically favourable path of insertion ● Clinical tips for efficient prosthetic workflow

05:30 PM – 06:30 PM	**Immediate Prosthetic Workflow** Immediate Prosthetic Workflow ● Bite registration protocols ● Impression making techniques ○ Conventional (manual) impressions ○ Digital impressions using intraoral scanner ● Selection of impression materials ● Verification procedures ● Transfer of records to laboratory
06:30 PM – 07:00 PM	**Interactive Discussion & Q/A** ● Review of surgeries performed ● Troubleshooting session ● Discussion on complications, mistakes, and clinical pearls
7pm to 8 pm	**Advanced Treatment Planning & Case Strategy** - Strategic analysis and planning for diverse clinical scenarios: - Single-tooth replacement and esthetic rehabilitation. - Segmental restoration protocols. Complex case scenarios and planning.

8 pm onwards dinner

DAY 3 – DIGITAL PROSTHETIC WORKFLOW, 3D PRINTING & PROSTHESIS DELIVERY

Timing	**Lecture Program & Curriculum**
08:30 AM – 09:00 AM	**Recap of Day 2 and Introduction to the Digital Workflow** - Review of surgical and prosthetic records - Overview of complete digital immediate loading workflow - Learning objectives for the day
09:00 AM – 11:00 AM	**CAD Software Training – Part I** - Introduction to CAD software interface - Importing scan data - Alignment and articulation procedures - Defining insertion path and prosthetic parameters - Designing full-arch prostheses - Occlusal concepts in Cortico-Basal Implantology

11:00 AM – 11:15 AM	Intermission: Tea Break
11:15 AM – 01:00 PM	**CAD Software Training – Part II** - Advanced design modifications - Designing gingival contours - Emergence profile considerations - Functional and esthetic optimization - Troubleshooting common design errors
01:00 PM – 02:00 PM	Intermission: Lunch Break
02:00 PM – 03:00 PM	**3D Printing Workflow – Theory and Demonstration** - Fundamentals of 3D printing in dentistry - Types of 3D printers and technologies - Resins and material selection - Printer calibration and maintenance - Slicing software workflow - Printing parameters and optimization
03:00 PM – 03:30 PM	**Demonstration: 3D Printing of Dental Models** - Designing and preparing printable models - Orientation and support generation - Printing parameters for study and working models - Post-processing and finishing of models
03:30 PM – 04:00 PM	**Demonstration: Digital Workflow for Clear Aligners** - Direct aligner printing without thermoforming
04:00 PM – 05:00 PM	**Characterization and Finishing of Printed Prostheses** - Staining and glazing protocols - Gingival characterization techniques - Addition of artificial gingiva - Surface finishing and polishing - Practical hands-on session
05:00 PM – 06:00 PM	**Live Clinical Session – Prosthesis Delivery** - Try-in and passive fit evaluation - Occlusal adjustments - Final insertion of the prosthesis - Torque protocol - Patient instructions and maintenance protocol
06:00 PM – 08:00 PM	**Advanced Lectures and Interactive Discussion** Topics:

	- Recent advancements in 3D printing in dentistry - Future of digital implantology - Material science in printed prostheses - Complications and troubleshooting in immediate loading cases - Long-term maintenance protocols - Case discussions and treatment planning exercises - Open forum, Q&A and sharing of clinical experiences

This revised schedule provides participants with exposure to the complete digital ecosystem in modern dentistry, including implant prosthetics, model printing, and clear aligner workflows.

DAY 4 – ADVANCED CONCEPTS, COMPLICATION MANAGEMENT & VALEDICTORY

Timing	Lecture Program & Curriculum
08:30 AM – 09:00 AM	**Recap and Discussion** Review of previous three days; Discussion of participant queries and unresolved clinical scenarios
09:00 AM – 10:30 AM	**Lecture: Failures in Cortico-Basal Implantology and Their Management** Topics: ● Surgical failures ● Prosthetic failures ● Biological failures ● Mechanical complications ● Reasons for implant failure ● Prevention strategies ● Troubleshooting and salvage protocols ● How to overcome failures and improve long-term success
10:30 AM – 10:45 AM	Intermission: Tea Break
10:45 AM – 11:45 AM	**Lecture: Osteolysis Around Implants** Topics: ● Classification of osteolysis ● Early and late osteolysis ● Septic versus aseptic osteolysis ● Functional and disuse osteolysis

	• Etiology, diagnosis and management • Clinical decision making and treatment protocols
11:45 AM – 01:00 PM	**Lecture: Flapless Zygomatic Implant Placement** 1, Indications and contraindications 2. Anatomy relevant to zygomatic implant placement 3. Surgical planning using CBCT 4. Flapless surgical protocols 5. Cortical engagement strategies 6. Complication avoidance and management 7. Case presentations and clinical videos
01:00 PM – 02:00 PM	Intermission: Lunch Break
02:00 PM – 02:45 PM	**Lecture: Grades of Titanium Used in Implantology** Topics: • Commercially pure titanium grades • Titanium alloys used in implantology • Mechanical properties of various grades • Clinical significance in immediate loading • Surface modifications and their relevance • Selection criteria for implant manufacturing
02:45 PM – 03:45 PM	**Lecture: Consent Forms and Practice Management** Topics: • Importance of informed consent • Essential components of implant consent forms • Documentation protocols • Medico-legal considerations • Photography and record maintenance • Communication with patients • Practice growth strategies • Team management and appointment systems • Patient education and follow-up protocols
03:45 PM – 04:30 PM	**Interactive Session** Discussion of difficult clinical cases; Participant case presentations; Open forum and Q&A session

04:30 PM – 05:00 PM	**Course Feedback Session** Participant feedback; Discussion on future learning pathways
05:00 PM – 06:00 PM	**Certificate Distribution and Valedictory Ceremony** Distribution of certificates; Felicitation of participants; Group photographs; Closing remarks; Vote of thanks