CONTINUING DENTAL EDUCATION

Current Concept Advanced Implant Dentistry

Certificate Series

FORMAT In-Person · 4 Weekly Programs	**SCHEDULE** 4 Days per Program · 16 Days Total + Day 17 (Half-Day): Final Case Presentations
CREDITS Advanced CDE Certificate	**AUDIENCE** Domestic & Intl Clinicians

About this series

Is a four-program, seventeen-day advanced curriculum for restorative and implant clinicians. The series is structured as a progressive clinical journey from advanced diagnosis and digital planning through surgical execution, prosthetic complexity, esthetic zone mastery, full-arch rehabilitation, and complex reconstruction.

Who should attend

- Restorative dentists seeking to deepen clinical expertise across all zones and case types
- Periodontists and oral surgeons expanding into prosthetics, full-arch rehabilitation, and complex bone augmentation
- Prosthodontists integrating advanced digital workflows and surgical knowledge into their implant practice
- International clinicians seeking advanced NYU CDE certification in implant dentistry

Program progression at a glance

PROGRAM	TITLE & CORE FOCUS	CE CERTIFICATE
1	**Implant Foundations, Diagnosis, CBCT Evaluation, Interdisciplinary Treatment Planning & Digital Integration** Comprehensive interdisciplinary diagnosis & treatment planning, Medical & Risk stratification, CBCT treatment planning & pathology, Bone biology - GBR, Soft tissue management – GTR, Surgical fundamentals, AI-assisted digital planning, prosthetic fundamentals & restorative options.	✓ Yes
2	**Surgical Techniques, Sinus Surgery & Provisionalization** Immediate placement · Atraumatic extraction · Lateral window & crestal sinus augmentation · Loading protocols · Digital provisional design	✓ Yes
3	**Implant Prosthetics, Esthetic Zone Mastery & Full-Arch Rehabilitation** Abutment selection · CAD/CAM restorations · Pink esthetics · Papilla management · All-on-X · Digital impression technique	✓ Yes
4	**Complex Reconstruction, Peri-Implant Disease & Advanced Practice Leadership** Vertical augmentation · Zygomatic & pterygoid implants · Peri-implant disease · Emerging technologies · Business development · Concept Certificate Case Presentation	✓ Yes

Stage 1 of 4

Implant Foundations, Diagnosis, CBCT Evaluation, Interdisciplinary Treatment Planning & Digital Integration

CBCT Treatment Planning · Bone Biology – GBR · Soft Tissue Management – GTR · Surgical Fundamentals · AI-Assisted Digital Planning

Days 1 – 4 · 4 Full Days · June 1 – June 4, 2027 / March 7 - March 10, 2028

Learning objectives

- Perform comprehensive extraoral and intraoral examinations, and integrate periodontal, caries, occlusal and esthetic findings into an individualized risk profile
- Determine the prognosis of compromised teeth and make evidence-based decisions to retain, treat or replace them with implants
- Analyze restorative space and collect a complete records protocol, including photography, mounted casts, facebow and VDO assessment
- Interpret periapical, panoramic and CBCT imaging, recognizing imaging errors, anatomic variants and pathology that require referral
- Identify surgical anatomy and assess medical and pharmacologic risk factors, including anticoagulant and antiresorptive therapy, that modify implant treatment
- Develop a prosthetically driven digital implant plan by merging intraoral scans with CBCT data, and design a surgical guide from that plan
- Critically evaluate AI-assisted planning tools, applying clinician verification to automated segmentation, nerve detection and implant positioning
- Apply socket healing biology and a hard and soft tissue decision framework to select appropriate biomaterials, GBR and GTR techniques
- Design and close surgical flaps with correct incision, reflection and suturing techniques, and recognize early post-operative complications
- Select implant designs, loading protocols, provisionalization strategies and prosthetic options, from single units to overdentures and MUA-supported full-arch prostheses

Stage 1 of 4 / Day 1

Clinical Examination, Treatment Planning, Occlusal Analysis, Radiographic & CBCT Diagnosis

June 1, 2027 / March 7, 2028

MORNING SESSION

LECTURE | DIDACTIC CONTENT

1. **Extraoral Clinical Examinations:** facial symmetry and profile, lip support and smile line, TMJ and muscle screening
2. **Intraoral Clinical Examinations:** soft and hard tissue screening, ridge morphology and keratinized mucosa, existing dentition and restorations
3. **Tooth vs.** Implant: Interdisciplinary Prognosis of Compromised Teeth: periodontal, endodontic and restorative prognosis; strategic value of teeth; retention vs. extraction criteria
4. **Preliminary Assessments:** periodontal and peri-implantitis susceptibility, caries risk index, parafunction and occlusal evaluation, esthetic risk assessment
5. **Restorative Space Analysis:** interarch distance, mesiodistal space, crown-to-implant ratio, minimum space by restoration type
6. **Records Protocol:** clinical photography, mounted diagnostic casts, facebow and occlusal records, VDO assessment
7. **Comprehensive Treatment Planning for Complex Interdisciplinary Cases:** phase sequencing, treatment alternatives, patient communication
8. **Traditional Radiographic and CBCT Assessment:** periapical and panoramic limitations, CBCT field-of-view and dose, bone volume and quality evaluation
9. **Recognizing and Troubleshooting Radiographic Imaging Errors:** positioning errors, scatter and metal artifacts, motion, distortion and magnification
10. **Radiographic and CBCT Pathology:** incidental findings, odontogenic and non-odontogenic lesions, sinus pathology, referral criteria
11. **Additional Diagnostic Investigations:** laboratory tests, medical consultations, specialist referrals and timing

AFTERNOON SESSION

CASE PLANNING WORKSHOP

CBCT Interpretation & Virtual Implant Planning Lab. At individual workstations with planning software, participants navigate and reformat CBCT datasets, identify key anatomic landmarks and trace the inferior alveolar nerve and other critical structures. Each participant then places virtual implants in prosthetically driven positions, measuring bone height, width and proximity to vital anatomy to confirm a safe, restorable plan.

Stage 1 of 4 / Day 2

Surgical Anatomy, Medical Risk & Pharmacology, Digital Treatment Planning & Prosthetic Design

June 2, 2027 / March 8, 2028

MORNING SESSION

LECTURE | DIDACTIC CONTENT

1. **Anatomy with Relevance to Implant Surgery:** maxillary and mandibular bone morphology, inferior alveolar and mental nerve pathways, lingual concavities and vascular canals, maxillary sinus anatomy and septa, anatomic danger zones by region
2. **Patient Medical Risk Factors and Contraindications for Implant Therapy:** absolute vs. relative contraindications, diabetes and glycemic control, smoking, head and neck radiation, autoimmune conditions, medically compromised patient management
3. **Pharmacology for the Implant Patient:** premedication and antibiotic prophylaxis, analgesia and anti-inflammatory protocols, anticoagulant and antiplatelet management, bisphosphonates and antiresorptives (MRONJ risk), chemotherapy considerations
4. **Local Anesthesia and Sedation for Implant Surgery:** anatomy-based block and infiltration techniques, anesthetic selection and dosing limits, anxiolysis and conscious sedation options, patient monitoring
5. **Medical Emergency Preparedness in the Implant Practice:** syncope, hypoglycemia, hypertensive crisis, anaphylaxis and uncontrolled bleeding; emergency kit and team protocols; pre-operative vital signs and ASA classification
6. **Digital Data Acquisition for Implant Planning:** CBCT scan protocols for planning, intraoral and model scanning, dual-scan and scan prosthesis techniques, DICOM and STL merge accuracy
7. **Digital Prosthesis Design & Fabrication; Prosthodontic Planning Principles for Implant Placement:** restoratively driven implant positioning, diagnostic wax-up and digital setup, tooth arrangement as the planning reference, translating the prosthetic design into surgical position
8. **Radiographic and Surgical Templates & Surgical Guide Design:** conventional radiographic stents to fully guided surgery, guide support types, sleeve and offset design, fabrication workflow and accuracy considerations
9. **AI-Assisted Digital Planning:** automated CBCT segmentation, nerve detection, AI-proposed implant positioning, clinician verification and current limitations

AFTERNOON SESSION

CASE PLANNING WORKSHOP

Digital Treatment Planning Lab. Participants merge intraoral digital scans with CBCT DICOM files, verifying alignment before designing a prosthetically oriented implant plan from a digital setup. Each participant then designs a surgical guide from that plan, confirming implant position, sleeve placement and clearance from vital structures before fabrication.

Stage 1 of 4 / Day 3

Periodontal considerations, Soft and Hard Tissue Principles; Biomaterials, Soft Tissue Management - GTR, Bone Biology – GBR, & Suturing techniques

June 3, 2027 / March 9, 2028

MORNING SESSION

LECTURE | DIDACTIC CONTENT

1. **Periodontal Assessment:** history of periodontitis, residual pockets and bleeding on probing, staging and grading, prognosis of compromised teeth and the decision to retain, treat or extract
2. **Tissue Integration of Dental Implants:** osseointegration biology, the peri-implant soft tissue seal, differences between the peri-implant and periodontal attachment, factors affecting integration
3. **Biomaterials for Guided Bone and Tissue Regeneration:** autograft, allograft, xenograft and alloplast properties; resorbable vs. non-resorbable membranes; biologic agents and growth factors
4. **Healing of the Extraction Socket:** biologic sequence of socket healing, buccal plate resorption patterns, dimensional changes over time, implications for implant timing
5. **Hard Tissue Decision Framework:** when to augment and when to accept the site, defect classification, short and narrow implant alternatives, staged vs. simultaneous augmentation
6. **Socket Preservation and Guided Bone Regeneration (GBR):** membrane selection and properties, space maintenance principles, fixation, tension-free primary closure in posterior sites
7. **Soft Tissue Management:** guided tissue regeneration (GTR), keratinized tissue requirements, soft tissue augmentation, free gingival graft vs. connective tissue graft technique selection
8. **Flap Design, Reflection and Tissue Management:** incision and flap design principles, full- vs. partial-thickness reflection, atraumatic tissue handling, suture material selection
9. **Tension-Free Flap Closure:** periosteal releasing incisions, horizontal mattress and interrupted suture placement, achieving passive primary closure over grafted sites
10. **Healing:** Normal vs. Early Post-Operative Complications: expected healing timeline, wound dehiscence, membrane exposure, infection and graft loss, early intervention protocols
11. **Periodontal Risk, Peri-Implantitis Susceptibility and Maintenance:** periodontitis history as a risk factor, keratinized tissue and hygiene access, recall intervals, supportive maintenance protocols

AFTERNOON SESSION

HANDS-ON | CLINICAL WORKSHOP

Osteotomy & implant placement lab: Working on bone density models ranging from Type II to Type IV, participants complete full osteotomy sequences, comparing tactile feedback, torque, and depth control, and apply undersizing and condensation drilling for low-density bone. Participants then prepare posterior typodont sites from pilot to final drill, verify alignment with paralleling pins, seat implants to target insertion torque, and complete cover screw placement and primary closure. Finally, they select healing abutments for a one-stage protocol and measure implant stability with Osstell RFA, interpreting ISQ readings by bone type. Socket preservation & regeneration lab: Working on typodont models with a range of extraction socket bony defects, participants select membranes and place particulate bone graft to perform socket preservation using GBR and GTR principles. Participants then design and reflect tissue flaps, managing tissue to achieve passive coverage, and complete closure with appropriate suturing techniques.

Stage 1 of 4 / Day 4

Implant Foundations: Prosthetic considerations, Provisionalization, Soft tissue development during healing & Clinical decision-making

June 4, 2027 / March 10, 2028

MORNING SESSION

LECTURE | DIDACTIC CONTENT

1. **Role of Implants in Contemporary Dentistry:** evolution of implant therapy, current survival and success data, implants within comprehensive care, patient expectations and evidence-based indications
2. **Implant Designs and Characteristics:** macro-design and thread geometry, surface technologies and biologic effects, internal vs. external connections, selecting a design for bone quality and site
3. **Implant-Supported vs.** Conventional Fixed Dental Prostheses: comparative survival and complication rates, preservation of adjacent teeth, cost and time considerations, case-based selection criteria
4. **Prosthetic Planning Principles from Basic to Complex:** restoratively driven planning, single-unit to full-arch progression, restorative space and implant number, defining the prosthetic endpoint before surgery
5. **Occlusion and Fixed Implant Prostheses:** implant-protected occlusion, differences in tooth vs. implant proprioception, occlusal scheme by prosthesis type, managing parafunction
6. **Treatment Planning for Partially and Completely Edentulous Arches:** implant number and distribution, fixed vs. removable options, sequencing in partially dentate patients, full-arch planning considerations
7. **Locator vs.** Bar Overdenture Considerations: indications for each attachment type, implant number and parallelism, retention and maintenance demands, restorative space requirements
8. **Implant Provisionalization and Soft Tissue Development:** provisional options by clinical scenario, screw-retained provisional design, emergence profile shaping, tissue maturation before final impression
9. **Complex Care and Staged Treatment Considerations:** phasing surgical and restorative care, interim prosthesis management, coordinating interdisciplinary treatment, patient communication across extended timelines
10. **Immediate Loading and Restorations in Implant Dentistry:** primary stability thresholds, immediate vs. early vs. conventional loading, case selection, immediate provisional and definitive restoration workflow

AFTERNOON SESSION

HANDS-ON | CLINICAL WORKSHOP

Prosthetic Components Lab. Working on typodont models, participants progress from immediate placement temporization techniques through single-unit implant restorations, handling impression copings, abutments and screw-retained provisionals. The session advances to complex multi-unit abutment (MUA) supported prosthetics, covering component selection, angulation correction and final prosthesis assembly.

Stage 2 of 4

Surgical Techniques, Sinus Surgery & Provisionalization

Immediate Placement · Atraumatic Extraction · Sinus Augmentation · Loading Protocols · Digital Provisional Design

Days 5 – 8 · 4 Full Days · Nov 10 – Nov 13, 2027 / May 30 – June 2, 2028

Learning objectives

- Select appropriate candidates for immediate implant placement by assessing soft tissue phenotype, buccal plate integrity and socket morphology in anterior and molar sites
- Perform atraumatic extraction and immediate implant placement in ideal 3D position, managing the buccal gap with grafting, membrane adaptation and connective tissue grafting where indicated
- Choose between immediate, early and delayed placement in posterior sites, and apply osseodensification for site preparation, ridge expansion and crestal sinus elevation
- Assess the maxillary sinus pre-operatively on CBCT, recognize pathology and anatomic risks, and determine when ENT referral is required before augmentation
- Execute lateral window and crestal sinus augmentation, select graft materials, manage membrane perforations, and decide between simultaneous and staged placement
- Evaluate short, ultra-short and tilted implants as evidence-based alternatives to sinus augmentation
- Measure implant stability with ISQ and insertion torque, and translate those values into immediate, early or conventional loading decisions
- Design screw-retained provisionals in CAD, develop emergence profiles through sequential tissue shaping, and manage occlusion on immediately loaded restorations
- Prevent, recognize and manage surgical, neurosensory, mechanical and early biologic complications, including implant removal and retreatment planning
- Apply risk-based decision-making and maintenance protocols to support long-term implant success, knowing when to refer, retreat or stop

Stage 2 of 4 / Day 1

Immediate Implant Placement, Soft Tissue Phenotypes, Atraumatic Extraction, Esthetic Zone Management & Osseodensification

Nov 10, 2027 / May 30, 2028

MORNING SESSION

LECTURE | DIDACTIC CONTENT

1. **Decision-Making for Immediate Implant Placement:** indications, contraindications & site selection.
2. **Soft Tissue Phenotype & Connective Tissue Grafting:** assessing thin vs. thick phenotypes. Connective tissue considerations and delayed grafting verses at the time of implant placement.
3. **Atraumatic Extraction Principles:** periotomes, luxators, rotational force vectors, root sectioning
4. **Buccal Plate Assessment and Management:** pre-operative CBCT, intraoperative integrity verification, response to fenestration.
5. **Ideal 3D Implant Positioning in the Esthetic Zone:** palatal angulation, subcrestal depth, mesiodistal axis, relationship to socket walls.
6. **Immediate Implant Placement Bone Grafting and Buccal Void Management:** biologics selection, membrane adaptation, primary vs. secondary closure.
7. **Immediate Implants in Molar Sites:** placement in the interradicular septum, socket classification for molars, managing the gap around a wide socket, and when to wait and place early instead
8. **Early Placement in Posterior Sites (4 to 8 weeks post-extraction):** timing criteria and outcomes vs. immediate placement
9. **Osseodensification - Building Bone Density Through Non-Subtractive Site Preparation:** posterior maxilla, ridge expansion, and crestal sinus elevation, and limitations.

AFTERNOON SESSION

HANDS-ON | CLINICAL WORKSHOP

Atraumatic socket preservation & regeneration lab: Atraumatic extraction exercise on typodont models, addressing socket defects and immediate implant placement preserving the buccal plate while preparing an osteotomy in the anterior and posterior areas of fresh extraction sockets, engaging available bone, implant placement, buccal gap grafting, membrane adaptation with closure and abutment selection.

Stage 2 of 4 / Day 2

Sinus Augmentation: Assessment, Posterior Maxillary Reconstruction Techniques, Graft Biology & Complication Management

Nov 11, 2027 / May 31, 2028

MORNING SESSION

LECTURE | DIDACTIC CONTENT

1. **Pre-Operative Sinus Assessment & ENT Collaboration:** CBCT evaluation of septa, posterior superior alveolar artery course, mucosal thickening, ostium patency and pre-existing sinus pathology; criteria for ENT referral and clearance before augmentation.
2. **Schneiderian Membrane Biology:** healing capacity, perforation thresholds, repair protocols, consequences of unrecognized violation.
3. **Lateral Window Sinus Lift:** piezoelectric vs. rotary antrostomy, window dimensions, membrane elevation, perforation management.
4. **Simultaneous vs.** Staged Implant Placement After Sinus Augmentation: residual bone height thresholds, primary stability requirements, graft maturation timelines, and when to re-enter for placement and loading.
5. **Crestal (Transcrestal) Sinus Lift:** Summers osteotome, osseodensification, hydraulic and balloon-assisted elevation; indications, height limits, evidence.
6. **Graft Material Selection:** autograft, allograft, xenograft, alloplast; volumetric stability, resorption and implant survival by material.
7. **Sinus Augmentation Complications:** perforation, infection, sinusitis, graft failure, implant displacement.
8. **Alternatives to Sinus Augmentation:** Short, Ultra short and Tilted Implants. Crown-to-implant ratio, survival evidence.

AFTERNOON SESSION

HANDS-ON | CLINICAL WORKSHOP

Lateral window antrostomy exercise on typodont models. Schneiderian membrane elevation. Perforation repair simulation with select membranes, and grafting. Crestal sinus lift with elevation and implant placement.

Stage 2 of 4 / Day 3

Loading Protocols, Provisionalization & Digital Provisional Workflow

Nov 12, 2027 / June 1, 2028

MORNING SESSION

LECTURE | DIDACTIC CONTENT

1. **Biologic Principles of Implant Loading:** osseointegration timeline, bone remodeling, primary stability, micromotion.
2. **Measuring Implant Stability:** ISQ, Insertion Torque & Clinical Thresholds: resonance frequency analysis, torque values, stability dip timing, and how the readings translate into loading decisions.
3. **Evidence-Based Loading Protocol Selection:** immediate, early and conventional loading by stability, bone quality, site and prosthetic design.
4. **Provisionalization Strategies by Clinical Scenario:** anterior esthetic zone, posterior single units, tissue conditioning.
5. **Emergence Profile Development:** biologic and prosthetic principles of sequential soft tissue shaping.
6. **Transition to Definitive Restorations:** timing, digital vs. conventional impressions, laboratory communication.
7. **Screw-Retained vs.** Cement-Retained Provisionals: retrievability, risk of residual cement, angled screw channels, and access channel management
8. **Occlusal Management of Immediately Loaded Provisionals:** occlusion considerations, removing excursive contacts, splinting, diet instructions, & monitoring during healing phase.

AFTERNOON SESSION

CASE PLANNING WORKSHOP

Participants import a patient STL scan and design screw-retained provisionals in CAD software: an anterior unit evaluated for emergence profile and screw access, and a molar unit planned for crown morphology, occlusal contacts, and access hole position. The session closes with a complete digital lab prescription.

Stage 2 of 4 / Day 4

Complication Management, Long-Term Outcomes & Clinical Decision-Making

Nov 13, 2027 / Jun 2, 2028

MORNING SESSION

LECTURE | DIDACTIC CONTENT

1. **Prevention and Recognition of Surgical Complications:** buccal plate perforation, guide-related errors, hemorrhage, sinus complications, vital structures.
2. **Early Implant Failure:** diagnosis, biologic and mechanical etiologies, explantation, site management, reimplantation criteria.
3. **Mechanical Complications:** screw loosening and fracture, abutment complications, prosthetic fracture, management.
4. **Peri-Implant Mucositis and Peri-Implantitis:** overview as late biologic risks.
5. **Long-Term Success and Survival:** outcomes by site, bone quality, loading protocol, prosthetic design and patient risk factors
6. **Neurosensory Complications:** Prevention, Diagnosis & Management: inferior alveolar and lingual nerve injury, early recognition, implant backout timing, pharmacologic management, referral criteria.
7. **Implant Removal & Retreatment Strategies:** counter-torque, trephine and piezoelectric techniques. Site preservation & planning the second attempt.
8. **Clinical Decision-Making Under Uncertainty:** weighing evidence & risk stratification. When to refer, when to retreat, when to stop.
9. **Implant Maintenance & Recare Protocols:** risk-based recare intervals, probing & radiographic baselines, prosthesis removal & cleaning schedules, patient home care to prevent long-term biologic and mechanical complications.

AFTERNOON SESSION

CASE REVIEW WORKSHOP

Faculty presents surgical complication and sinus augmentation cases, work through what went wrong, what was recoverable, and how they would plan differently. The session closes with complex provisionalization cases covering diagnosis, treatment planning, and sequencing through immediate provisionalization, multi-unit restorations, and full-arch conversion. Participants discuss each case interactively with the faculty and weigh alternative treatment options.

AFTER HOURS · OPTIONAL · INFORMATION SESSION

Certificate Case Presentation Review. An optional session for participants pursuing the Advanced Implant Dentistry Certificate. Faculty will review the case presentation format, required documentation, and evaluation criteria, and answer questions about case selection and preparation.

Stage 3 of 4

Implant Prosthetics, Esthetic Zone Mastery & Full-Arch Rehabilitation

Abutment Selection · CAD/CAM Restorations · Pink Esthetics · Papilla Management · All-on-X · Digital Impression Technique

Days 9 – 12 · 4 Full Days · Oct 9 - Oct 12, 2028

Learning objectives

- Evaluate implant-abutment connection design, platform switching and implant level selection for their influence on crestal bone and long-term soft tissue stability
- Select stock, custom and Ti-base abutments and restorative materials based on esthetic demand, occlusal loading, tissue response and manufacturing workflow
- Choose between screw-retained and cement-retained restorations using current evidence, and apply correct screw mechanics and angulated screw channel principles
- Capture and verify accurate digital implant impressions, recognizing and correcting scanning errors and comparing outcomes with conventional techniques
- Plan and manage esthetic zone implant cases using phenotype assessment, papilla predictors, adjacent periodontal considerations and interdisciplinary input
- Develop emergence profiles through provisional tissue sculpting, and manage soft tissue deficiencies with connective tissue grafting and tension-free flap techniques
- Plan full-arch rehabilitation by selecting fixed or removable designs, optimizing A-P spread and cantilever length, and choosing appropriate prosthetic materials
- Execute an immediate conversion workflow with passive fit verification, and establish maintenance protocols to prevent full-arch prosthetic complications
- Integrate CBCT, intraoral and facial scanning into a prosthetically driven digital workflow, applying static, stackable, dynamic and robotic guidance appropriately to case complexity
- Critically assess the accuracy, limitations and validation of guided surgery, 3D printing and AI tools before adopting them in practice

Stage 3 of 4 / Day 1

Implant-Prosthetic Interface, Digital Restorative Workflow & Material Science

Oct 9, 2028

MORNING SESSION

LECTURE | DIDACTIC CONTENT

1. **Implant-Prosthetic Interface Biomechanics:** connection geometry, rotational freedom, micro-gap biology; influence of implant-abutment design on long-term tissue stability
2. **Abutment Selection:** stock vs. custom; titanium, zirconia and PEEK; material effects on peri-implant bone and soft tissue health
3. **Ti-Base (Hybrid) Abutments:** indications, chimney height and design, bonding protocols for zirconia and lithium disilicate, mechanical outcomes vs. one-piece custom abutments
4. **Custom Abutment Design Principles:** emergence profile development, margin location, angulation correction, restorative space management, CAD design considerations
5. **Screw-Retained vs.** Cement-Retained Restorations: updated clinical evidence, cement selection risks, retrievability, practical advantages of screw-retained design
6. **Prosthetic Screw Mechanics and Angulated Screw Channels:** preload and torque protocols, screw materials and coatings, retightening, angulation limits and access-channel correction
7. **Digital Implant Impressions:** scan body selection and seating, intraoral scanning accuracy for single unit vs. multi-unit cases, stitching error, verification of the digital model
8. **CAD/CAM Implant Restorative Materials:** monolithic zirconia, layered ceramics, lithium disilicate, hybrid materials; selection by esthetic demand, occlusal loading and manufacturing workflow
9. **Design-to-Delivery Manufacturing Workflow:** chairside vs. laboratory vs. centralized milling, 3D-printed models with analogs and printed restorative resins, fit verification and quality control before delivery

AFTERNOON SESSION

HANDS-ON | CLINICAL WORKSHOP

Digital Implant Impression Lab: Working on posterior single-unit and multi-unit anterior implant typodont models, participants select and seat the correct scan body for each implant system and connection type, verifying seating before capturing intraoral scans. Each participant then reviews their scans for shadow zones, missed anatomy and registration drift, and corrects errors through targeted rescanning. The session closes with a side-by-side comparison of a traditional polyvinyl implant-level impression and a digital scan of the same typodont site, evaluating accuracy, detail and workflow efficiency.

Stage 3 of 4 / Day 2

Esthetic Zone Mastery, Soft Tissue Management and Pink Esthetics

Oct 10, 2028

MORNING SESSION

LECTURE | DIDACTIC CONTENT

1. **Biologic Principles of the Peri-Implant Esthetic Zone:** gingival phenotype, crestal bone stability, biologic width (supracrestal tissue attachment), soft tissue response around implants
2. **Platform Switching and Tissue-Level vs.** Bone-Level Implants: biologic rationale, crestal bone preservation, restorative workflow considerations
3. **Interdisciplinary Esthetic Treatment Planning:** orthodontic root positioning, restorative space management, lip dynamics, smile design, phonetic considerations
4. **Pink Esthetics:** Papilla Preservation and Reconstruction: Jemt papilla index, bone level predictors, surgical and prosthetic strategies for papilla management
5. **Multiple Adjacent Implants in the Esthetic Zone:** inter-implant spacing, papilla preservation, restorative limitations, the 3-mm interproximal bone concept
6. **Emergence Profile Development and Soft Tissue Sculpting:** provisional restoration design, tissue compression protocols, ovate pontic concepts, timing of tissue maturation
7. **Peri-Implant Mucosal Color and Restorative Material Selection:** mucosal discoloration, mucosal thickness thresholds, titanium vs. zirconia vs. gold-hued abutments, shade matching of crown and soft tissue
8. **Management of Esthetic Complications:** gingival recession, tissue deficiencies, soft tissue augmentation strategies
9. **Periodontal Considerations Adjacent to Esthetic Zone Implants:** periodontal health and attachment level of neighboring teeth as papilla determinants, tooth vs. implant decision-making for periodontally compromised anterior teeth, crown lengthening and altered passive eruption, gingival margin harmonization between natural teeth and implant restorations

AFTERNOON SESSION

HANDS-ON | CLINICAL WORKSHOP

Esthetic Zone Soft Tissue Surgery & Suturing Lab: Working on typodont models and tissue pads, participants harvest and prepare a palatal connective tissue graft to target thickness and dimensions, create a tunnel by blunt dissection and suture the graft in place for esthetic zone volume augmentation. Participants next practice periosteal releasing incisions with horizontal mattress and interrupted suturing for tension-free flap closure. The session closes with probe-based soft tissue thickness measurements before and after simulation, interpreting what the change means clinically for phenotype modification outcomes.

Stage 3 of 4 / Day 3

Full-Arch Rehabilitation, Immediate Conversion & Prosthetic Biomechanics

Oct 11, 2028

MORNING SESSION

LECTURE | DIDACTIC CONTENT

1. **Patient Selection and Treatment Planning for Full-Arch Rehabilitation:** indications, diagnostic workflow, prosthetic goals, surgical planning principles
2. **Fixed vs.** Removable Full-Arch Solutions: FP1, FP2 and FP3 prosthesis classification, implant overdentures with attachment and bar options, lip support, hygiene access and cost considerations in prosthesis selection
3. **Full-Arch Biomechanics:** anterior-posterior spread, implant distribution, cantilever control, occlusal load management
4. **All-on-X Concepts:** evidence-based indications, implant distribution strategies, long-term clinical outcomes
5. **Tilted Posterior Implants and Multi-Unit Abutments:** surgical rationale, prosthetic implications, restorative workflow
6. **Alveoloplasty and Ridge Modification:** prosthetic space creation, ridge leveling, soft tissue management before immediate conversion
7. **Immediate Conversion and Definitive Prosthetic Workflow:** digital planning, passive fit verification, framework selection, transition prosthesis fabrication
8. **Full-Arch Prosthetic Materials:** monolithic zirconia, titanium bar with acrylic or composite, PMMA, and PEEK frameworks; fracture resistance, repairability, opposing dentition and parafunction
9. **Maintenance and Prosthetic Complications of Full-Arch Restorations:** cleansable intaglio design, recall and removal protocols, screw loosening, prosthetic fracture and wear, peri-implant mucositis under full-arch prostheses

AFTERNOON SESSION

CASE REVIEW WORKSHOP

Full-Arch Case Review & Digital Planning Demonstration. Faculty presents a series of All-on-X cases, and participants analyze implant positioning decisions, A-P spread calculations, cantilever lengths and prosthetic design outcomes. Groups then review cases with documented passive fit failures, interpreting Sheffield test findings and debating corrective strategies and remake decisions. The session closes with a live faculty demonstration of prosthetically driven virtual planning, from implant positioning and A-P spread optimization through conversion prosthesis design. Participants discuss each case interactively with the faculty and weigh alternative treatment options.

Stage 3 of 4 / Day 4

Guided Surgery, Digital Workflow & Advanced Clinical Integration

Oct 12, 2028

MORNING SESSION

LECTURE | DIDACTIC CONTENT

1. **Digital Workflow Integration:** combining CBCT, intraoral scanning, prosthetically driven planning, surgical guide design and restorative workflows from diagnosis to delivery
2. **The Virtual Patient:** Facial Scanning and Photogrammetry: face scanner integration with CBCT and intraoral data, smile and lip-line driven planning, photogrammetry for full-arch implant position capture
3. **Static Guided Surgery:** tooth-, bone- and mucosa-supported guides; accuracy, tolerance stacking, indications, limitations, case selection
4. **Stackable Guides in Implant Dentistry:** fixation-pin base guides, bone reduction, osteotomy and prosthetic positioning guides; full-arch immediate conversion workflow, accuracy and design pitfalls
5. **Guided Surgery in Complex Clinical Situations:** posterior limited access, flapless esthetic procedures, immediate implant placement
6. **Dynamic Navigation Systems (X-Guide, Navident):** workflow, calibration, intraoperative navigation, comparison with static guidance
7. **Robotic-Assisted Implant Surgery:** haptic-guided systems (e.g., Yomi), workflow and learning curve, accuracy evidence, cost and practice integration compared with static and dynamic guidance
8. **Three-Dimensional Printing in Implant Dentistry:** surgical guides, diagnostic models, provisionals, materials, accuracy standards, in-office vs. laboratory production
9. **Artificial Intelligence in Implant Dentistry:** automated diagnostics, nerve tracing, bone density analysis, treatment planning support, current limitations and validation

AFTERNOON SESSION

CASE REVIEW WORKSHOP

Faculty presents a series of high-complexity anterior cases, and participants analyze papilla management decisions, tissue phenotype challenges, multi-unit implant spacing and documented final ceramic outcomes. Groups then work through All-on-X cases, evaluating A-P spread, cantilever length, passive fit verification and prosthetic design choices. The session closes with static and dynamic navigation cases with documented accuracy data, discussing tolerance stacking, intraoperative deviation and corrective strategies. Participants discuss each case interactively with the faculty and weigh alternative treatment options.

AFTER HOURS · OPTIONAL · INFORMATION SESSION

Public Speaking and Professional Presentation Skills. An optional session focused on speaking with confidence and engaging an audience through effective voice, pacing, and body language. Participants will apply these skills directly to their certificate case presentations. The session also strengthens everyday communication with patients and colleagues, prepares participants to interview with confidence for career opportunities, and offers guidance for those interested in teaching, lecturing, or a broader public speaking career.

Stage 4 of 4

Complex Reconstruction, Peri-Implant Disease & Advanced Practice Leadership

Vertical Augmentation · Zygomatic & Pterygoid Implants · Peri-Implant Disease · Emerging Technologies · Business Development

Days 13 – 16 + Day 17 Case Presentations · 4 Full Days + Half-Day · Nov 27 – Dec 1, 2028 (Half day) Case Presentations

Learning objectives

- Classify complex ridge deficiencies and select between bone augmentation and modified implant strategies based on defect morphology, patient risk factors, and current evidence.
- Apply the biologic principles of guided bone regeneration, including graft and membrane selection, to perform horizontal and vertical augmentation, ridge split, and ridge expansion procedures.
- Compare short implants, augmentation, and pterygoid and zygomatic implants for the atrophic posterior ridge using evidence-based decision rules.
- Describe the biology of peri-implant tissues and explain why they are more vulnerable to inflammatory breakdown than tissues around natural teeth.
- Diagnose peri-implant mucositis and peri-implantitis using current case definitions, probing protocols, and radiographic assessment.
- Develop non-surgical, surgical, and explantation treatment plans for peri-implant disease, and implement maintenance, prosthetic design, and soft tissue strategies that prevent recurrence.
- Critically appraise current literature and emerging technologies, including AI, robotics, regenerative biologics, and new materials, and apply a structured framework for their responsible adoption in practice.
- Lead an interdisciplinary implant team while addressing the ethical, medicolegal, and quality-improvement responsibilities of advanced implant practice.
- Formulate treatment plans for the severely atrophic maxilla using the ZAGA classification, CBCT-based and digital planning, and appropriate zygomatic, pterygoid, or combined approaches, including perioperative sinus management and rescue strategies for complications.
- Present a fully documented implant case demonstrating sound clinical reasoning, treatment planning, surgical and prosthetic execution, and outcome assessment, and create a 12-month action plan for clinical and practice development.

Stage 4 of 4 / Day 1

Advanced Bone Augmentation & Complex Site Development

Nov 27, 2028

MORNING SESSION

LECTURE | DIDACTIC CONTENT

1. **Treatment Planning for Complex Ridge Deficiencies:** defect classification, augmentation versus implant strategy modification, patient selection, risk assessment, and evidence-based decision-making
2. **Biologic Principles of Guided Bone Regeneration and Membrane Selection:** PASS principles, healing biology, and resorbable versus non-resorbable membranes
3. **Horizontal and Vertical GBR:** Technique and Staged Management: flap design, space maintenance, fixation techniques, simultaneous versus staged protocols, and complications
4. **Bone Graft Selection for Ridge Augmentation:** autogenous bone, allograft, xenograft, synthetic substitutes, biologics, and pairing grafts with membranes
5. **Evidence for Posterior Reconstruction:** vertical augmentation of the posterior mandible, sinus augmentation, and graft and biologic outcomes
6. **Ridge Split and Ridge Expansion:** indications, piezoelectric osteotomy, sequential expansion, simultaneous versus staged placement, and clinical limitations
7. **The Atrophic Posterior Ridge I:** Short Implants versus Augmentation: evidence, prosthetic considerations, and decision rules based on residual bone height
8. **The Atrophic Posterior Ridge II:** Pterygoid and Zygomatic Implants: surgical anatomy, outcomes, and the comparative decision framework for severely deficient ridges

AFTERNOON SESSION

HANDS-ON | CLINICAL WORKSHOP

Guided Bone Regeneration with Tenting Screws and Ridge Split with Implant Placement. Guided bone regeneration performed on posterior mandibular typodonts with non-contained, combined horizontal and vertical defects covered by simulated soft tissue. Titanium tenting screws are placed to support the barrier membrane, which is then secured with membrane tacks. The screws, tacks, and membrane contain the bone graft and preserve the planned ridge height and contour during healing. Ridge split with implant placement. Performed on a narrow posterior typodont ridge, 3–5 mm wide, with a simulated cancellous core. The ridge is split using piezoelectric instrumentation and expanded sequentially with graduated spreaders. Osteotomies are then created in the expanded ridge and dental implants are placed.

Stage 4 of 4 / Day 2

Peri-Implant Biology, Disease Prevention & Surgical Management

Nov 28, 2028

MORNING SESSION

LECTURE | DIDACTIC CONTENT

1. **Biology of Peri-Implant Tissue Health.** The structure and function of the peri-implant mucosal seal, biologic width dimensions, and how implant surface characteristics affect tissue integration. Host response differences between implants and natural teeth are compared to explain why peri-implant tissues are more vulnerable to inflammatory breakdown.
2. **Prevention and Maintenance of Peri-Implant Health.** Principles of supportive implant therapy, including risk-based maintenance intervals and patient risk factors such as periodontitis history, smoking, and diabetes. Biofilm control and long-term preventive protocols are presented.
3. **Diagnosis and Classification of Peri-Implant Diseases.** Case definitions for peri-implant health, mucositis, and peri-implantitis, with probing protocols, radiographic assessment, and defect characterization as the foundation for diagnosis and treatment planning.
4. **Non-Surgical Management of Peri-Implant Mucositis and Early Peri-Implantitis.** Evidence-based debridement protocols and adjunctive therapies, including antimicrobials and lasers. Emphasis on realistic outcomes and maintenance to prevent recurrence.
5. **Surgical Management of Peri-Implantitis.** Regenerative and resective approaches based on defect morphology. Surface decontamination methods, regenerative materials, and long-term outcome evidence are critically evaluated.
6. **Implant Explantation and Site Redevelopment.** Indications and techniques for removing failing implants, post-explant site management, and ridge reconstruction, including criteria for when and how to place a replacement implant.
7. **Prosthetic Design and Restorative Factors in Peri-Implant Disease.** How restorative decisions affect peri-implant health, including emergence profile and angle, cleansability, screw- versus cement-retention, and residual cement. Participants will learn design principles that reduce biofilm retention and support tissue stability.
8. **Peri-Implant Soft Tissue Augmentation for Long-Term Health.** The role of keratinized mucosa width and mucosal thickness in preventing disease and maintaining esthetics. Indications, timing, and techniques for soft tissue grafting with autogenous grafts and substitutes, with supporting evidence.

AFTERNOON SESSION

CASE REVIEW WORKSHOP

Surgical Management of Peri-Implantitis. Faculty will present clinical cases illustrating the surgical treatment of peri-implantitis. Cases will demonstrate flap design for defect access, osseous recontouring, and implantoplasty in resective therapy; a sequential surface decontamination protocol combining mechanical debridement, EDTA, chlorhexidine, and photodynamic therapy; and regenerative treatment of angular defects with bone grafting, membrane fixation, and primary closure. Discussion will focus on case selection, defect-based decision-making, and treatment outcomes. Participants discuss each case interactively with the faculty and weigh alternative treatment options.

Stage 4 of 4 / Day 3

Future Directions, Emerging Technologies & Advanced Practice Leadership

Nov 29, 2028

MORNING SESSION

LECTURE | DIDACTIC CONTENT

1. **Current Evidence Update.** Clinically significant publications in implant surgery, digital workflows, esthetic rehabilitation, and full-arch treatment, critically appraised for their impact on treatment protocols and clinical decision-making.
2. **Emerging Digital Technologies.** The expanding role of artificial intelligence, robotic-assisted surgery, advanced diagnostics, and workflow automation. Capabilities, limitations, and supporting evidence are discussed in the context of everyday implant practice.
3. **Regenerative Innovations.** Platelet-rich fibrin (PRF), biologics, growth factors, and emerging regenerative therapies. Biological rationale, clinical applications, and current evidence are reviewed to guide appropriate use.
4. **Next-Generation Implant Materials and Restorative Technologies.** Advances in surface modifications, patient-specific prosthetics, additive manufacturing, and future biomaterials, and how they may improve osseointegration, restorative precision, and long-term outcomes.
5. **Translating Innovation into Clinical Practice.** A framework for evaluating new evidence and technologies before adoption. Return on investment, practice integration, team training, and implementation strategies are addressed to support responsible adoption.
6. **Leading the Interdisciplinary Implant Team.** The clinician's role in coordinating surgical, restorative, laboratory, and auxiliary team members. Communication systems, case coordination, and team training are discussed to improve efficiency and outcomes in complex cases.
7. **Ethical, Legal, and Risk Management Considerations in Emerging Implant Practice.** The ethical and medicolegal implications of new technologies, including informed consent, documentation, data privacy, and scope of practice, with strategies for minimizing liability while offering innovative treatment.
8. **Outcomes Measurement and Quality Improvement in Implant Practice.** Methods for tracking clinical outcomes, complications, and patient-reported measures. Participants will learn to use practice data to refine protocols, support evidence-based decisions, and drive continuous quality improvement.

AFTERNOON SESSION

PROFESSIONAL DEVELOPMENT SEMINAR

Building and Leading an Advanced Implant Practice. This seminar equips clinicians with the business, leadership, and communication skills needed to grow a successful advanced implant practice. Topics include defining an ideal case mix and market position with a realistic 12- to 48-month growth framework, developing a sound fee strategy, and presenting complex treatment with confidence and transparency. Participants will learn how to build specialist referral networks that improve outcomes and generate consistent advanced case flow, lead and motivate a clinical team, and establish themselves as recognized implant authorities. Advanced patient communication is addressed through consultation frameworks for complex cases, expectation setting, diplomatic management of complications, and handling dissatisfied patients. The seminar concludes with a strategic planning workshop in which each participant drafts a personal action plan, defining one clinical implementation goal and one practice development goal with specific milestones for the 12 months following the series.

Stage 4 of 4 / Day 4

Advanced Implant Rehabilitation of the Severely Atrophic Maxilla - Zygomatic & Pterygoid Implant Concepts

Nov 30, 2028

MORNING SESSION

LECTURE | DIDACTIC CONTENT

1. **Patient Selection for the Severely Atrophic Maxilla.** A treatment planning algorithm comparing bone grafting, short, pterygoid, zygomatic, and hybrid approaches. Patient factors, anatomic limitations, and evidence-based outcomes are reviewed to guide selection of the most predictable option.
2. **ZAGA Classification.** The Zygoma Anatomy-Guided Approach (ZAGA) and its role in individualized zygomatic implant planning, including anatomical variations, CBCT interpretation, and selection of an antral, extrasinus, or hybrid approach.
3. **Zygomatic Implant Surgery.** Surgical protocol covering access, osteotomy preparation, implant trajectory, and Schneiderian membrane management, along with immediate loading and prosthetic considerations for stable, functional outcomes.
4. **Pterygoid Implant Concepts.** Pterygomaxillary anatomy and CBCT-based planning, osteotomy trajectory, prosthetic emergence, and long-term outcomes, establishing the role of pterygoid implants in posterior maxillary rehabilitation.
5. **Combined Zygomatic-Pterygoid Rehabilitation.** Biomechanics and prosthetic design of full-arch rehabilitation combining zygomatic and pterygoid implants, with patient selection, complication management, and long-term maintenance for the most challenging maxillary cases.
6. **Digital Planning and Navigation in Zygomatic and Pterygoid Surgery.** Virtual planning, static guides, dynamic navigation, and robotic assistance compared for accuracy, learning curve, and clinical limitations to improve surgical precision and safety.
7. **Maxillary Sinus Health and Perioperative Management.** Pre-surgical sinus evaluation, including existing pathology and ENT collaboration, plus anesthesia and sedation options, perioperative medications, and postoperative protocols to reduce sinus-related and surgical complications.
8. **Late Complications and Rescue Strategies for Failed Zygomatic Implants.** Long-term complications such as sinusitis, oroantral communication, soft tissue dehiscence, and implant failure. Diagnosis, explantation techniques, and rescue options, including quad zygoma and alternative remote anchorage, are presented.

AFTERNOON SESSION

CASE PLANNING WORKSHOP

Planning and Clinical Decision Making for Zygomatic and Pterygoid Rehabilitation. This workshop provides practical experience in CBCT-based planning for zygomatic and pterygoid cases, including identification of key anatomical landmarks, implant trajectory planning, and the virtual surgical workflow. Faculty will present a clinical case series of zygomatic, pterygoid, and hybrid full-arch rehabilitations, leading discussion of treatment planning, complication analysis, and long-term outcomes. The workshop concludes with a review of referral pathways and scope of practice, addressing appropriate case selection, informed consent, collaborative treatment planning, and building competency through mentorship and advanced training.

STAGE 4 OF 4 / DAY 5

Concept Certificate Case Presentations & Series Completion Ceremony

Dec 1, 2028

CASE PRESENTATIONS | CONCEPT CERTIFICATE

Morning session · 9am – 12pm

Please note that day 5 is optional and only those completing all 4 sessions are required to attend and complete a case presentation.

The series culminates in formal case presentations. Each participant presents a selected implant case organized around three areas: clinical reasoning and diagnosis, treatment planning and sequencing, and surgical and prosthetic treatment with outcome. Required documentation includes the patient's medical assessment and ASA classification, current medications and their relevance to the planned procedures, full-mouth periodontal charting, pre- and post-treatment radiographs, and CBCT imaging with assessment for any evidence of pathology.

Presentations must also include intraoral and extraoral photographs, clinical photographs of the surgical and restorative phases, documentation of any postoperative complications, and additional supporting visual aids as appropriate. Cases are evaluated holistically, with emphasis on diagnostic quality, completeness of documentation, clarity of treatment rationale, and evidence of outcome assessment. The faculty panel provides structured verbal feedback immediately following each presentation.

Implant Symposium

March 13 – 14, 2028