Orthodontic Mini Residency Syllabus

Part 1: Course Information

Contact Information

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Course Description

The Mini Residency is a two-month program administered by the UAB School of Dentistry. Applications are open through the whole year and admissions are offered to foreign-trained dentists three times per year (please contact admin. office for specific dates). This basic course aims to educate dentists on basic orthodontic concepts and prepare interested applicants to successfully integrate into the International Orthodontic Certificate Program of UAB, upon further acceptance.

Prerequisites

- Candidates must possess a DMD/DDS or equivalent and have successfully completed an accredited dental program in a country other than the United States or Canada.
- Official transcripts from all colleges/universities attended are
required. Furthermore, candidates will be required to provide documentation of having passed TOEFL (Test of English as a Foreign Language).

- Candidates should have passed the NBDE Part I exam before acceptance into the Mini Residency Program.

**Textbook & Course Materials**

**Required Text**


  ISBN: 978-0-323-05007-4

  The textbook is offered to the selected candidates.

- Other readings will be made available during lectures and hand-on sessions.

**Course Requirements**

- Laptop

- Wire Bending Pliers:
  
  a. Light wire bird beak & heavy wire bird beak
  
  b. Heavy wire ligature cutter
  
  c. Two torquing pliers
  
  d. Tweed loop/Helix forming plier
  
  e. Arch forming plier
  
  f. Two Mathieu ligating pliers
  
  g. Elastic remover director
  
  h. Loop forming and closing plier (Nance)

  The pliers are offered to the candidates for the course time period.
Course Structure

This course will be delivered through four course modules, Didactic, Demonstration, Hands-on, Exam. At designated times throughout the two-month course period the students will participate in a blend of self-paced and group-paced activities. Activities will consist of

a. Continuous series of lectures and reading assignments.

b. Meetings of whole class discussion on specific orthodontic topics.

c. Rotations in the clinic and work observation with their mentor (assigned 3rd year resident).

d. Lab work observation followed by hands-on wire bending and typodont exercises.

e. Work through a series of developmental research stages: attend research methodology classes, get assigned a research topic, build knowledge on their research project (case report), write-up article, followed by a departmental presentation and publish work at recognized evidence based orthodontic journal.

f. Examination and interview process by a Departmental Admissions Committee (applies to candidates interested to participate into the International Orthodontic Program).

Important Note: This syllabus, along with course assignments and due dates, are subject to change. It is the student’s responsibility to check with administration office for corrections or updates to the syllabus. Any changes will be clearly noted in course announcement or through email.
Part 2: Course Topics/Modules

- **Module 01: Didactic**
  
  Ch.1: Craniofacial growth and development
  
  Ch.2: Development of the occlusion, Andrew’s six keys of occlusion
  
  Ch.3: Appropriate timing for orthodontic treatment
  
  Ch.4: Orthodontic records and case evaluation
  
  Ch.5: 3D imaging in orthodontics
  
  Ch.6: Diagnosis of Orthodontic problems
  
  Ch.7: Orthodontic appliances
  
  Ch.8: Biomechanics in orthodontics, Concept of Straight wire appliance (SWA)
  
  Ch.9: Treatment planning
  
  Ch.10: Treatment tactics for problems related to dentofacial discrepancies in three planes
  
  Ch.11: Phase I
  
  Ch.12: The Invisalign System
  
  Ch.13: Treatment of Class II Malocclusions
  
  Ch.14: Class III Correctors
  
  Ch.15: Minor tooth movement
  
  Ch.16: Phase II
  
  Ch.17: Adult Orthodontic treatment
  
  Ch.18: Implants in Orthodontics
Ch.19: Mini implants and palatal implants for orthodontic anchorage

Ch.20: Oral Hygiene

Ch.21: Orthodontic and craniofacial deformities

Ch.22: TMJ disorders

Ch.23: Retention in Orthodontics

Ch.24: Soft-tissue diode laser surgery in Orthodontics

Ch.25: Secrets in computer aided surgical simulation for complex craniofacial surgery

L.1: Guest Lecturer

L.2: Case presentations by Dr. Kau

R.1: Creating an Endnote Library

R.2: Study Design and Methods

R.3: Data Collection, Analysis and Publication

• **Module 02: Demonstration**

  Cl.1: Clinical Photographs

  Cl.2: Physical/ Digital Study Casts

  Cl.3: 2D radiographs

  Cl.4: 3D radiographs

  Cl.5: 4D Acquisition/ Jaw tracking

  Cl.6: Patient’s management software: Dolphin

    Cl.6.a: Selection of pliers/How to hold pliers

    Cl.6.b: Z-bends, Vertical open loop, Vertical helical closing loop,
    Horizontal “L” open boot loop, Horizontal “T” open loop

    Cl.6.c: Max./ Mand. Utility arch
Cl.6.d: Correction of rotations
Cl.6.e: Bracket placement at FA point and with using MBT prescription
Cl.6.f: Indirect bonding/Tray-fabrication

Typ.1: Bonding on study casts
Typ. 2: Indirect bonding set up
Typ. 3: Wire Sequence
Typ. 4: Ligature ties/ Power chain/ Separators

- **Module 03: Hands-On**
  
  Residents will repeat all the above (Module 02) procedures that have been demonstrated by the faculty member.

- **Module 04: Exam**
  
  Ex.1: Written examination on Mosby’s Orthodontic Review Textbook
  
  Ex.2: Research topic presentation
  
  Ex.3: Research topic publication
  
  Ex.4: Interview by Departmental Admissions Committee