USC Comprehensive Surgical and Restorative Implant Training Program in Hong Kong 2014
About the Program
Implants can often serve as the most predictable, functional, esthetic and conservative therapeutic option for replacement of hopeless teeth. An array of surgical and prosthetic protocols have been proposed in implant dentistry; however, not all are supported by evidence-based documentation. The long-term success of implant-supported restorations requires a systematic approach to selection of appropriate diagnostic tools, risk assessment, treatment options, surgical and restorative protocols, as well as components and sequencing of care. This intense 17-day course consists of lectures, hands-on model workshops and live surgery and prosthetic demonstration. This educational experience will provide practical protocols which are beneficial for beginners, as well as experienced clinicians who would like to increase the predictability of their results and update their knowledge.

The USC implant training program consists of the following modules:

- Five days in Los Angeles:
  - Two days of diagnosis & treatment planning of complex cases, guided surgery restorations using CADCAM solutions (actual training on computers for guided surgery, one computer per doctor)
  - One day of live surgery demonstrations specifically for the USC-Hong Kong course participants
  - Two days of attendance of 40th Annual International Periodontal and Implant Symposium
  - Three days of optional hands-on cadaver workshops
  - Awards ceremony at USC and receipt of program certificate

The main strength of this program is that the updated and predictable protocols will be presented in a systematic manner by world experts.

Who will benefit from attending this course:
This course is appropriate for any clinician who is interested in gaining a comprehensive training in implant dentistry:

- Beginners with limited implant knowledge
- Clinicians with intermediate or advanced experience who would like to increase the predictability of their treatment by adopting evidence-based updated protocols
- Laboratory technicians, dental hygienists and dental assistants who would like to be more effective in their functions

Please note: We reserve the right to change course dates, times, and speakers in the case of unforeseen circumstances. Registrants will be notified with changes in advance.

Educational Objectives

**Conceptual Topics**
- Biologic basis of Osseointegration
- Anatomy of implant sites and surrounding structures
- Factors influencing lifelong osseointegration

**Diagnosis and Treatment Planning**
- Treatment planning & case selection
- Diagnostic imaging: Periapical and panoramic images
- Virtual treatment planning: computer aided implant planning
- Surgical guides: conventional and computer-generated surgical guides

**Surgical Placement of Implants**
- Surgical considerations and treatment planning
  - Extraction techniques to minimize surgical trauma
  - Socket preservation and augmentation bone grafting
  - Immediate, early or delayed implant placement
  - Implant placement in healed edentulous ridge, including hands-on using models
  - Single-unit tooth replacement
  - Multiple-unit tooth replacement
  - Fully edentulous lower jaw

**Augmentation of Hard and Soft Tissues**
- Selection and sequencing of implant site development techniques
- Bone grafting: autogenous bone and bone substitutes
- Sinus augmentation rationale and techniques
- Horizontal and vertical ridge augmentation
- Mandibular block auto-grafting: rationale and techniques
- Guided bone regeneration
- Bone Morphogenetic Protein (rhBMP-2) and Platelet-derived Growth Factor (PDGF) applications
- Soft tissue augmentation

**Implant Prosthetics**
- Implant restorative options
- Implant impression techniques
- Laboratory techniques and procedures
- Abutment selection:
  - Prefabricated, CAD/CAM and ceramic abutments
  - Immediate vs. staged implant loading
  - Provisional placement: immediate vs. delayed

**Hands-on Workshops**
- CT and cone beam scan interpretation
- Virtual treatment planning
- Extraction socket bone grafting
- Flap management and suturing techniques
- Socket preservation and augmentation bone grafting
- Implant placement in healed edentulous ridge
- Implant placement in extraction socket
- Immediate provisional fabrication
- Autogenous bone grafting
- Harvesting of bone from mandibular ramus and chin
- Fixation of autogenous bone to recipient site
- Sinus augmentation
- Crestal osteotomy
- Lateral window
- Guided bone regeneration
- Soft tissue augmentation

**Live Surgery Demonstration**
- Flap management and suturing techniques
- Implant placement in healed edentulous ridge
- Immediate provisional fabrication
- Sinus augmentation
- Soft tissue augmentation

**USC Comprehensive Surgical and Restorative Implant Training Program in Hong Kong 2014**
Module 1: Surgery Session
Fundamental principles of implant dentistry for the single missing tooth — Surgical principles

Synopsis
With primary concerns of patient safety and procedural predictability, this two-day program establishes guidelines and training exercises to prepare the clinician for placing posterior implants to replace single teeth or a short span edentulous segment. For maximum benefit, this program is ideally preceded by a restorative introduction establishing goals, diagnosis and restorative alternatives available for replacing the posterior single tooth or two adjacent teeth. With a clear vision of the restorative outcome desired, clinical and radiographic examination from a surgical perspective to support this restoration are presented. Hands-on exercises with models, surgical trays and drilling equipment are used to prepare the participant for soft tissue handling, bone qualities and important anatomy encountered in treating the posterior maxillary and mandibular sextants. To reinforce thorough coverage of fundamental principles for your first ten implants placed, each participant is provided with a checklist of important topics to be understood as a self-assessment for confident preparation for this treatment. For the dentist not interested in implant surgery, this program is still of benefit for experience gained on surgical considerations supporting diagnostic and restorative procedures. For the practitioner undecided about taking the step to place implants, this program will provide a practical and useful exposure to help in this determination.

With a focus on the specifics of posterior implant placement as a realistic starting point, underlying diagnostic, surgical and restorative principles emphasized coupled with your early clinical experience providing these procedures will form the foundation to continue with expanded treatments as this program progresses.

Educational Objectives
- Practical planning with pre-operative models, radiographs and computer software
- Getting the most out of 3-dimensional scans
- Implant seating depths and alignment based on soft tissue volume and desired restorative outcome
- Safety margin considerations for upper and lower jaws
- Surgical template alternatives for precise positioning
- Minimally invasive flap designs for the healed site without compromise
- Site preparation strategies based on bone quality
- Understanding implant insertion torque and determining healing phase options

Module 1: Restorative Session
Fundamental principles of implant dentistry for the single missing tooth — Restorative principles

Synopsis
In this introductory course, participants will gain proficiency in diagnosis and treatment planning for the single missing anterior or posterior tooth, and will master the restorative steps for single posterior implant and single anterior implant. Restorative decision making and execution will be transformed into a simple and easy process. Participants will also learn how to avoid and manage restorative complications. The lecture on this day will address all of the above topics. On day two, in addition to demonstrations by the instructor, participants will have the opportunity to participate in a hands-on workshop featuring impression-making techniques and fabrication provisional restorations, custom impression copings and custom abutments.

Educational Objectives
Diagnosis and treatment planning
- Standard of care
- Indications and contraindications for dental implants
- Options for replacement of a single missing tooth.

Implant prosthetics
- Cement vs. screw retained restorations
- Abutment selection
  - Prefabricated stock abutments
  - Custom computer designed abutments
- Provisionalization
- Impression techniques
- Biomechanics and occlusion

Demonstrations: Instructor will demonstrate
- Fabrication of single unit provisional restoration
- Fabrication of custom impression copings
- Fabrications of custom abutments

Hands-On: Participants will have the opportunity to
- Make abutment level and implant level impressions
- Attach abutments to implants
- Learn proper use of a torque driver
- Fabricate single unit provisional restoration
- Fabricate a custom impression coping
- Fabricate a pattern for a custom abutment
Module 2: Surgery Session
Basic protocols in bone and soft tissue grafting in implant dentistry

Synopsis
A variety of clinical scenarios may present, requiring complex prosthetic restoration. A key to success is careful planning and simplification of therapy, based on sound principles. A wide array of restorative options are available today. Selection of the appropriate prosthesis requires consideration of the patient anatomy, quantity and quality of available hard and soft tissues, the need for augmentation surgery, esthetic requirements occlusal scheme and patient’s desires. The objective of this course is to review the fundamentals for prosthetic restoration of implants in patients. An evidence-based approach will be used to provide treatment options with high degree of predictability. Practical surgical solutions to common implant site deficiencies will be provided.

Educational Objectives
Basic protocols
- Selections and sequencing of implant site development techniques
- Sinus augmentation rationale and techniques
- Horizontal ridge augmentation
- Vertical ridge augmentation
- Mandibular block auto-grafting
- Onlay block grafts: rationale and techniques
- Bone morphogenic protein (rhBMP-2) and Platelet derived growth factor (PDGF) applications
- Soft tissue augmentation around implants
- Vestibular Incision Subperiosteal Tunnel Access (VISTA) for soft tissue augmentation
- VISTA for ridge augmentation in the esthetic zone
- Socket preservation and augmentation

Module 2: Restorative Session
Intermediate dental implant restorative principles, procedures and protocols

Synopsis
In this course, participants will gain confidence and proficiency in restoring any type of implant connection. Both internal and external connections will be discussed, and advantages and disadvantages of the various types of connections will be analyzed. Participants will also learn when certain connections are indicated or preferred and how to participate in the decision making process with the oral surgeon or periodontist. The management of implants from single unit to multiple units in the partially edentulous arch will be discussed. On day one, lectures will address all of the above topics. On day two, in addition to lectures and demonstrations by the instructor, participants will have the opportunity to participate in a hand-on workshop including impression-making techniques, fabricating custom impression copings, fabrication provisional restorations for different types of implant connections, and provisional restorations for multiple implants.

Educational Objectives
Diagnosis and treatment planning
- Different types of implant-abutment connections
  - External-hex
  - Internal-hex, trilobe, conical, conical with hex, and others
- Advantages and disadvantages
- Indications and contraindications for use
- Different brands and their connection types
- Multiple missing teeth
- Number of implants required to replace multiple missing teeth

Implant prosthetics
- Cement vs. screw retained restorations
- Abutment selection
  - prefabricated stock abutments
  - custom computer designed abutments
  - engaging vs. non-engaging
  - material selection, strength, indication
  - splint or individual
  - splinting at implant / abutment / restoration level
- Abutment screws- different head-recess size/designs
- Provisionalization
- Impression techniques
- Biomechanics and occlusion
- Surgical guides

Demonstrations: Instructor will demonstrate
- Fabrication of single unit provisional restoration using different implant connections
- Fabrication of multiple unit provisional restoration

Hands-on: participants will have the opportunity to
- Learn proper use of a torque driver
- Make implant level impressions for different types of connections
- Make accurate multiple unit impressions
- Attach abutments to implants
- Fabricate single unit provisional restoration using different connections
- Fabricate multiple unit provisional restoration
Module 3: Surgery Session
Implant surgery complications and Guided bone regeneration

Synopsis
The number of claims related to implant complications has increased significantly over the last few years. Complications associated with implant surgery can have a devastating effect on the final outcome of treatment. First part of the session will focus on how to identify and avoid potential complications before they arise and how to manage many of the common complications that can occur with implant surgery. Emphasis will be given to risk assessment, classifications of complications, and proper treatment planning principles. At the end of this course, participants should be able to diagnose and treat complications related to implant surgery. Second part of the session will feature a combined one-day scientific lecture and hands-on workshop on bone grafting. The course will focus primarily on the principles of guided bone regeneration in implant dentistry and on the most up-to-date techniques in bone grafting to improve long-term clinical success with dental implants. This course is designed for the clinician that has prior implant experience and would like to broaden his/her knowledge and scope of practice and improve surgical skill.

Educational Objectives
Topics of discussion include:
• Pre-operative risk assessment
• Avoiding and minimizing risks associated with bone grafting procedures
• Management and avoiding complications associated with sinus augmentation
  – Graft infection and failure
  – Sinusitis
  – Oral-antral communication
  – Sinus fistula
• Management of implant dehiscence and fenestration
• Management of peri-implantitis
• Management of nerve injury associated with implant surgery; Classification of levels of injury, charting and prognosis
• Management of failed implants, removing implants with minimal bone trauma
• Avoiding esthetic complications

Guided bone regeneration
• The biologic basis of bone regeneration
• The criteria for patient selection
• The step-by-step surgical procedure
• Properties of barrier membranes
• Selection of biomaterials
• Biologic modifiers and their relationship to bone regeneration
• Flap design for optimal esthetic and predictability
• Guided bone regeneration in various post-extraction defects / simultaneous implant placement / vertical ridge augmentation
• The proper use of screws in the “screw tent-pole grafting” technique
• All aspects of the post-operative management
• Recognition and management complications associated with guided bone regeneration

Module 3: Restorative Session
Advanced restorative options with dental implants for fully edentulous arches

Synopsis
In this course, participants will gain confidence and proficiency in restoring most full arch implant supported situations. Various fixed and removable options will be presented. Both internal and external connections will be discussed, as well as the use of non-engaging multi-unit abutments. On day one, lectures and demonstrations by the instructors, participants will have the opportunity to participate in hand-on workshop including techniques for accurate full arch implant impressions, fabricating provisionalals for full edentulous arches, and learning how to assess the fit of full arch metal or zirconia bars and frameworks.

Educational Objectives
Diagnosis and treatment planning
• Treatment planning for the fully edentulous maxilla and mandible
• Fixed and removable options
• Number of implants required to support different options
• Surgical guides for ideal placement

Implant prosthetics
• Fixed and removable restorations
• Provisionalization
• Impression techniques
• Biomechanics and occlusion
• Material choices

Demonstrations: Instructor will demonstrate
• Fabrication of a fixed provisional restoration by converting an existing full denture
• How to try in full arch frameworks made of titanium or zirconia

Hands-on: Participants will have the opportunity to
• Fabricate a surgical guide by duplicating an existing full denture
• Make an accurate full arch implant impression
• Fabricate a fixed provisional restoration by converting an existing removable full denture
• Assess full arch titanium and zirconia frameworks for passive fit
Synopsis
To achieve an ideal prosthetic outcome with dental implants, it takes proper treatment planning. Traditional implant placement, with conventional surgical templates are restorative driven, although it does not account for anatomical factors that will make it impossible to place the implant. CAD/CAM surgical templates or guided templates, through the use of surgical planning software allows for a restorative driven implant placement along with a three dimensional view of the patient’s anatomy, allowing treatment planning in a team approach. The accuracy of implant placement is crucial from the single tooth implant to the fully edentulous patient. This presentation will discuss the accuracy of guided surgery, advantages of guided implant surgery, and the sequence to treat patients, while working and participating in treatment planning with the NobelClinician™ surgical planning software.

Educational Objectives
• Explore the clinical advantages of using a digital treatment planning concept as well as the benefits for communication with the patient (treatment acceptance).
• Gain knowledge of basic digitization processes and their impact on treatment accuracy.
• Differentiate benefits of 3D X-ray technologies: CT vs. CBCT.
• Master the NobelGuide™ workflow and the related options.
• Examine the clinical and laboratory steps of defining and transferring teeth setup into a radiographic guide.
• Integrate step-by-step handling procedures with the NobelClinician Software.
• Consider benefits of visualizing anatomy in 3D to prosthetic-driven treatment planning.
• Use NobelClinician Software to identify available bone volume. This allows for defining indications and options.
• Apply benefits of digital diagnostics to communicate with treatment team prior to surgery, possibly resulting in minimally invasive (flapless) surgery.

Sessions in Downtown Los Angeles
Digital Diagnostics and Treatment Planning

January 18, 2015 (Sunday)
Dr. Baldwin Marchack and Dr. Christopher Marchack

January 19, 2015 (Monday)
Dr. Alexandre-Amir Aalam
Sessions in Downtown Los Angeles
(Summary)

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<td>January 18, 2015 (Sunday)</td>
<td>Digital Diagnostics and Treatment Planning</td>
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<td>January 19, 2015 (Monday)</td>
<td>Live Surgery Demonstrations</td>
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<td>January 20, 2015 (Tuesday)</td>
<td>Lectures with Grad Perio Residents on Campus</td>
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<td>January 21 – 22, 2015 (Wednesday to Thursday)</td>
<td>Optional Cadaver Workshops</td>
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<td>January 23 – 24, 2015 (Friday to Saturday)</td>
<td>40th Annual International Periodontal and Implant Symposium</td>
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<td>January 25, 2015 (Sunday)</td>
<td>Optional Cadaver Workshops</td>
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How to Register
Online registration available at www.uscdentalce.org.
For questions in regards to making payment via wire transfer or credit card, please email to: shuli@usc.edu, or fax form to: (1) 213-740-3973

Registration Fees

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<th>Plan</th>
<th>Before August 1, 2014</th>
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<tr>
<td>Full Program (Includes certificate of completion)</td>
<td>USD $12,500</td>
<td>USD $13,500</td>
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<td>Hong Kong Sessions Only (Does not include certificate of completion)</td>
<td>USD $9,650</td>
<td>USD $10,650</td>
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<tr>
<td>Optional Cadaver Workshops on Bone and Soft Tissue Grafting</td>
<td>Each Workshop USD 1,695</td>
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Registration Form
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Title __________ Specialty __________
Address __________
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Phone ( ) __________ Fax ( ) __________
E-mail __________
☐ Mastercard ☐ Visa ☐ Check
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Card Number __________ Expiration Date __________
Total Payment $ __________

Enquiries
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Faculty

**Dr. Baldwin W. Marchack**
Dr. Marchack graduated from the Ostrow School of Dentistry of USC and received his MBA from UCLA. He is a Fellow of the American College of Dentists, International College of Dentists, and the Pierre Fauchard Academy. Dr. Marchack is an Honorary Member of the American College of Prosthodontists and Past President of the American Prosthodontic Society, the Pacific Coast Society for Prosthodontics, and the American Academy of Esthetic Dentistry. He is the Chair of the Editorial Council for the Journal of Prosthetic Dentistry, and serves on the Board of Councilors for the Ostrow School of Dentistry of USC.

**Dr. Christopher B. Marchack**
Dr. Marchack is a graduate of the University of the Pacific School of Dentistry. He has received his prosthodontic certificate from USC. Dr. Marchack is an active member of the Academy of Prosthodontics, the Pacific Coast Society for Prosthodontics, the American College of Osseointegration, the San Gabriel Valley Dental Implant Study Club, and the Southern California Osseointegration Study Club. Dr. Marchack serves on the editorial review board of the Journal of Prosthetic Dentistry and Quintessence International.

**Dr. Richard M. Sullivan**
Dr. Sullivan is Clinical Director for Nobel Biocare USA. He completed the two-year Harvard University Implant Dentistry Program and later provided implant placement, restoration and dental laboratory aspects of implant dentistry as a general dentist. Since 1990, he has worked with Nobel Biocare in several capacities, including a two-year relocation to Gothenburg, Sweden. He is a Fellow of the Academy of Osseointegration and has served as Chairman of the Professional and Public Relations Committee.

**Dr. Homayoun H. Zadeh**
Dr. Zadeh is an Associate Professor and graduate of the Ostrow School of Dentistry of USC. He completed the advanced clinical education in Periodontology and earned his PhD degree in Immunology from the University of Connecticut. He is a Diplomate of the American Board of Periodontology. Dr. Zadeh also leads a research team, funded by the NIH and industry. His clinical research interests involve studies on minimally invasive surgery and tissue engineering. He is Director of the USC International Periodontal and Implant Symposium.

**Dr. Alexandre-Amir Aalam**
Dr. Aalam graduated with a DDS degree from the University of Nice Sophia Antipolis, Nice (France). He subsequently specialized in Advanced Periodontics at the University of Southern California, Los Angeles. Dr. Aalam is a Diplomate of the American Board of Periodontology and a Diplomate of the American Board of Oral Implantology. The French Society and the California Society of Periodontology awarded Dr. Aalam for his contribution to clinical research in the field of implant dentistry. Dr. Aalam is a Clinical Assistant Professor of dentistry at USC. In 2012, Dr. Aalam was appointed as the USC dental school representative on the Board of Governors. He maintains a private practice in Brentwood CA, limited to Periodontics and Reconstructive Implant Dentistry. Dr. Aalam lectures and publishes in the field of dental implants and site development procedures.

**Dr. Bach Le**
Dr. Le is a Clinical Associate Professor of the Ostrow School of Dentistry of USC and USC Medical Center. He is a Diplomate of the American Board of Oral & Maxillofacial Surgeons, the American Dental Society of Anesthesiologists, and the International Congress of Oral Implantologists. Dr. Le holds Fellowship in the International College of Dentists and the International Association of Oral and Maxillofacial Surgeons.

**Dr. Alexandre-Amir Aalam**
Dr. Aalam graduated with a DDS degree from the University of Nice Sophia Antipolis, Nice (France). He subsequently specialized in Advanced Periodontics at the University of Southern California, Los Angeles. Dr. Aalam is a Diplomate of the American Board of Periodontology and a Diplomate of the American Board of Oral Implantology. The French Society and the California Society of Periodontology awarded Dr. Aalam for his contribution to clinical research in the field of implant dentistry. Dr. Aalam is a Clinical Assistant Professor of dentistry at USC. In 2012, Dr. Aalam was appointed as the USC dental school representative on the Board of Governors. He maintains a private practice in Brentwood CA, limited to Periodontics and Reconstructive Implant Dentistry. Dr. Aalam lectures and publishes in the field of dental implants and site development procedures.