



Faculty of  
Dentistry

مَعَهَدُ الْكُوَيْتِ لِلْإِخْتِصَاصَاتِ الطَّبِئِيَّةِ  
Kuwait Institute for Medical Specialization



The Kuwaiti Board of Periodontology and Implant Surgery  
البيورد الكويتي لطب وجراحة اللثة وزراعة الأسنان



**Program Handbook**

**2024/2025**

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## Disclaimer

This document aims to enhance the postgraduate training experience by establishing clear learning objectives that will guide residents towards becoming skilled and competent periodontists.

"While this curriculum may include sections outlining certain training regulations, it is imperative that these regulations align with the most recent "General Bylaws" and "Executive Policies" of The Kuwait Institute for Medical Specialization (KIMS).

These documents can be accessed online through the official KIMS website <https://kims-pge.org/> . Given the ongoing refinement of this curriculum, please refer to the electronic version posted online for the most up-to-date information.

## Acknowledgment

On behalf of the Curriculum Scientific Committee, we would like to thank the Program Foundation Committee for their exceptional contributions to the previous curriculum. Their tireless efforts and unwavering dedication have been instrumental in shaping this program.

In addition, special thanks to The Dental Administration and The Department of Periodontics at MOH for all their support and assistance in preparing all the requirements and needs for the establishment of the KB-Perio Program Clinic at Al-Jahra Specialized Dental Center.

Last but not least, we extend our heartfelt gratitude to the pioneers in postgraduate dental education programs for their support, advice, and recommendations for conducting this version of the KB-Perio curriculum:

- Dr. Khalid Said, Consultant Periodontist at Hamad Medical City, Qatar
- Dr. Amer Al Anezi, Founder of Kuwait Board of Endodontics
- Dr. Anfal Faridoun, Program Director of Kuwait Board of Paediatric Dentistry



## Foreword

The Board of Trustees of KIMS has decided to initiate full-fledged residency programs in all different specialties in Medicine and Dentistry starting November 2010. All programs are designed as a five- year structured programs, leading to the conferral of the “Kuwait Board” in respective specialties. In dentistry, successful completion of the first two years of the program (R1 and R2) in basic general dentistry will mark an entry point to further three years of postgraduate education in different fields of dentistry, including periodontics for R3, R4, and R5. The residents of any of the programs will be promoted to various levels through a series of qualifying examinations/assessments conducted at the end of each level in the presence of external examiners. At the end of each year, the Board of Examiners will be chaired by the Secretary General and will review the results of all formative in-course assessments and the summative ones for approval and final announcement by KIMS.

Periodontics is the branch of dentistry, which is concerned with diagnosis, prevention, and treatment of diseases of the supporting and surrounding tissues of the teeth or their substitutes, and maintenance of the health, function and aesthetics of these structures and tissues.

Currently, public sector specialty centers handle an average of 54000 patients yearly in each dental specialized center (6 centers in Kuwait) in the department of Periodontics alone. Due to the population growth and the need to provide quality dental services to the public sector in Kuwait, qualified specialists are in high demand to provide such service at MOH centers. Currently, Kuwaiti dentists obtain their specialty at international programs

such as the United States of America and the United Kingdom. These programs are highly competitive, and an average of only 3-4 residents are accepted every year. The population growth demands an increase in the number of highly qualified specialist periodontists to keep up with the increased demand.

The Ministry of Health (MOH) dental specialists have graduated from distinguished programs with the acquisition of the highest qualifications in the field (American Board of Periodontology and Implant Dentistry and Membership in the Royal College of Surgeons (MRD)). With such potentials, MOH specialists are able to establish a post graduate training program that meets the international standards and is tailored to the needs of Kuwait. This will ensure a steady flow of qualified specialists to keep up with the demands and ensure provision of top-quality treatment in the public sector.

Developing curricula in the medical or dental fields is a scholarly endeavor, that combines a particular area of knowledge with educational theory and methodology to assess its effectiveness<sup>1</sup>. Kuwaiti medical and dental specialists are frequently hired by the KIMS to overhaul the current curricula across all specialties and define their unique contributions to healthcare services and educational institutions. However, while specialists are often considered as content experts, they may not be well-versed in the curriculum development process and may have trouble accessing the necessary resources.

As a result, a structured approach was applied to the development of the new Kuwaiti Board of Periodontology and Implant surgery (KB-Perio) curriculum to justify the efforts involved. Therefore, the six-step approach to the curriculum development that was established by (Kern et al., 1998)<sup>1</sup> is now being implemented (Table 1, Figure 1 ).

	Title	Tasks Involved in the Step
1	Problem Identification	<ul style="list-style-type: none"> <li>• Identification and critical analysis of the healthcare problems that will be addressed in the curriculum. This requires substantial research to analyze: <ol style="list-style-type: none"> <li>1. <b>The current approach:</b> What is currently being done by periodontists and educators.</li> <li>2. <b>The ideal approach:</b> What should ideally be done by periodontists and educators to address the healthcare problem related to periodontics specialty</li> </ol> </li> </ul>
2	Needs Assessment of targeted learners	The general needs assessment is applied to targeted learners.
3	Goals and Objectives	<ul style="list-style-type: none"> <li>• Overall goals and aims for the curriculum are written.</li> <li>• Specific measurable knowledge, skills and professionalism objectives are written for the curriculum (CanMEDS-based objectives).</li> </ul>
4	Educational Strategies	<ul style="list-style-type: none"> <li>• A plan is prepared to maximize the impact of the curriculum, including the content and educational methods congruent with the objectives.</li> </ul>
5	Implementation	<ul style="list-style-type: none"> <li>• A plan for implementation, including timelines and resources required, is created.</li> <li>• A group of faculty members is selected to ensure consistency.</li> </ul>
6	Assessment and Evaluation	<ul style="list-style-type: none"> <li>• Learner and program evaluation plans are created. A plan is devised for disseminating the curriculum.</li> </ul>

Table 1



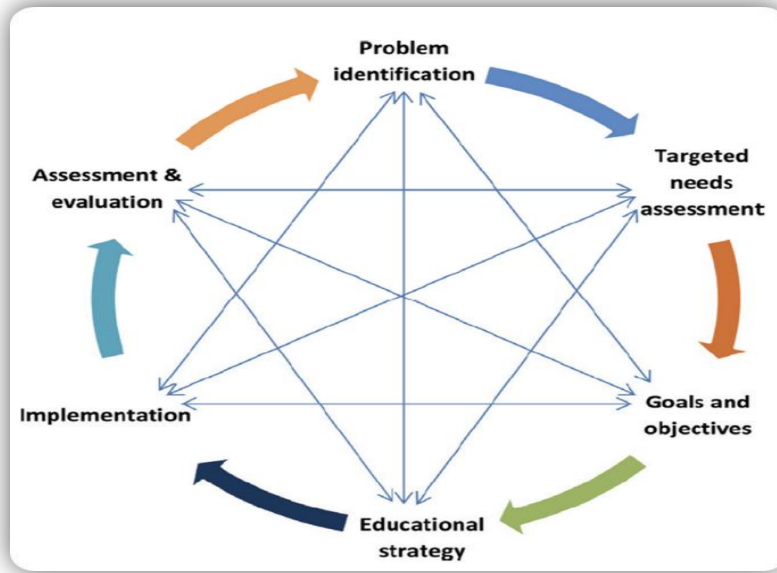


Figure 1: Six-step approach to curriculum development

As a part of the KIMS strategic plan adopted in the years of 2020-2024 (Figure 2), CanMEDS framework education system was integrated in the KB-Perio program curriculum.

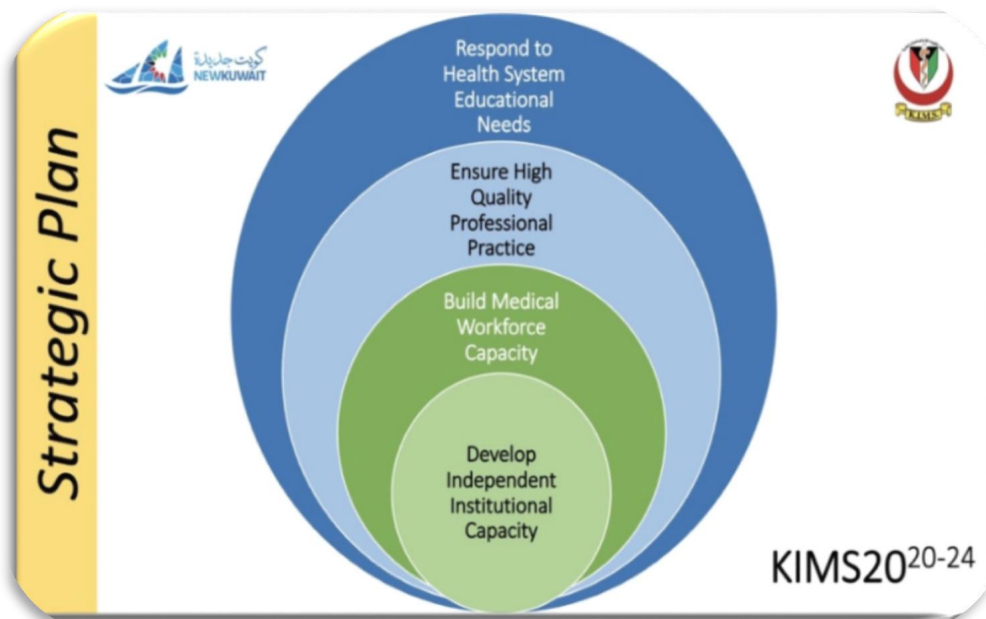


Figure 2: KIMS Strategic Plan

## CanMEDS Framework Educational System

[The CanMEDS Framework](#)<sup>2</sup> is a Canadian-developed educational system used to train and assess healthcare professionals. It focuses on the competencies needed for effective patient care, organized into seven key roles (Figure 3 & Table 2).

CanMEDS Role	Description
<b>Medical Expert</b>	The central physician Role in the CanMEDS Framework and defines the physician’s clinical scope of practice possesses the clinical knowledge and skills to diagnose and treat patients. In this curriculum, medical experts will be referred to dental experts.
<b>Communicator</b>	Establishes strong relationships with patients that facilitate the gathering and sharing of essential information for effective health care, through clear communication.
<b>Collaborator</b>	Dentists work effectively with other health care professionals to provide safe, high-quality, patient-centered care.
<b>Leader</b>	Dentists engage with others to contribute to a vision of a high-quality health care system and take responsibility for the delivery of excellent patient care through their activities as clinicians, administrators, scholars, and/or teachers.
<b>Health Advocate</b>	Promotes patient well-being and advocate healthcare system improvements by supporting the mobilization of resources to effect change.
<b>Scholar</b>	Commits to lifelong learning and stays up to date on medical advancements. Dentists demonstrate a lifelong commitment to excellence in practice through continuous learning and by teaching others, evaluating evidence, and contributing to scholarship.
<b>Professional</b>	Demonstrates ethical practice, professionalism, and accountability.

Table 2



The framework guides curriculum development, assessment strategies, and overall professional development throughout medical training and practice. The CanMEDS Framework has gained recognition beyond Canada and is now used in various healthcare professions worldwide including Kuwait. Moreover, the [Competency-based Education](#)<sup>3</sup> (CBE) assessment framework is accepted worldwide now to implement Competence by Design (CBD) system in postgraduate educational programs. CBE is a learning assessment framework that is based on predetermined "competencies" and focuses on educational outcomes in clinical performance settings. (Figure 3)



Figure 3: CanMEDS Roles

# General Program Information

## KB-Perio Vision & Mission

### Vision

To become a nationally recognized leader program in training future generations of periodontists and improving oral health care in the community through evidence-based practice.

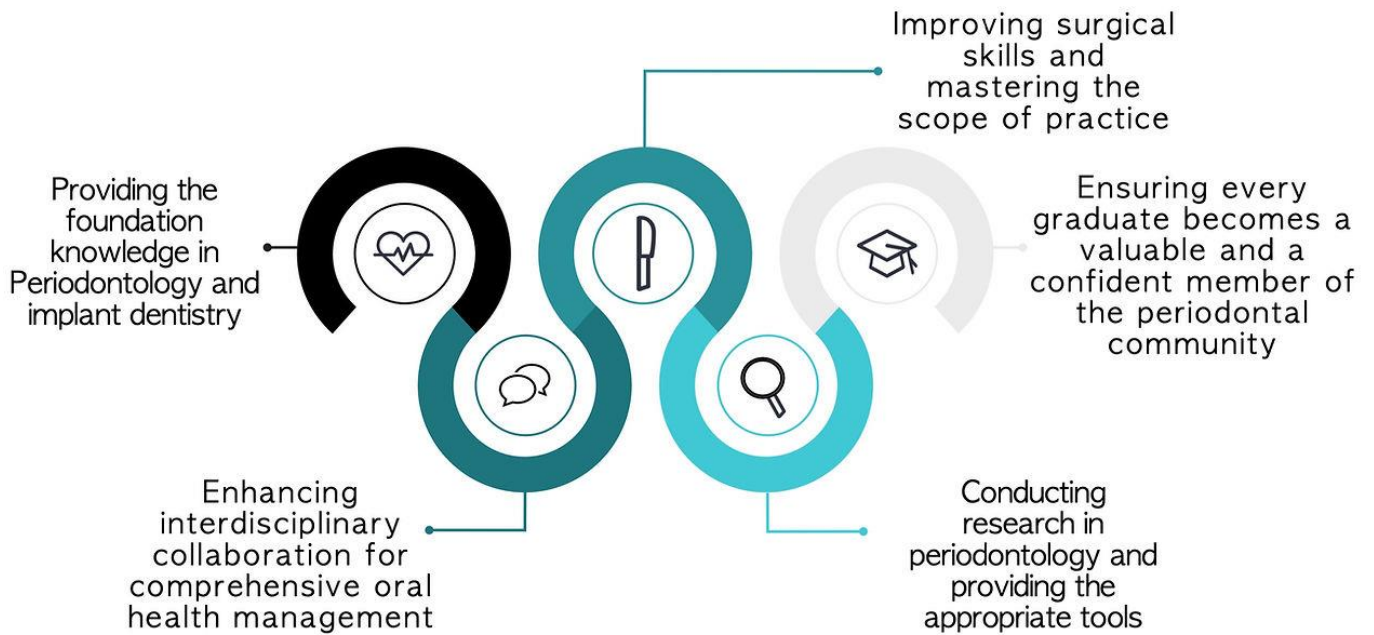


### Mission

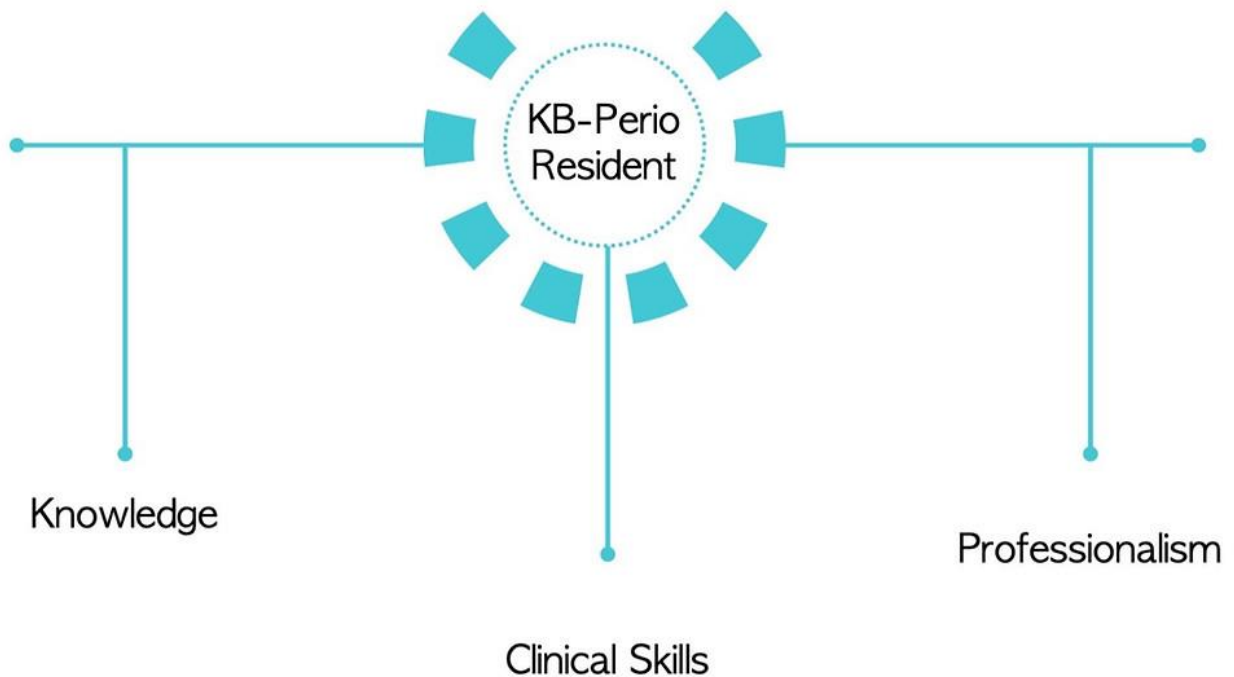
To improve periodontal health in Kuwait through comprehensive education, innovative research, patient-centered care, community outreach and promoting lifelong oral wellness for people in community.



## KB-Perio Program Goals



## KB-Perio Program Objectives



**The KB-Perio Residents are expected to follow CanMEDS-based objectives, which include Knowledge, Clinical Skills and Professionalism:**

### Knowledge

- Master the theoretical foundation of periodontology and implantology, including anatomy, physiology, pathology, and pharmacology.
- Develop a comprehensive understanding of periodontal diseases and implant dentistry principles and procedures.
- Develop skills in critically evaluating scientific research and applying evidence-based practices to clinical decision-making.
- Stay updated with the latest advancements in periodontology and implantology through ongoing research and participation in continuing education programs.
- Develop effective communication skills to interact with patients, colleagues, and other healthcare professionals.
- Master presentation skills to effectively communicate clinical findings, treatment plans, and research results.
- Participate in ongoing research projects within the program or develop independent research projects under faculty mentorship.

## Clinical Skills

- Diagnose and manage a wide range of periodontal and peri-implant diseases.
- Formulate and implement comprehensive treatment plans for patients with complex periodontal and implant needs.
- Perform a variety of periodontal and implant surgical procedures with proficiency and confidence.
- Effectively communicate with patients, colleagues, and other healthcare professionals.
- Master the clinical skills required for accurate diagnosis and treatment of various periodontal and peri-implant diseases.
- Develop proficiency in performing a variety of periodontal procedures, including scaling and root planing, flap surgeries, regenerative techniques, and implant placement.
- Master the surgical skills required for site preparation and successful implant placement and restoration.
- Gain clinical experience in managing different types of implant cases, including single tooth replacements, multiple tooth replacements, and full-mouth rehabilitation.
- Develop effective pain management strategies for periodontal and implant procedures.
- Gain proficiency in administering various types of local anesthesia and conscious sedation techniques.



## Professionalism

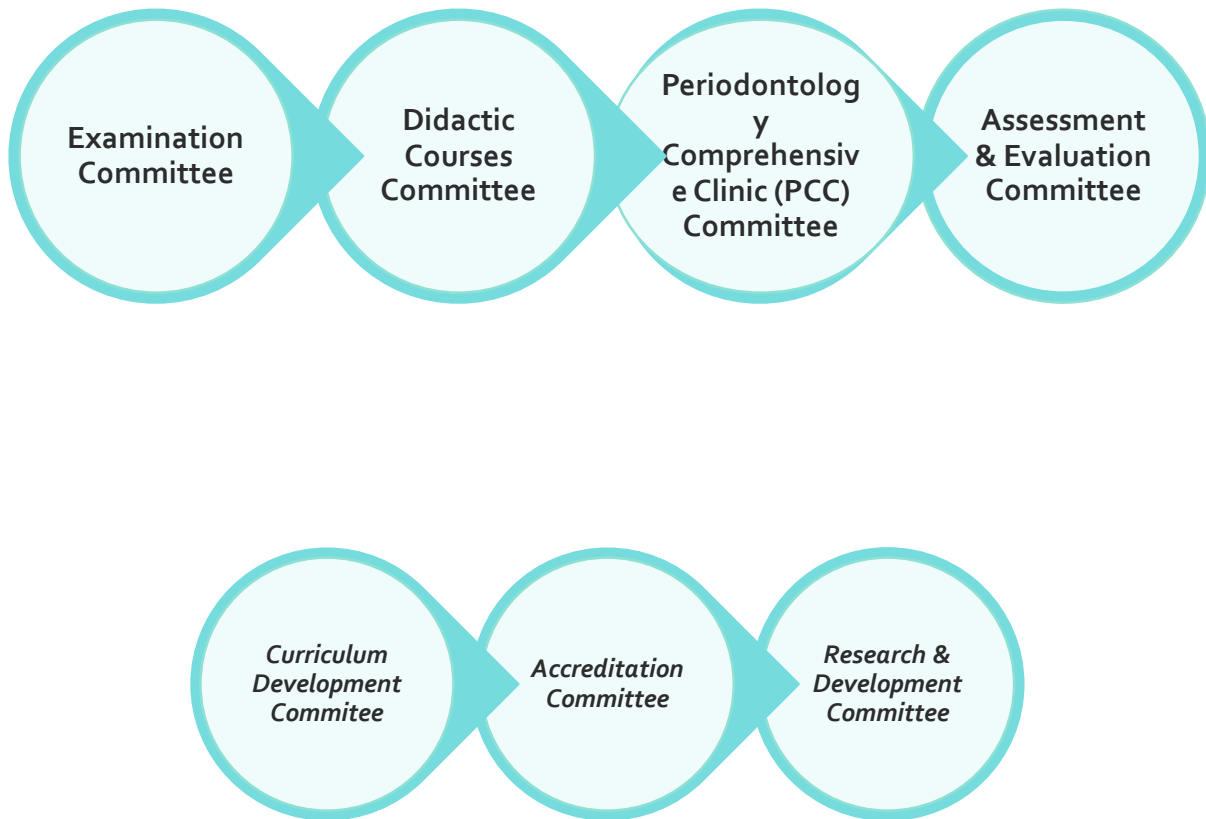
- Develop ethical decision-making skills.
- Understand and apply ethical principles to patient care, research, and professional interactions.
- Make informed decisions based on patient needs, scientific evidence, and professional guidelines.
- Develop strong relationships with faculty members, fellow residents, and other healthcare professionals.
- Demonstrate respect, collaboration, and professionalism in all interactions.
- Maintain a commitment to patient safety and quality care.
- Contribute to the field of periodontology and implantology:
  - Actively participate in professional organizations and societies.
  - Advocate for the advancement of the field through community outreach and education initiatives.



## KB-Perio Organization Structure



## KB-Perio Program Committees



## Full Time Faculty



### Program Director

**Dr. Ahmad Al-Sharrad**

**(BMedSc, BDS, MFD RCSI, MS, SB-Perio)**

Dr. Ahmad Alsharrad obtained his BMedSc & BDS from Kuwait University in 2004 & 2007 respectively. In 2011, he obtained his Membership of the Faculty of Dentistry from the Royal College of Surgeons in Ireland. Then he joined Riyadh Elm University in 2012 and graduated holding a master's degree and Clinical Certificate with distinction in Periodontics in 2015. In 2015, Dr. Alsharrad joined Saudi Board program at Prince Sultan Military Medical City & at Ministry of Health. He awarded Saudi Board Certificate in periodontics in 2017.

### Assistant Program Director

**Dr. Munirah Burashed**

**(BMSc, B.D.M, MFDS RCSI, M.S, ABP Diplomate)**

Dr. Burashed earned her Bachelor of Medical Sciences in Dentistry from Kuwait University in 2005 and her Bachelor of Dental Medicine from Kuwait University in 2008. She obtained the Membership of Faculty of Dentistry from the Royal College of Ireland in 2009. In 2014, Dr. Burashed received her Degree in Master of Science and her Certificate in Periodontics and Implant Dentistry from The Ohio State University, United States. She received her American Board certification in Periodontology and her "Diplomate" status in 2015.



### Head of Didactic Courses and Training Site Coordinator

**Dr. Nada Hayati (BChD, MSc, CAGs, ABP Diplomate)**

Dr. Nada Hayati obtained her Bachelor of Dental Surgery degree from the University of Leeds (United Kingdom) in the year 2012. Dr. Hayati then completed her advanced speciality training in Periodontology and implant dentistry in Tufts University (Boston, Massachusetts) in 2019. She also earned a Master of Science Degree from Tufts University in the same year. Dr. Hayati became a Diplomate of the American Board of Periodontology in 2022 which granted her the full certification of the organization.



### Head of Research Committee

**Dr. Ahmad Sedeqi (DDS, MS, Periodontics, ABP Diplomate)**

Dr. Ahmad obtained his DDS from Ajman University in 2012. In 2013 he obtained his Membership of the Faculty of Dental Surgery of Royal College of Surgeons. He also obtained American National Board in 2015. Then in 2017, he joined the University of Oklahoma where he obtained both his specialty degree of periodontics and master science in 2020. In 2021 he became a diplomate of the American board of Periodontology.



## Faculty Duties and Responsibilities

- Comply with the program goals and objectives.
- Comply with CanMEDS- assessment framework and tools for residents' evaluation.
- Prepare and conduct lectures and seminars in accordance with the program curriculum.
- Assist residents to comply with the seven roles of CanMEDS, literature appraisal skills, and scientific evidence critique skills.
- Attend program faculty meetings regularly, to ensure the program objectives and goals fulfillment.
- Ensure the safety of the residents, patients, and staff during clinical treatment sessions.

## Residents Duties and Responsibilities

- Comply with the program goals, objectives and CanMEDs roles.
- Attend and participate in didactic courses (lectures and seminars).
- Prepare and conduct courses assignments and clinical case presentations in accordance with program curriculum.
- Fulfill the program clinical and academic requirements.
- Participate in updating the program objectives and goals, in accordance with postgraduate committee meetings.
- Comply with the KIMS and KB-Perio rules and regulations.
- Be responsible and committed toward patients' needs.
- Ensure the safety of the patients and staff during clinical treatment sessions.
- Participate in the program evaluation process for courses, faculty members, and fellow residents.

## Program Syllabus

Year	Didactic Courses	Clinical Courses
<b>R3</b>	<ul style="list-style-type: none"> <li>• Introduction to periodontology</li> <li>• Embryology and Histology</li> <li>• Pharmacology in periodontics</li> <li>• Oral surgery in periodontics</li> <li>• Research methodology and its application in the field of periodontology and implantology</li> <li>• Infection control and sterilization in dental health setting</li> <li>• Classic literature review in periodontology and Implantology</li> <li>• Current literature review in periodontology and Implantology</li> <li>• Implantology A-Z</li> <li>• Oral medicine and pathology in periodontics</li> <li>• Radiology in periodontics</li> </ul>	<ul style="list-style-type: none"> <li>• Simulation lab</li> <li>• Periodontology and Implant Comprehensive Clinic</li> </ul>
<b>R4</b>	<ul style="list-style-type: none"> <li>• Classic literature review in periodontology and Implantology</li> <li>• Current literature review in periodontology and Implantology</li> <li>• Inter-disciplinary course</li> <li>• Oral Microbiology and immunology in periodontology</li> <li>• Basic Sciences course for periodontology</li> <li>• Sedation course</li> <li>• Implantology A-Z</li> <li>• Case Presentation Clinical Conference</li> </ul>	<ul style="list-style-type: none"> <li>• Advanced Periodontology and Implant Comprehensive Clinic</li> </ul>
<b>R5</b>	<ul style="list-style-type: none"> <li>• Current literature review in periodontology</li> <li>• Personal Development Courses</li> <li>• Case Presentation Clinical Conference</li> </ul>	<ul style="list-style-type: none"> <li>• Advanced Periodontology and Implant Comprehensive Clinic</li> </ul>



## Didactic Courses

The KB-Perio residency program is meticulously designed to provide residents with a comprehensive and in-depth understanding of periodontics and implant dentistry over the course of 36 months. This rigorous program blends theoretical knowledge with hands-on experience, ensuring that our residents are fully equipped to excel in their specialties.

Throughout the program, residents will participate in a series of didactic courses, each carefully selected to build a strong foundation in periodontology, implantology, and related disciplines. These courses cover essential aspects of periodontal and implant therapy while also exploring advanced topics, enabling residents to remain at the forefront of current practices and innovations.

The following table (Table 3) lists the topics of didactic courses that form the backbone of the KB-Perio residency curriculum:

List of Topics	Year
Introduction to periodontology	<b>R3</b>
Classic literature review in periodontology and Implantology	<b>R3- R5</b>
Current literature review in periodontology and Implantology	<b>R3- R5</b>
Implantology A-Z	<b>R3- R4</b>
Embryology and Histology	<b>R3</b>
Pharmacology in periodontics	<b>R3</b>
Oral surgery in periodontics	<b>R3</b>

Research methodology and its application in the field of periodontology and implantology	<b>R3- R5</b>
Infection control and sterilization in dental health setting	<b>R3</b>
Oral medicine and pathology in periodontics	<b>R3- R4</b>
Radiology in periodontics	<b>R3</b>
Inter- disciplinary seminar	<b>R3- R5</b>
Microbiology and Immunology in periodontics	<b>R4</b>
Special topics and basic sciences in periodontics	<b>R4- R5</b>
Personal development courses	<b>R3- R5</b>
Sedation skills for periodontal and implant therapy	<b>R4- R5</b>
Case Presentation Clinical Conference (CPC)	<b>R3- R5</b>

Table 3

# Introduction to Periodontology

Course Director: Dr. Jassem AlSharrah

## Course Description

This course will provide the residents with an introduction to multiple topics that will be fundamental to their early knowledge. These include introduction to diagnosis, examination, professional mechanical plaque removal (PMPR), surgical techniques, dental photography and case presentation seminars. This course will be conducted at KB-Perio facilities, where the simulation lab in periodontics and implant surgery represents a major component of the course.

During the professional mechanical plaque Removal (PMPR) lectures, residents will be given articles to read about the history and importance of initial periodontal treatment preparing them for literature evaluation in addition to clinical introduction.

Introduction to surgical therapy will provide the residents with initial knowledge which they will use to improve their decision making and clinical skills during their clinical sessions, presentations and seminars.

Dental photography will provide the students with key skills that are crucial for documentation, treatment planning, patient education and self-reflection during their residency.

Introduction to case presentation seminars will act like a base to develop the resident presenting and speaking skills.



## Course Goals

The following table (Table 4) lists the course objectives:

Course Topic	Goals Description
Introduction to examination and diagnosis	<ul style="list-style-type: none"> <li>• Residents will get introduced to current periodontal classifications and develop an understanding in periodontal examination.</li> </ul>
PMPR	<ul style="list-style-type: none"> <li>• Residents will get familiar with Scaling/ Root planing, sharpening of instruments, rational behind PMPR and why it is essential to be done prior to surgical treatment.</li> </ul>
Introduction to surgical therapy	<ul style="list-style-type: none"> <li>• Residents will get basic insight to advance surgical techniques, treatments and goals.</li> <li>• They will also become familiar with the associated armamentarium - blades, elevators, needle holder etc.</li> </ul>
Dental photography	<ul style="list-style-type: none"> <li>• During this course residents will get introduced to photography and start to develop their skills in the basic understanding of camera settings and intra oral photography including associated armamentarium.</li> </ul>
Introduction to seminars	<ul style="list-style-type: none"> <li>• During this course residents will get introduced to:               <ul style="list-style-type: none"> <li>○ The concept of presentation skills to develop their soft and technical skills.</li> <li>○ How to Establish a draft/pre- planned presentation flow (including text, font distribution, style, color scheme).</li> </ul> </li> </ul>

Table 4



## Course Learning Objectives

Residents are expected to learn and gather the desired knowledge in the following aspects:

- **Introduction to examination and diagnosis:**
  - Introduction to periodontal examination.
  - Understanding mucogingival considerations.
  - Develop Radiographic considerations in periodontal examination.
  - Understand Record keeping.
- **PMPR:**
  - Efficiency of PMPR.
  - Rational of PMPR.
  - Goals of PMPR.
  - Effects of PMPR on bacterial environment.
  - Effect of PMPR on soft tissue and hard tissue.
- **Introduction to surgical therapy:**
  - Differentiate between different surgical techniques and goals.
  - Familiarize self with different surgical instruments used in periodontology.
  - Materials objectives: Platelet-Rich-Fibrin (PRF), different Bone grafts and membranes materials.
  - Flap designs objectives: Principles of flap design, Incisions (sulcular vs. submarginal), Full thickness flaps Vs Partial thickness flaps, Types of flaps and related instruments.

- Suturing objectives: Goals of suturing, Suturing instruments, Suturing materials, Suturing techniques.
- **Dental photography:**
  - Understanding camera settings.
  - Understanding role of flash/soft box.
  - Developing intra and extra oral photography skills.
- **Introduction to seminars:**
  - Introduction to treatment planning and surgical seminars.
  - Develop presentation skills.
  - Incorporation of photography in slides.
  - Initial set up of presentation.

**Course Topics Schedule**

The following table (Table 5) lists the course topics schedule:

Week	Topic
<b>1</b>	<ul style="list-style-type: none"> <li>● Introduction to Seminars Class (1)</li> </ul>
<b>2</b>	<ul style="list-style-type: none"> <li>● Course introduction</li> <li>● Discussing goals/aims and objectives.</li> <li>● Explaining the methodology of the class.</li> <li>● Periodontal Examination</li> <li>● Photography (1)</li> </ul>
<b>3</b>	<ul style="list-style-type: none"> <li>● Periodontal diagnosis (1)</li> <li>● Introduction to Seminars Class (2)</li> <li>● Photography (2)</li> </ul>
<b>4</b>	<ul style="list-style-type: none"> <li>● Periodontal diagnosis workshop (2)</li> <li>● Introduction to Seminars Class (3)</li> </ul>
<b>5</b>	<ul style="list-style-type: none"> <li>● Photography (3)</li> </ul>

<b>6</b>	<ul style="list-style-type: none"> <li>• Non- Surgical periodontal therapy Session (1)</li> <li>• Introduction to Seminars Session (4)</li> <li>• Photography (4)</li> </ul>
<b>7</b>	<ul style="list-style-type: none"> <li>• Non- Surgical periodontal therapy Session (2)</li> <li>• Photography (5)</li> </ul>
<b>8</b>	<ul style="list-style-type: none"> <li>• Introduction to surgery (1)</li> <li>• Non-Surgical periodontal therapy (3)</li> <li>• Photography (6)</li> </ul>
<b>9</b>	<ul style="list-style-type: none"> <li>• Introduction to surgery (2)</li> <li>• Non-Surgical periodontal therapy (4)</li> <li>• Photography (7)</li> </ul>
<b>10</b>	<ul style="list-style-type: none"> <li>• Non-Surgical periodontal therapy Hands on workshop: Sharpening and Scaling</li> </ul>
<b>11</b>	<ul style="list-style-type: none"> <li>• Introduction to surgery (3)</li> <li>• Photography (8)</li> </ul>
<b>12</b>	<ul style="list-style-type: none"> <li>• Introduction to surgery (4)</li> <li>• Workshop: Surgical flap and sutures</li> </ul>

Table 5

**Course Assessment**

- Course assessment details will be provided for the residents by the course director at the beginning of each course.



# Classic Literature Review in Periodontology and Implantology

**Course Directors: Dr. Nada Hayati , Dr. Saqer AlSaqer.**

This class is divided to two main parts:

1. Classic Literature review in Periodontology
2. Classic Literature review in Implantology

## 1. Classic Literature Review in Periodontology

### Course Description

This course will help the residents familiarize themselves with the foundational and classical articles in periodontology. By the end of their third year of residency (R5) of Classic literature review class, if they complete the readings and the assignments, they will become competent in critical evaluation of the past scientific literature in Periodontology. This course will be held in-person on Mondays for 3 hours per session.

The seminar will follow a consistent weekly format. Residents will gain exposure to the weekly topics by engaging with online material on the following platforms:

- One Drive
- Microsoft teams

Each week a different topic will be discussed. During class, a team of one resident (presenter) and one faculty will show a 20-30 minutes PowerPoint/Keynote presentation on 2-3 articles to introduce the topic to the audience and highlight the important aspects of the papers assigned. Once the presentation is completed, the rest of the papers should be discussed in the class. Summaries are encouraged to be prepared in advance. These can be shared between the residents.



More papers will be available on the online platforms for the residents to review during their own time after the class to get a deeper understanding of the topic discussed.

The faculty member hosting the session is expected to prepare a set of questions, either shared with the residents in advance or asked during the class. These questions should help the residents focus on the most important aspects of the literature provided and help direct them throughout the class.

### Course Goals

Participants will be able to:

- Critically evaluate past periodontal literature.
- Address the important concepts of evidence-based dentistry in current clinical practice of periodontology.
- Demonstrate a clear understanding of scientific arguments.
- Construct thoughts on future directions in the field of periodontology.

### Course Learning Objective

After completing this course, residents will be able to:

- Fully understand concepts and theories of the past periodontal literature for the purpose of clinical analysis and application.
- Master periodontal terminology and interact professionally with co-residents, faculty members and future colleagues.
- Develop alternative treatment plans, that are evidence-based and be able to incorporate an inter-disciplinary approach.



- Be fully competent in applying the knowledge obtained during these seminars into daily clinical practice, future case presentations and surgical seminars.
- Develop presentation skills, focusing on elaboration, description and observation. This also includes sharing both positive and negative feedback with the presenter, the faculty assigned and the rest of the class.

### Course Topics Schedule

The following table (Table 6) lists the course topics schedule:

Week	Topic
<b>1</b>	<ul style="list-style-type: none"> <li>• Course introduction</li> <li>• Discussing goals/aims and objectives.</li> <li>• Explaining the methodology of the class.</li> </ul>
<b>2</b>	Anatomy of the periodontium and Histology II: <ul style="list-style-type: none"> <li>• Gingival epithelium and oral mucosa</li> <li>• Dentogingival Complex</li> <li>• PDL</li> </ul>
<b>3</b>	Anatomy of the periodontium and Histology I: <ul style="list-style-type: none"> <li>• Cementum</li> <li>• Alveolar Bone</li> </ul>
<b>4</b>	Etiology and contributing factors for periodontitis I: <ul style="list-style-type: none"> <li>• Local Factors Focused</li> </ul>
<b>5</b>	Furcation
<b>6</b>	Introduction to basic science: <ul style="list-style-type: none"> <li>• Microbiology and Pathogenesis of Periodontitis</li> </ul>
<b>7</b>	Natural History of Periodontitis and Epidemiology
<b>8</b>	Etiology and contributing factors for periodontitis II: <ul style="list-style-type: none"> <li>• Systemic Factors</li> <li>• Environmental Factors</li> </ul>

9	Periodontal Diagnosis: (Old and new)
10	Periodontal Diagnosis: Diagnostic tools Workshop- Application of Diagnosis
11	Prognosis of Periodontal disease
12	Occlusion and Occlusal Trauma
13	Pharmacology in Periodontology: Antibiotics, antimicrobials and local agents.
14	Non-surgical therapy I
15	Non-surgical therapy II
16	Periodontal Maintenance and Supportive periodontal treatment.
17	Oral physiotherapy
18	Introduction to periodontal surgeries: <ul style="list-style-type: none"> <li>• Basic Surgical Principles</li> <li>• Wound healing (to be discussed in further details per topic)</li> </ul>
19	Gingivectomy and flap surgery
20	Osseous Surgery
21	Osseous Surgery: Crown Lengthening
22	GTR: Membranes and Biologics
23	GTR: Bone grafts
24	GTR: Technique
25	GBR: RP and Sinus Augmentation
26	GBR: Vertical and horizontal
27	GBR: Other techniques
28	Inter-disciplinary Considerations: <ul style="list-style-type: none"> <li>• Periodontic/Restorative</li> <li>• Periodontic/Endodontic</li> <li>• Periodontic/Orthodontic</li> </ul>
29	Introduction to periodontal plastic surgery





	Gingival recession: Etiology, diagnosis and prognosis
<b>30</b>	Mucogingival therapy I: FGG
<b>31</b>	Mucogingival therapy II: CTG and non-autogenous
<b>32</b>	Lasers
<b>33</b>	Longitudinal studies
<b>34</b>	Surgical vs. non-surgical treatment reviews

Table 6

### Course Assessment

- Course assessment details will be provided for the residents by the course director at the beginning of each course.

## 2. Classic Literature Review in Implantology

### Course Description

This course will help the residents to familiarize themselves with the foundational and classical articles in Implantology. By the end of their third year of Classic literature review classes (R5), if they complete the readings and the assignments, they will become competent in critical evaluation of the past scientific literature in Implantology. This course will be held in-person on Mondays for 3 hours per session.

The seminar will follow a consistent weekly format. Residents will gain exposure to the weekly topics by engaging with online material on the following platforms:

- One Drive
- Microsoft teams



Each week a different topic will be discussed. During class, a team of one resident (presenter) and one faculty will show a 20-30 minutes Keynote presentation on 2-3 articles to introduce the topic to the audience and highlight the important aspects of the papers assigned. Once the presentation is completed, the rest of the papers should be discussed in the class. Summaries are encouraged to be prepared in advance. These can be shared between the residents.

More papers will be available on the online platforms for the residents to review during their own time after the class to get a deeper understanding of the topic discussed.

The faculty member hosting the session is expected to prepare a set of questions, either shared with the residents in advance or asked during the class. These questions should help the residents focus on the most important aspects of the literature provided and help direct them throughout the class.

## Course Goals

Participants will be able to:

- Critically evaluate past implant literature and demonstrate a clear understanding of scientific arguments.
- Address the important concepts of evidence-based dentistry in current clinical practice of implantology.
- Construct thoughts on future directions in the field of implantology.

## Course Learning Objectives

After completing the three-year cycles of the seminar, residents will be able to:

- Fully understand concepts and theories of the past implant literature for the purpose of clinical analysis and application.
- Master implant terminology and interact professionally with co-residents, faculty members and future colleagues.
- Develop alternative treatment plans, that are evidence-based and be able to incorporate an inter-disciplinary approach.
- Be fully competent in applying the knowledge obtained during these seminars into daily clinical practice, future case-presentations and surgical seminars.
- Develop presentation skills, focusing on elaboration, description and observation. This also includes sharing both positive and negative feedback with the presenter, the faculty assigned and the rest of the class.

## Course Topic Schedule

The following table (Table 7) lists the course topics schedule:

Week	Topic
1	Implant designs: Macro and Micro designs.
2	Surface modifications: Additive vs. subtractive methods.
3	Contraindications for implant surgery.
4	Short implants.
5	Submerged vs. non-submerged approach.

6	Guided bone regeneration around implants.
7	Sinus augmentation.
8	Peri-implant soft tissue evaluation and augmentation.
9	Immediate implant and loading protocols.
10	Bone to implant contact and Osseointegration.
11	Implant risk factors.
12	Catch-up Session.

Table 7

**Course Assessment**

- Course assessment details will be provided for the residents by the course director at the beginning of each course.

# Current Literature Review in Periodontology and Implantology

Course Director: Dr. Ahmad AlSharrad

## Course Description

This course will help the residents to be up to date with the current research in periodontology and implant dentistry. A thorough selection of recent articles from the major journals in periodontology and implant dentistry will be extracted by KB Perio residents under the supervision of the program director. The course will start on the second semester of the first year until the end of third year. The current Literature that will be discussed in the course are from these journals:

- Journal of Periodontology
- Journal of clinical periodontology
- Periodontology 2000
- Clinical implant dentistry and related research
- Clinical oral implants research

## Course Goals

Residents will be able to:

- Critically evaluate current periodontal literature.
- Address the important concepts of evidence-based dentistry in current clinical practice of periodontology.
- Construct thoughts on future directions in the field of periodontology and implant dentistry.



## Learning Objectives

After completing the course, residents will be able to:

- Abstracting, and evaluating the most recently published research and technique in the field of periodontology and dental implantology.

## Course Assessment

- Course assessment details will be provided for the residents by the course director at the beginning of each course.



# Implantology A-Z Course

Course Director: Dr. Saqer ALSaqer

## Course Description

This course represents the fundamental phase to the discipline of dental implantology. Throughout the course, the residents will learn the foundational literature, surgical techniques, prosthetic aspects of dental implantology. By the end of this course, if they complete the readings, assignments and presentations, they will be able to apply their knowledge in the clinic and to function in a multidisciplinary approach cooperating with other dental specialties. This course will be held in-person on Mondays for 1.5 hours.

Each week a different topic will be discussed. The course will be divided into lectures, seminars and presentations. Lectures will be given by the faculty members and visitors followed by discussions with the residents. On the other hand, during seminars each resident will be assigned a number of articles to read and summarize. These articles will be discussed and criticized in the class. By the end of the course, each resident will be asked to prepare an implant case presentation and a topic presentation related to dental implantology.

More papers will be available on the online platforms for the residents to review during their own time after the class to get a deeper understanding of the topic discussed.

The faculty member hosting the session is expected to prepare a set of questions. These questions are either shared with the residents in advance or asked during the class. This should help the residents focus on the most important aspects of the literature provided and help direct them throughout the class.

## Course Goals

Participants will be able to:

- Critically evaluate implant literature.
- Address the important concepts of evidence-based literature in current clinical practice of implant dentistry.
- Obtain proper knowledge to be able to function in a multidisciplinary approach
- Demonstrate a clear understanding of scientific arguments.
- Construct thoughts on future directions in the field of implant dentistry.

## Course Learning Objectives

- Knowledge Obtainment:
  - Understand the history, different types and indications of dental implants
  - Learn about implant site evaluation and treatment plan for single and multiple implants.
  - Understand different protocols regarding timing of implant placement including immediate, early and delayed implant placement.
- Clinical Skills Development:
  - Demonstrate and conduct complete dental history and clinical evaluation of implant patients.
  - Master surgical techniques for implant placement.
  - Develop the right skills to manage complications and failure.
- Prosthetic Analysis:





- Understand esthetic considerations and prosthetic aspects of implant dentistry.
- Learn about implant loading protocols and different types of implant supported restorations.
- **Implant Maintenance:**
  - Understand postoperative follow-up and maintenance protocols.
  - Learn how to manage peri-implant diseases.
- **Interdisciplinary Approach:**
  - Foster collaboration with other dental specialties.
  - Understand the role of periodontists in multidisciplinary care.
  - Learn to coordinate care with other specialties.

**Course Topics Schedule**

The following table (Table 8) lists the course topics schedule:

Week	Topics
1	<ul style="list-style-type: none"> <li>● Course introduction</li> <li>● Discussing goals/aims and objectives.</li> <li>● Explaining the methodology of the class.</li> </ul>
2	The evolution of dental implants throughout history
3	Definition and histology of Osseointegration
4	Implant designs and implant surface modifications
5	Implant site evaluation I: Anatomical considerations
6	Implant site evaluation II: Horizontal and vertical ridge deficiencies
7	Treatment planning for single and multiple implants

8	Implant placement: surgical protocol
9	Submerged Vs non-submerged approach
10	Implant-abutment connection and platform switching
11	Implant site preparation I: Ridge preservation
12	Implant site preparation II: Ridge augmentation
13	Implant site preparation III: Sinus lift
14	Implant site preparation IV: Peri-implant soft tissue augmentation
15	Timing of implant placement I: Early and Delayed implant placement
16	Timing of implant placement II: Immediate implant placement
17	Esthetic considerations for implant placement
18	Biologics
19	Guided implant I: Treatment planning
20	Guided implant II: Surgical protocol
21	Implant loading protocols
22	Screw vs. cement retained implants
23	Evidence based success and survival rates of dental implants
24	Systemic factors affecting the success of dental implants
25	Topic presentation: resident 1
26	Contraindications of implant placement
27	Topic presentation: resident 2
28	Management of peri-implant diseases
29	Topic presentation: resident 3
30	Implant removal: decision and techniques
31	Topic presentation: resident 4



32	Maintenance protocols after implant placement
33	Short implants
34	Zirconia implants
35	Implant case presentation
36	Implant case presentation
37	Implant case presentation
38	Implant case presentation

Table 8

### Course Assessment

- Course assessment details will be provided for the residents by the course director at the beginning of each course.

# Embryology and Oral Histology

**Course Director: Dr. Mashael AlNasser, Dr. Bader AlBaqshi**

## Course Description

This course is intended to provide the residents with fundamental knowledge of general embryonic development and in-depth knowledge about growth and development of structures of the head and neck, and their relevance to the assessment and treatment of patients.

## Course Goals

- To understand the basic knowledge of general embryonic development.
- To understand in-depth knowledge about the embryonic development of head and neck structures.
- To describe normal and abnormal facial development including common malformations.
- Recognize histological structures in the oral cavity and the surrounding structures.

## Course Learning Objectives

Have a thorough understanding of:

- The general development of face and nasal cavity.
- The development of the palate, the tongue and salivary glands.
- The development of tooth structures and supporting tissues.
- The development of facial malformation and dental anomalies.
- Structure of enamel, dentine pulp, cementum, periodontal ligament and bone
- Formation stages and composition of tooth apparatus.



## Course Topics Schedule

The following table (Table 9) lists the course topics schedule:

Week	Topics
1	Dental Embryology
2	Histology of the oral cavity and surrounding structures
3	Development of face, oral soft and hard tissues: "Face and teeth disclosed"

Table 9

## Course Assessment

- Course assessment details will be provided for the residents by the course director at the beginning of each course.



# Pharmacology in Periodontics

**Course Director: Dr. Samaa AlRushaid**

## Course Description

This course will provide residents with the basic and clinical pharmacology concepts to effectively and safely prescribe medications to optimize therapeutic outcomes while minimizing adverse effects and preventing potential drug-drug interactions.

The course will provide an overview of medications commonly prescribed by dentists, such as analgesics, local anesthetics, sedatives, and antimicrobials. The course will also discuss medications which are commonly taken by patients with a focus on potential drug-drug interactions with medications, which are prescribed by dentists.

## Course Goals

Participants will be able to:

- Identify potential hazards related to prescribing medications
- Optimize the effectiveness of selected medications
- Prescribe medications according to the patients' condition.

## Course Learning Objectives

After completing this course the residents will be able to:

- Describe the basic pharmacodynamics and pharmacokinetics of selected medications
- Calculate doses of selected medications
- Identify potential drug-drug interactions
- Identify patient related conditions, which may interfere with medications



- Recognize the oral manifestation of drugs which the patient is taking
- Apply laws and regulations related to prescribing medications
- Write a prescription with appropriate dose and formulation

### Course Topic Schedule

The following table (Table 10) lists the course topics schedule:

Week	Topic
<b>1</b>	Prescribing medications and prescription writing General Laws and regulations
<b>2</b>	Local anesthetics and sedatives
<b>3</b>	Analgesics – Opioid and non-opioid
<b>4</b>	Antimicrobials – Antibiotics (systemic & oral; prophylaxis)
<b>5</b>	Antimicrobials - antifungal and antivirals
<b>6</b>	Anticoagulants
<b>7</b>	Commonly prescribed drugs (oral manifestations, drug-drug interactions)
<b>8</b>	Commonly prescribed drugs (oral manifestations, drug-drug interactions)

Table 10

### Course Assessment

- Course assessment details will be provided for the residents by the course director at the beginning of each course.

# Oral Surgery in Periodontics

Course Director: Dr. Hessah Aman

## Course Description

This course is designed to equip our residents with the essential skills and knowledge needed for performing a range of oral surgical procedures commonly encountered in periodontal practice. The curriculum covers surgical principles, techniques, and patient management strategies, focusing on the intersection of periodontology and oral surgery.

Emphasis is placed on understanding surgical anatomy, minimizing complications, and optimizing healing and patient outcomes. This course prepares the residents to confidently integrate oral surgical procedures into their clinical practice, enhancing their ability to provide comprehensive patient care.

## Course Goals & Learning Objectives

### (1) Head and Neck Anatomy

The main objective of the anatomy course is to prepare the residents to operate comfortably and confidently when performing surgeries in the future. Thus, this course should mainly focus on two aspects: Anatomical structures identification and clinical relevance of anatomy to daily practice.

The following table (Table 11) lists the course topics and their learning objectives:

Topic	Learning Objectives
1. Skull osteology	<ul style="list-style-type: none"><li>• Identification of the bones, Foramina of the skull (Overview).</li><li>• Focusing on identification of main structures of the <u>mandible</u> and <u>maxilla</u> to provide a general knowledge of</li></ul>





	<p>foramina, canals, arteries muscle insertions and attachment.</p> <ul style="list-style-type: none"> <li>• This should serve a foundational knowledge for the residents to be able to perform future procedures in these areas (Delivering LA, Releasing incisions, placing implants close to vital structures, harvesting bone block grafts and so on).</li> </ul>
2. Temporomandibular joint (TMJ)	<ul style="list-style-type: none"> <li>• Osteology of the TMJ.</li> <li>• Articular disc (Meniscus) and auricular capsule .</li> <li>• Nerve supply and arterial supply to the TMJ.</li> <li>• How to examine the TMJ.</li> <li>• How to identify TMD, overview of possible treatments (This should serve as a way for the residents to be able to identify issues and be able to refer to OS once detected).</li> </ul>
3. Nasal cavity and paranasal sinuses	<ul style="list-style-type: none"> <li>• The main objective of this course is to focus on the anatomy of the maxillary sinuses.</li> <li>• To prepare the residents for future application of this knowledge in their clinical practice for sinus elevation procedures and identification of minor and major complications.</li> <li>• The maxillary sinus-related topics covered in this course include: <ul style="list-style-type: none"> <li>○ Anatomy of the maxillary sinus.</li> <li>○ Boundaries and communication.</li> <li>○ Vascularization and innervation .</li> <li>○ Presence of Septa.</li> <li>○ Schneiderian membrane and lining of the maxillary sinus.</li> <li>○ Assessment using CBCT and Panoramic radiographs (Pre-operative assessment).</li> <li>○ Pathology associated with Maxillary sinuses, focusing on its relevance to implant placement procedures.</li> <li>○ Generating referrals to ENT when needed.</li> </ul> </li> </ul>
4. Muscles (Triangles of the neck, muscles of mastication)	<ul style="list-style-type: none"> <li>• Triangles of the neck - Mainly an identification, knowing the boundaries and the content.</li> <li>• Muscles of mastication:</li> </ul>



	<ul style="list-style-type: none"> <li>● Identification of the following for each one of the muscles: <ul style="list-style-type: none"> <li>○ Innervation</li> <li>○ Origin</li> <li>○ Insertion</li> <li>○ Action</li> </ul> </li> <li>● The same applies for the accessory muscles of mastication: The digastric and the Geniohyoid.</li> </ul>
5. Arterial supply of the head and neck region	<ul style="list-style-type: none"> <li>● A general overview of the arterial supply focusing on identification and avoiding possible complications that might arise in the future.</li> </ul>
6. Venous and lymphatic drainage	<ul style="list-style-type: none"> <li>● A general overview of the following topics will be included: <ul style="list-style-type: none"> <li>○ Venous and lymphatic drainage of the head and neck region.</li> <li>○ Extra-oral examination of Lymph nodes.</li> </ul> </li> </ul>
7. Cranial nerves	<ul style="list-style-type: none"> <li>● Identification of the cranial nerves.</li> <li>● Clinical relevance, disorders and referrals.</li> <li>● Focusing on the innervation of the oral cavity and the tongue.</li> </ul>
8. Fascial spaces	<ul style="list-style-type: none"> <li>● Identification and focusing on spread of infection pre and post-surgery.</li> </ul>
9. Salivary glands	<ul style="list-style-type: none"> <li>● Anatomy of salivary glands .</li> <li>● Location.</li> <li>● Function.</li> <li>● Clinical application (Identification of conditions and disorders, ability to refer patients, overview of available treatments).</li> </ul>
10.Squamous cell carcinoma	<ul style="list-style-type: none"> <li>● This topic will be covered from an oral surgery perspective: <ul style="list-style-type: none"> <li>○ SSC Identification, biopsy, survival rates and treatment will be covered.</li> <li>○ A Case-based class with diagnosis reports and histology slides if possible to help with identification of slides.</li> </ul> </li> </ul>

Table 11



## **(2) Medical Emergencies in the Dental Setting**

Residents should be able to:

- Acquire the essential knowledge and skills needed to manage medical emergencies occurring during dental treatments.
- Be able to identify medical conditions that require medical clearance before delivering dental treatment.
- Be able to identify medical conditions that require periodontal clearance to proceed with medical therapy.

## **(3) Local Anesthesia and Anxiety Management**

Residents should be able to:

- Recognize the mechanism of action of anesthetics (Overview- as this will be covered in Pharmacology Course)
- Recognize/Classify clinically available local anesthetics
- Be able to select the most appropriate local anesthetic for different patients on the basis of medical history. (Case-selection) and type of the procedure.
- Discuss the possible adverse effects of local anesthesia
- Be able to recognize and manage anxious or fearful patients
- Overview on the different forms of sedation (Inhalation, IV) and its clinical application in dentistry.
- Overview on GA and be able to select the patients appropriate to receive this form of treatment.



## Course Topics Schedule

The following table (Table 12) lists the course topics schedule:

Week	Topic
<b>1</b>	Anatomy: Introduction Skull Osteology
<b>2</b>	Anatomy: Cranial nerves
<b>3</b>	Anatomy: Muscles of mastication
<b>4</b>	Anatomy: Fascial spaces
<b>5</b>	Anatomy: The Temporomandibular joint (TMJ)
<b>6</b>	Anatomy: Salivary glands
<b>7</b>	Anatomy: Arterial, venous and lymphatic drainage
<b>8</b>	OS: Medical emergencies (1) Local Anesthesia (1)
<b>9</b>	Anatomy: Nasal Cavity and sinuses
<b>10</b>	OS: Medical emergencies (2) Local Anesthesia (2)
<b>11</b>	Anatomy: SCC

Table 12

## Course Assessment

- Course assessment details will be provided for the residents by the course director at the beginning of each course.



# Research Methodology

and its application in the field of periodontology and implantology

Course Director: Dr. Ahmad Sedeqi

## Course Description

The Research methodology course is tailored for the KB-Perio program. The course primary goal is to equip residents with the essential tools to navigate the intersection of epidemiology, biostatistics, and clinical dentistry. Through comprehensive instruction, residents will learn to adeptly apply these disciplines to scientific inquiry within the dental field. Emphasis will be placed on honing critical appraisal skills, enabling residents to scrutinize and analyze scientific literature effectively. Furthermore, the curriculum underscores the significance of evidence-based dentistry in informing clinical practice, fostering a deep understanding of its principles and methodologies. By the end of this course, residents will not only possess the ability to engage with scholarly literature with discernment, but will also appreciate the vital role evidence-based dentistry plays in delivering optimal patient care.

The course is divided into three main parts:

1. Introduction to the importance of research, epidemiology, types of research and epidemiology concepts.
2. Introduction to the statistical methods used in different studies and how to select the proper statistical tests.
3. The proper use of research engines and to critique scientific papers.



## Course Goals

This course will aim to introduce residents to the following:

- Research tools and the importance of scientific research in the field of dentistry.
- Epidemiology and epidemiology-associated terms definitions.
- Biostatistics and its application in dental/periodontology/implantology research.
- Search engines and the ability to navigate and extract articles.
- Evidence based dentistry and the ability to critically appraise scientific papers and identifying sources of bias.
- The skills of integrating clinical, microbiological, radiographical, histological, biological, and genetic analyses to enhances research outcomes.
- The ability to write a research proposal.
- Ethics in the field of periodontology and implantology and their application in a research.

## Course Learning Objectives

- **Apply Epidemiology and Biostatistics in Clinical Dentistry:**
  - Residents will gain a comprehensive understanding of how epidemiological principles and biostatistical methods intersect with clinical dentistry. By grasping these concepts, they will be able to design studies, interpret data, and draw meaningful conclusions essential for evidence-based practice in periodontology.
- **Critically Appraise Scientific Literature:**
  - An essential skill for any periodontist is the ability to read, evaluate, and critique scientific articles effectively. In this course, Residents will learn the art of

discerning quality research, identifying biases, and extracting relevant information to inform your clinical decision-making process.

- **Embrace Evidence-Based Dentistry:**

- Evidence-based dentistry forms the cornerstone of modern clinical practice. Understanding the hierarchy of evidence, critically appraising research findings, and integrating them into resident’s clinical approach will be emphasized. They'll recognize the importance of basing your periodontal interventions on sound scientific evidence, enhancing the quality of patient care and outcomes.

**Course Topics Schedule**

The following table (Table 13) lists the course topics schedule:

Week	Topics
<b>Introduction to the course:</b>	
<b>1</b>	<ul style="list-style-type: none"> <li>• Describe the course to the students.</li> <li>• Outline the student responsibilities.</li> <li>• Outline the grading system in the course.</li> <li>• Outline lectures and seminars distribution.</li> </ul>
<b>Introduction to research &amp; searching for scientific information:</b>	
	<ul style="list-style-type: none"> <li>• Define the meaning of research and its importance in dental field.</li> <li>• Identify article parts and what each part contains.</li> <li>• Have the ability to identify and formulate PICO question.</li> <li>• Demonstrate the ability to browse articles by name or subject.</li> <li>• Demonstrate the ability to form dental research strategy.</li> <li>• Compose a keyword for searching procedures.</li> <li>• Choose the appropriate key words.</li> <li>• Operate PUBMED search using internet.</li> </ul>

	<ul style="list-style-type: none"> <li>• Use other search engine like Google Scholar, Embase, and Web of Science.</li> <li>• identify the importance of ISSN indexed journals.</li> <li>• identify the meaning and importance of journal impact factor.</li> <li>• Illustrate how to save and use searched strategy and search output.</li> </ul>
<b>Epidemiology I:</b>	
<b>2</b>	<ul style="list-style-type: none"> <li>• Define epidemiology and its uses.</li> <li>• Describe the major contribution of epidemiology to improving the population's health status.</li> <li>• Define epidemic, pandemic, endemic.</li> <li>• Define exposure, outcome, covariate.</li> <li>• Define ratio, proportion, rate.</li> <li>• Define prevalence, incidence rate, and cumulative rate and be able to calculate them.</li> <li>• Define different types of studies indications of use, and limitations for each one.</li> </ul>
<b>Seminar I:</b>	
	<ul style="list-style-type: none"> <li>• Demonstrate the ability to calculate the prevalence, incidence rate and cumulative rate.</li> <li>• Demonstrate the ability to identify the exposure and outcome for published articles.</li> <li>• Demonstrate the ability to calculate rate, proportion, ratio.</li> <li>• Demonstrate the ability to select the best study design based on study questions.</li> </ul>
<b>Epidemiology II:</b>	
<b>3</b>	<ul style="list-style-type: none"> <li>• Describe the basic concept of systematic error (bias).</li> <li>• Identify the different types of bias.</li> <li>• Describe the concept of confounding and how stratification may reduce it.</li> <li>• Describe the concept of internal and external validity.</li> <li>• Describe the concept of random error in medical research.</li> <li>• Describe the inter and intra-examiner calibration.</li> <li>• Define association and risk.</li> <li>• Compute and interpret relative risk (odds ratio) as a measure of association.</li> </ul>





	<ul style="list-style-type: none"> <li>• Compute and interpret attributable risk as a measure of potential impact.</li> </ul>
<b>Statistics I:</b>	
	<ul style="list-style-type: none"> <li>• Define statistics.</li> <li>• Define the variables and their types.</li> <li>• Identify the best graphical presentation of each type of variables.</li> <li>• Recognize the frequency distribution of the curves ( normal vs skewed shapes) and its meaning.</li> <li>• Be familiar with normality tests and their interpretation.</li> <li>• Recognize measures of central tendency (mean, median, mode) and the meaning of each one.</li> <li>• Recognize measures of variation (range, variance, standard deviation) and the meaning of each one.</li> <li>• Understand the meaning of outliers and how to detect them.</li> </ul>
<b>Statistics II</b>	
<b>4</b>	<ul style="list-style-type: none"> <li>• Identify confidence interval (CI) and how to interpret it</li> <li>• Identify the factors that affect the CI</li> <li>• The concept of probability</li> <li>• Importance of sample size calculation</li> <li>• Characteristics of a good sample</li> <li>• Factors that affect the sample size determination</li> <li>• Identify the concept of probability and non-probability sampling</li> <li>• the ability to use a key article for sample size calculation</li> <li>• the concept of piloting, when to do it, and how to apply it for your research sample size calculation</li> <li>• The ability to calculate the sample size.</li> </ul>
<b>Seminar II</b>	
	<ul style="list-style-type: none"> <li>• Be able to calculate the inter and intra-examiner calibration and identify what is considered good or poor agreement</li> <li>• Calculate the odds ratio, relative risk and attributable risk</li> <li>• Be able to identify the type of variables from different examples</li> <li>• Identify the different graphical presentations of the data and be able to read them</li> <li>• Identify the frequency distribution of data curves</li> <li>• Calculate measures of central tendency and measures of variation through different examples</li> </ul>



<b>Statistics III</b>	
<b>5</b>	<ul style="list-style-type: none"> <li>• Recognize the hypothesis concept</li> <li>• Identify the types of hypotheses</li> <li>• Identify the types of error</li> <li>• Recognize the steps for hypothesis testing</li> <li>• Recognize sensitivity and specificity</li> <li>• Recognize the positive and negative predictive value</li> <li>• Recognize the P-value and its interpretation</li> <li>• Parametric tests of hypothesis for single mean. Two paired groups, and two independent groups</li> <li>• Non-parametric tests of hypothesis for one sample, two paired groups, and two independent groups</li> </ul>
<b>Seminar III</b>	
	<ul style="list-style-type: none"> <li>• How to calculate CI</li> <li>• How to calculate the sample size of different studies' samples</li> <li>• How to calculate sensitivity, specificity, and positive and negative predictive value</li> </ul>
<b>Statistics IV</b>	
<b>6</b>	<ul style="list-style-type: none"> <li>• Define association, correlation, regression</li> <li>• Recognize the tests for the association between two qualitative variables</li> <li>• Usage of 2x2 contingency table</li> <li>• Usage of contingency table for a discretized quantitative variable</li> <li>• How to calculate relative risk and odds ratio</li> </ul>
<b>Seminar IV</b>	
	<ul style="list-style-type: none"> <li>• How to perform descriptive analysis and interpret it</li> <li>• How to calculate the measures of central tendency and measures of variation</li> </ul>
<b>Statistics V</b>	
<b>7</b>	<ul style="list-style-type: none"> <li>• Be familiar with the association between two quantitative variables</li> <li>• Identify the parametric correlation tests</li> <li>• Identify the non-parametric correlation tests</li> <li>• Identify the test used for measuring regression of one independent variable (linear regression test)</li> <li>• Differentiate between linear and multiple regression tests</li> </ul>



	<ul style="list-style-type: none"> <li>• Be familiar with the ANOVA test</li> </ul>
<b>Seminar V</b>	
	<p>Measure the association between two qualitative variables</p> <p>a) Do 2x2 contingency table and interpret it</p> <p>b) Do contingency table for a discretized quantitative variable and interpret it</p> <p>Calculate the relative risk and odds ratio and interpret it</p>
<b>Evidence-Based dentistry I</b>	
8	<ul style="list-style-type: none"> <li>• Define evidence-based dentistry</li> <li>• Define the art and science of dentistry</li> <li>• Rate the quality of the literature</li> <li>• Define systematic review</li> <li>• Recognize how to conduct a systematic review</li> <li>• Recognize examples of evidence-based dentistry</li> </ul>
<b>Evidence-Based density II</b>	
9	<ul style="list-style-type: none"> <li>• Define the responsibilities of practitioners</li> <li>• Recognize the current state of the science</li> <li>• Recognize the limitations of evidence-based dentistry</li> <li>• Recognize the sources of literature including textbooks and peer-reviewed journals</li> <li>• Judge the quality of a journal including a) peer review b) journals' sponsorship c) editorial board, advisory board, and consultants d) nature of the papers e) advertisement f) production standards.</li> </ul>
<b>Seminar VI</b>	
	<p>critical appraisal discussion</p> <ul style="list-style-type: none"> <li>• Illustrate the ability of students to critically appraise literature and present it in a logical manner.</li> <li>• Explain the process of performing critical appraisal of cohort and case control studies</li> <li>• Demonstrate the skill of appraising cohort and case control study</li> </ul>
<b>Evidence-Based density III</b>	
10	<ul style="list-style-type: none"> <li>• Recognize the critical reading</li> <li>• evaluating the quality of a published paper</li> <li>• Recognize the hierarchy of the quality of information</li> <li>• Recognize the quality issues in judging research reports</li> <li>• Judge the quality issues in narrative reviews of the literature</li> </ul>



	<ul style="list-style-type: none"> <li>• Judge the quality issues in commentaries</li> <li>• Understand the principles of critical appraisal and its role in evidence-based practice</li> <li>• Appraise the validity and reliability of research papers</li> <li>• Recognize the relevance of published research</li> <li>• Recognize the critical appraisal of different types of study designs</li> <li>• Appraisal of an RCT and Systematic Review using a critical appraisal checklist</li> <li>• Appraise the validity and reliability of research papers</li> <li>• Assess the relevance of published research to your own work</li> </ul>
<b>Seminar VII (critical appraisal discussion)</b>	
	<ul style="list-style-type: none"> <li>• Illustrate the ability of students to critically appraise the literature and present it in a logical manner</li> <li>• Explain the process of performing critical appraisal of systematic reviews and controlled trials</li> <li>• Demonstrate the skill of appraising systematic reviews and controlled trials</li> </ul>

Table 13

**Course Assessment**

- Course assessment details will be provided for the residents by the course director at the beginning of each course.



# Infection Control and Sterilization in Dental Health Setting

Course Director: Dr. Hanouf AlBuaijan

## Course Description

This two-day supplemental course focuses on the standards that should be followed to ensure the prevention of transmission of diseases among members of the dental team and/or the patients. It details the protocols each member of the dental team should implement to ensure infection control and hence safe practice for themselves and the patients at the dental clinic. It also will detail the decontamination stages used for the dental instruments handling from the sterilization department to reach the dental clinic. The course consists of a lecture series, clinical practice, and an objective structured clinical examination (OSCE) exam.

## Course Goals

This course aims to build participants' confidence with their infection prevention and control strategies by highlighting policies to reduce risk, ensure best practice and improve efficiency.

## Course Learning Objectives

After completing this course, the residents will be able to:

1. To provide basic infection prevention principles and recommendations for dental health care settings.
2. To reaffirm that following standard precautions is the foundation for preventing transmission of infectious agents during patient care in all dental health care settings.
3. To provide the residents with an understanding of the sterilization department policies and procedures.



## Course Topics Schedule

The following table (Table 14) lists the course topics schedule:

Week	Topics
1	Infection Control and Sterilization in the Dental Setting
1	Course Assessment Day (OSCE)

Table 14

## Course Assessment

- Course assessment details will be provided for the residents by the course director at the beginning of each course.

# Oral Medicine and Pathology in Periodontics

**Course Director: Dr. Anwar AlMuzaini**

## Course Description

The course will expand the resident's knowledge of common oral mucosal disorders, non-inflammatory gingival enlargement, periodontal manifestations of systemic diseases, histopathology of common gingival lesions, and different orofacial pain conditions including temporomandibular joint disorders (TMD).

The course Lectures will aim to develop the residents' ability of recognizing features of oral cancer and precancerous lesions and conducting an oral cancer screening through a comprehensive head and neck examination.

In addition, the residents will rotate in the oral medicine clinic where they will gain experience in the examination, diagnosis, and management of patients with different conditions affecting the oral and maxillofacial area. The course will allow residents to apply this knowledge to patients allowing them to deliver periodontal therapy in a safe and effective manner.

## Course Goals and Learning Objectives

Upon completion of the Oral Medicine and Pathology in Periodontics course, the residents will be able to:

- Understand common oral mucosal disorders and how to manage them.
- Understand the different etiologies of non-inflammatory gingival enlargement and the appropriate management modalities of each.



- Understand the different periodontal manifestations of systemic disease and manifestations of commonly prescribed medications.
- Recognize histopathological features of common gingival lesions and correlate clinical findings with histopathological features of such lesions.
- Understand the risk factors and clinical presentation of oral cancer and precancerous lesions/conditions; identify the need for consultations and further investigations of suspicious lesions.
- Conduct a comprehensive oral cancer screening through a systematic extra- and intra-oral examinations of the head and neck.
- Recognize normal oral variants and deviations from normal including pathological lesions.
- Develop a differential diagnosis and select appropriate diagnostic methods to determine the final diagnosis of oral lesions and establish a treatment plan.
- Understand the anatomy and physiology of common orofacial pain conditions, including TMD, and the various pharmacological and non-pharmacological treatment modalities.

### Course Topics Schedule

The following table (Table 15) lists the course topics schedule:

Didactic Classes (R3):	
Week	Lecture Title
1	New Patient Examination
2	Oral Mucosal Disorders I + II
3	Non-inflammatory Gingival Enlargement
3	Periodontal Manifestation of Systemic Diseases





4	Histopathology of Gingival Lesions
4	Orofacial Pain Disorders
5	Temporomandibular Joint Disorders
6	Case seminar
<b>Clinical rotation (R4)</b>	
<b>Week</b>	<b>Location</b>
1	TBD
2	TBD
3	TBD
4	TBD

Table 15

### **Course Suggested Resources**

1. Burket's Oral Medicine, 13<sup>th</sup> edition
2. Pre-Malignant and Malignant Lesions handout, KBGD R1 academic course

### **Course Assessment**

- Course assessment details will be provided for the residents by the course director at the beginning of each course.



# Radiology in Periodontics

**Course Director: Dr. Aref AlAwadhi, Dr. Mariam Baghdady**

## Course Description

The Oral Maxillofacial Radiology course will cover the basic oral radiology knowledge needed by a practicing periodontist. It will have a didactic and practical portion. The didactic portion will cover the most common dental diseases seen in practice, cone beam CT technology and its application in periodontology. The practical part of the course will be focused on acquiring intraoral radiographic images, detecting errors, and correcting them.

## Course Goals

Participants will be able to:

1. Acquire intraoral radiographic images using the paralleling technique.
2. Interpret radiographic images and come up with reasonable differential diagnosis.
3. Understand CBCT technology and its applications in daily practice.

## Course Learning Objectives

The aim of this course is to expose students to disease and pathological processes that affect the oro-maxillofacial region. By the end of the course, the residents should be able to:

- Complete intraoral radiographic image acquisition:
  - Acquire the images on a mannequin using the paralleling technique.
  - Mount the images appropriately.
  - Recognize technique errors.
  - Correct acquisition errors.



- Infection control.
- Understand panoramic imaging and anatomy.
- Differentiate normal anatomy from disease processes.
- Understand the radiographic appearance of:
  - Cyst and cyst-like lesions
  - Benign tumors
  - Malignant tumors
  - Bone diseases
  - Diseases of the paranasal sinuses
- Understand basic cone-beam technology, manipulation and anatomy:
  - Basic physics
  - Basic radiation protection
  - Acquisition protocoling
  - Anatomy
  - Image manipulation
  - Was Common case

**Course Topics Schedule**

The following table (Table 16) lists the course topics schedule:

<b>Topic: Self-learning Classes and Videos</b>
Intraoral radiographic imaging acquisition and errors
Panoramic imaging acquisition, anatomy and error
<b>Topic: lectures and workshops</b>
CBCT-Part1: Physics, anatomy

CBCT-Part2: Interpretation and hands on
Principles of radiographic interpretation Part 1
Principles of radiographic interpretation Part 2
Benign cysts and tumors-An overview
Fibro-osseous lesions-An overview
Malignancy and Inflammatory changes in bone
Paranasal sinuses-Anatomy and common diseases

Table 16

**Course Assessment**

- Course assessment details will be provided for the residents by the course director at the beginning of each course.

# Inter-Disciplinary Seminar

**Course Director: Dr. Munirah Burashed**

## Course Description

This seminar is designed for periodontics and prosthodontics residents, with contributions from endodontists, orthodontists, oral surgeons, and pediatric residents. It aims to foster a collaborative approach to complex dental cases, integrating knowledge and skills across various specialties.

The seminar emphasizes the importance of interdisciplinary care in achieving optimal patient outcomes and highlights the roles of different specialists in managing multifaceted oral health issues.

## Course Goals

- To enhance residents' understanding of the interconnected roles of periodontics and prosthodontics.
- To promote collaborative decision-making and treatment planning among dental specialists.
- To explore the impact of interdisciplinary approaches on patient care and clinical outcomes.
- To provide exposure to real-world cases that require coordinated care among multiple specialties.



## Course Learning Objectives

By the end of this seminar, participants will be able to:

1. Identify key areas where periodontics and prosthodontics overlap and understand the roles of each specialty in comprehensive treatment planning.
2. Collaborate effectively with specialists in endodontics, orthodontics, oral surgery, and pediatric dentistry to formulate multidisciplinary treatment plans.
3. Apply knowledge from various dental specialties to manage complex cases, particularly those involving multiple treatment phases.
4. Evaluate the outcomes of interdisciplinary treatments and adjust as necessary to optimize patient care.
5. Communicate effectively with patients and other healthcare providers about the benefits and challenges of an interdisciplinary approach.

## Course Topics Schedule

The following table (Table 17) lists the course topics schedule:

Week	Topic	Description
1	Introduction to Interdisciplinary Care	<ul style="list-style-type: none"> <li>•Importance of interdisciplinary collaboration in dentistry.</li> <li>•Roles and perspectives of periodontists and prosthodontists.</li> </ul>
2	Periodontal Considerations in Prosthodontic Planning	<ul style="list-style-type: none"> <li>•Periodontal health assessment before prosthetic reconstruction.</li> <li>•Managing soft tissue and bone for optimal prosthetic outcomes.</li> </ul>
3	Collaborations with Endodontists	<ul style="list-style-type: none"> <li>•Endodontic considerations in periodontal and prosthetic planning.</li> </ul>

		<ul style="list-style-type: none"> <li>•Management of combined endodontic-periodontal lesions.</li> </ul>
<b>4</b>	Orthodontics and Periodontics Interface	<ul style="list-style-type: none"> <li>•Periodontal implications of orthodontic treatment (KT assessment, sequence of treatment, PAOO, exposure of impacted teeth, etc..).</li> <li>•Coordinating care in cases involving periodontal and orthodontic needs.</li> </ul>
<b>5</b>	Oral Surgery and Complex Case Management	<ul style="list-style-type: none"> <li>•Surgical considerations in implant placement and ridge augmentation.</li> <li>•Managing complications and surgical risks in interdisciplinary cases.</li> </ul>
<b>6</b>	Pediatric Dentistry and Periodontics:	<ul style="list-style-type: none"> <li>•Periodontal management in pediatric patients.</li> <li>•Interdisciplinary approaches to developmental and congenital conditions.</li> </ul>
<b>7</b>	Case Studies and Collaborative Treatment Planning	<ul style="list-style-type: none"> <li>•Interactive sessions on complex cases requiring multidisciplinary care.</li> <li>•Joint treatment planning and discussion of alternative strategies.</li> </ul>
<b>8</b>	Future Directions and Innovations in Interdisciplinary Dentistry	<ul style="list-style-type: none"> <li>•Emerging technologies and techniques in periodontics and prosthodontics.</li> <li>•The future of interdisciplinary care and its impact on practice.</li> </ul>

Table 17

### Course Assessment

- Course assessment details will be provided for the residents by the course director at the beginning of each course.



# Microbiology and Immunology in Periodontics

Course Director: Dr. Khaled AlTabtbaei

## Course Description

This course will review the relationship between periodontal health and states of disease (mainly gingivitis, periodontitis, necrotizing periodontal diseases, peri-implant mucositis, peri-implantitis) from the aspects of microbiology and immunology.

## Course Goals

Participants will be able to:

- Critically understand the relationship between the microbiota and host immune system in health while discussing the most pivotal literature in the subject.
- Critically understand changes in the relationship in states of disease.

## Course Learning Objectives

After completing this course the residents will be able to:

- Critically understand the historical milestones that have shaped our current understanding of disease etiology, and how technological advancement altered this view.
- Identify the specific-plaque hypothesis, and the Polymicrobial Synergy and Dysbiosis.
- Identify the difference between planktonic “Free floating” and biofilm microbes.
- Identify host reaction to biofilms.
- Identify the difference between symbiosis and dysbiosis.
- Explain the effect of the host on the microbiota at states of health and disease.





- Explain the differences between the different periodontitis phenotypes from a microbiological and immunological perspective.
- Identify specific characteristics and virulence factors related of specific oral bacteria.
- Learn about the effect environmental and acquired factors have on periodontal equilibrium, specifically on the following aspects:
  - Smoking.
  - Diabetes mellitus.
  - Hormonal changes related to puberty, oral contraceptives and pregnancy.

**Course Topics Schedule**

The following table (Table 18) lists the course topics schedule:

Week	Topic
<b>1</b>	Introduction to periodontal biofilms, and host defense mechanisms
<b>2</b>	The host – Pathogenesis of periodontal diseases
<b>3</b>	The host – Immunology: innate and adaptive response to periodontal pathogens 1
<b>4</b>	The host – Immunology: innate and adaptive response to periodontal pathogens 2
<b>5</b>	The biofilm – normal periodontal microbiota, changes in microbiota in disease
<b>6</b>	The biofilm – peri-implant health, peri-implant mucositis, peri-implantitis
<b>7</b>	The biofilm – pathogen specific virulence factors 1
<b>8</b>	The biofilm – pathogen specific virulence factors 2

Table 18

## Course Assessment

- Course assessment details will be provided for the residents by the course director at the beginning of each course.

# Special Topics/Basic Sciences in Periodontology

**Course Director: Dr. Nada Hayati**

## Course Description

This course provides a comprehensive introduction to the basic sciences underlying periodontology, focusing on the relationship between periodontal disease and systemic diseases. It covers the biological mechanisms that link oral health to systemic conditions, offering insights into how periodontal disease can influence overall health.

This course will take place towards the end of second year, where the residents have completed most of their basic sciences classes. To be able to integrate the knowledge and apply it in their clinical practice.

## Course Goals and Learning Objectives

- To help residents to demonstrate the ability to integrate the underlying basic science mechanisms that manifest in periodontal diseases.
- To help residents utilize basic science principles in the diagnosis, treatment and management of disease.
- To help residents to achieve a deeper understanding of the basic science mechanisms relevant to clinical problems and apply them in daily clinical practice.
- To inspire residents to explore opportunities for conducting research in the clinical translational research projects.
- To integrate basic science principles to the clinic practice and to help residents realize that understanding basic science principles contribute to better patient care.



## Course Topics Schedule

Lectures to be delivered/along with literature will cover the following topics:

Week	Topic
<b>Week 1</b>	<ul style="list-style-type: none"> <li>• Introduction to Periodontology and Systemic Health.</li> <li>• Discussion: The Relationship Between Oral Health and Systemic Health.</li> </ul>
<b>Week 2</b>	<ul style="list-style-type: none"> <li>• Pathogenesis of Periodontal Disease:               <ul style="list-style-type: none"> <li>○ Microbiological Factors in Periodontitis.</li> <li>○ Host Immune Response and Inflammation in Periodontitis.</li> </ul> </li> </ul>
<b>Week 3</b>	<ul style="list-style-type: none"> <li>• Periodontitis as a Risk Factor for Systemic Diseases:               <ul style="list-style-type: none"> <li>○ Cardiovascular Disease and Periodontitis.</li> </ul> </li> </ul>
<b>Week 4</b>	<ul style="list-style-type: none"> <li>• Periodontitis as a Risk Factor for Systemic Diseases:               <ul style="list-style-type: none"> <li>○ Diabetes Mellitus and Periodontal Health.</li> </ul> </li> </ul>
<b>Week 5</b>	<ul style="list-style-type: none"> <li>• Periodontal Disease and Pregnancy Outcomes:               <ul style="list-style-type: none"> <li>○ Impact of Periodontitis on Pregnancy Outcomes.</li> <li>○ Preterm Birth and Low Birth Weight.</li> </ul> </li> </ul>
<b>Week 6</b>	<ul style="list-style-type: none"> <li>• Periodontitis and Respiratory Diseases:               <ul style="list-style-type: none"> <li>○ Oral-Respiratory Pathway: Aspiration of Oral Pathogens.</li> <li>○ Periodontal Pathogens in Pneumonia and Chronic Obstructive Pulmonary Disease (COPD).</li> </ul> </li> </ul>
<b>Week 7</b>	<ul style="list-style-type: none"> <li>• Other Systemic Implications of Periodontal Disease:               <ul style="list-style-type: none"> <li>○ Periodontitis and Rheumatoid Arthritis.</li> <li>○ Links Between Periodontal Disease and Cancer.</li> <li>○ Panel Discussion: Multidisciplinary Approach to Periodontal-Systemic Health.</li> </ul> </li> </ul>
<b>Week 8</b>	<ul style="list-style-type: none"> <li>• Prevention and Management Strategies:               <ul style="list-style-type: none"> <li>○ Prevention of Periodontal Disease and its Systemic Effects</li> <li>○ Integrative Management Approaches in Periodontal and Systemic Health</li> </ul> </li> </ul>
<b>Week 9</b>	<ul style="list-style-type: none"> <li>• Bisphosphonates in periodontology:               <ul style="list-style-type: none"> <li>○ Mechanism of action</li> <li>○ Clinical implications:                   <ul style="list-style-type: none"> <li>▪ Influence on periodontal disease progression and bone loss</li> <li>▪ Risks of bisphosphonate-related osteonecrosis of the jaw (BRONJ)</li> </ul> </li> </ul> </li> </ul>



	<ul style="list-style-type: none"> <li>▪ Considerations for dental management in patients receiving bisphosphonate therapy and its effect on the periodontal treatment plan.</li> </ul>
<b>Week 10</b>	<ul style="list-style-type: none"> <li>• Effect of medications on the course of periodontal disease and implant therapy.</li> </ul>

Table 19

**Course Assessment**

- Course assessment details will be provided for the residents by the course director at the beginning of each course.

## Personal Development Course

To ensure comprehensive development of future specialists, the program aligns with the CanMEDS framework, a widely recognized healthcare competency framework.

By incorporating the seven CanMEDS roles into the curriculum, KB- Perio aims to produce graduates who are not only technically proficient but also effective communicators, collaborators, leaders, health advocates, scholars, and professionals. (Table 20)

Course Topics	
<b>Communication Skills</b>	<ul style="list-style-type: none"> <li>• Know how to Build strong relationships with patients and colleagues.</li> <li>• How to educate and counsel patients effectively.</li> <li>• The importance of listening and showing empathy.</li> </ul>
<b>Presentation Skills</b>	<ul style="list-style-type: none"> <li>• How to create engaging and clear presentations.</li> <li>• Making the most of visual aids and technologies.</li> <li>• Handling questions and feedback properly Work on voice, tone and pitch.</li> </ul>
<b>Leadership and Teamwork</b>	<ul style="list-style-type: none"> <li>• Know how to lead the dental team and managing any conflicts.</li> <li>• Making decisions together and solving problems as a group.</li> <li>• Creating a positive and supportive team environment.</li> <li>• Example that can be applied: leading the team through a medical emergency.</li> </ul>
<b>Professionalism</b>	<ul style="list-style-type: none"> <li>• How to keep things professional in the clinic (with patients, colleagues and administration staff).</li> <li>• Tips for managing time and staying organized.</li> </ul>

	<ul style="list-style-type: none"> <li>• Staying updated and committed to profession. (Allowing time for attending courses, lectures and conferences).</li> </ul>
<b>Critical Thinking and Decision- Making</b>	<ul style="list-style-type: none"> <li>• Breaking down complex clinical situations.</li> <li>• Reflecting on what worked and what didn't.</li> <li>• for continuous improvement.</li> </ul>
<b>Ethics in Dentistry</b>	<ul style="list-style-type: none"> <li>• Patient confidentiality.</li> <li>• Obtaining consent in the best way.</li> </ul>
<b>Cultural Competence</b>	<ul style="list-style-type: none"> <li>• Understanding and respecting different patient backgrounds.</li> <li>• Adapting your communication to fit different cultural contexts.</li> <li>• Addressing health disparities and promoting fairness in care.</li> </ul>
<b>Stress Management and Resilience</b>	<ul style="list-style-type: none"> <li>• Strategies for managing stress in a demanding residency program.</li> <li>• Building resilience and finding ways to cope.</li> <li>• Balancing work and life in a healthy way.</li> </ul>
<b>Mental and Physical Wellbeing</b>	<ul style="list-style-type: none"> <li>• Understanding the importance of mental health in a demanding profession.</li> <li>• Developing habits for physical health whenever possible and finding balance and preventing burnout.</li> </ul>
<b>Dental practice management</b>	<ul style="list-style-type: none"> <li>• Skills and knowledge necessary to run a successful dental practice.</li> <li>• Brief description for financial management, marketing and patient relations.</li> </ul>
<b>Medicolegal course</b>	<ul style="list-style-type: none"> <li>• Understanding medical law and legal system in Kuwait</li> </ul>

Table 20



# Case Presentation and Clinical Conference (CPC)

Course Director: Dr. Munirah Burashed

## Course Description

This course is conducted in a seminar format, and it will focus on the diagnosis, treatment planning and management of periodontal diseases and conditions. For each session, a resident will present a specific case and lead the discussion using appropriate case documentation and materials. The seminar will also focus on clinical decision-making, evidence-based practice, technique and presentation skills. Residents are expected to provide a scientific justification for each procedure and/or decision supported by the scientific literature. In addition, residents are responsible for providing the course director with their clinical case presentations, copy of the patient's file, original patients' photographs and radiographs, and cast models.

Residents are required to present their cases for two categories:

1. Fully documented cases seminars.
2. Case discussion seminars.





Table 21 summarizes CPC seminars description and requirements:

CPC	Description	Requirements
<b>1. Fully documented cases seminars:</b>		
<b>A. Treatment Planning CPC (R3)</b>	<ul style="list-style-type: none"> <li>Residents must focus on: Descriptions of periodontium (using photographs, radiographs and clinical data collection to assist in the description of the periodontium), diagnoses, prognoses, etiologic factors, and ideal and alternative treatment plans with rationales.</li> </ul>	<ul style="list-style-type: none"> <li>Periodontal disease cases <b>(MUST BE APPROVED BY THE COURSE DIRECTOR)</b></li> </ul>
<b>B. Surgical Therapy CPC (R4/R5)</b>	<ul style="list-style-type: none"> <li>Residents must focus on: Descriptions of surgical treatment plans, treatment objectives, surgical treatment, patient management, surgical outcomes, and prognoses.</li> </ul>	<ul style="list-style-type: none"> <li>Morbidity and Mortality Seminars (M &amp; M's):                             <ul style="list-style-type: none"> <li>Two cases that have had documented complications with their management approach.</li> </ul> </li> <li>Periodontal Plastic Therapy Seminars:                             <ul style="list-style-type: none"> <li>Two periodontal therapy cases that require aesthetic surgical therapy such as soft tissue grafting, aesthetic crown lengthening, and/ or lip repositioning surgeries.</li> </ul> </li> </ul>

		<ul style="list-style-type: none"> <li>● Implant cases CPC: <ul style="list-style-type: none"> <li>○ One Implant Treatment Plan CPC.</li> <li>○ One Implant Site Preparation CPC.</li> <li>○ One Implant Placement Surgery CPC.</li> </ul> </li> </ul>
<b>2. Case-Based Discussion seminars:</b>		
	<ul style="list-style-type: none"> <li>● The seminar will be held on regular clinic days prior to the start of each clinical session (or upon course director designated timings).</li> </ul>	<ul style="list-style-type: none"> <li>● Residents are required to present at least once per quarter in an academic year.</li> </ul>

Table 21

**Course Goals**

- To provide a scientific platform for the residents, that enables them to present and discuss their ongoing cases.
- To test the residents’ knowledge on their ability to provide scientific evidence to support their clinical decisions.
- To enable residents to receive proper scientific feedback on their clinical decisions and practices, with the provision of different ideal and alternatives treatment options with their expected prognoses.
- To improve and modify residents’ presentation and communication skills.
- To prepare KB-Perio residents for the promotion and the final Kuwaiti Board of Periodontology and Implant Dentistry Board Examination.

## CPC Course Schedule

Table 22 summarizes CPC course requirements timings:

Year	Q1	Q2	Q3
<b>R3</b>		Treatment Plan CPC	
<b>R4</b>	Surgical Therapy CPC	Surgical Therapy CPC	
<b>R5</b>	Surgical Therapy CPC		Surgical Therapy CPC

Table 22

## Course Assessment and Evaluation

- Course assessment details will be provided for the residents by the course director at the beginning of each course.

# Periodontology Comprehensive Clinic (PCC)

Course Director: Dr. Munirah Burashed

## Course Description

This course represents the clinical training component of the KB-Perio curriculum. Residents are expected to attend this course at KB-Perio Clinics (PCC) facilities. PCC follows a comprehensive periodontal/implant clinic strategy, where patients are treated in a holistic approach. Residents are expected to receive patient cases that vary in complexity throughout their three years of residency of residency.

Prior to the PCC course entry, resident must attend, participate, and pass the pre-clinical training course components of the Introduction to Periodontology Course. Once the residents start their PCC clinical sessions, they are expected to perform:

- Comprehensive Periodontal examination
- Periodontal treatment planning
- Professional mechanical plaque removal (PMPR)
- Surgical periodontal therapy procedures
- Implants surgeries & Implant site preparation-related surgeries
- Interdisciplinary cases management
- Mucogingival surgeries & procedures

***NOTE: All the patients' data collected by the residents (patients files data, photographs, radiographs, cast models, etc..) are considered a property of the KB-Perio program.***



## Course Goals & Learning Objectives

Clinical training in periodontics is intended to enable residents to:

1. Collect, organize, and interpret data, while applying different current/advanced concepts of periodontics.
2. Implement evidence-based clinical practice in patient management strategies..
3. Learn and achieve the desired level of competency in different treatment approaches.
4. Communicate effectively with patients, supporting staff, colleagues, and faculty members for reaching the optimum patient therapy outcomes.
5. Follow and adhere to strict dental clinic infection control guidelines and.

## Course Assessment

Residents at PCC course will be assessed daily, quarterly, and annually based on the CanMEDS objectives: knowledge, skills, and professionalism.. Assessment forms are categorized into:

- Skill-based **Daily Assessment Form**: each procedure should be evaluated by a specific mentor (same mentor for the same procedure for each resident).
- Mentor-based **Quarterly Assessment Form**: program director and assistant program director will provide continuous evaluation for the residents for each year (same mentor for the same resident).

Each resident must be assigned to a clinical mentor (KB-Perio program director, assistant program director and/or the PCC director) to continuously review the Clinical logbook and provide constructive feedback to the resident.



As a part of the PCC course requirements, each resident must maintain a Clinical logbook (hard copy). It is the resident’s responsibility to document and sign their PCC clinical cases on daily bases. Moreover, residents are required to submit a total of 20 “Fully Documented Periodontology Cases” at the end of their residency.

Residents who fail to reach the minimum number of required cases/ procedures, shall submit a written request to the program director for a “clinical time extension” to meet the (PCC) course requirements.

The following Table (Table 23) lists the numbers of clinical procedures and EPA’s that should be completed by each resident to obtain such requirements:

Clinical Requirements Entrustable Professional Activities (EPAs)		Minimum Number of Cases
<b>1.</b>	<b>Minimum non-surgical requirements</b>	
a.	Subgingival scaling and root planning	120
b.	Periodontal maintenance (Resident’s own cases)	20
<b>2.</b>	<b>Minimum surgical requirements</b>	
a.	Gingivectomy and/or gingivoplasty	10
b.	Open flap debridement/apically repositioned flap	20
c.	Periodontal surgical osseous recontouring	15
d.	Distal or proximal wedge procedure	5
e.	Guided Bone Regeneration	10
f.	Atraumatic extraction + Socket/ ridge Preservation	10
g.	Root amputation/hemisection	2
h.	Functional crown lengthening	30
i.	Esthetic crown lengthening	5
j.	Guided tissue regeneration (with or without bone graft or biologic materials)	10
k.	Free gingival graft	5



l.	Subepithelial connective tissue graft	5															
m.	Surgical placement of dental implant	100															
n.	Provisional restoration of dental implant	5															
o.	Restoration of dental implant	2															
p.	Sinus augmentation (internal)	7															
q.	Sinus augmentation (external)	5															
r.	Block graft (ramus/chin)	2															
s.	Provisional teeth splinting	5															
t.	Management of bruxism (Night Guard)	5															
u.	Combined periodontal / orthodontic case	5															
v.	Combined periodontal / endodontic case	5															
w.	Digital implant planning	5															
<b>3.</b>	<b>Fully documented cases</b>																
	<ul style="list-style-type: none"> <li>• <b>During the program, a resident must submit 20 fully documented cases. The requirements for these cases are:</b></li> </ul> <table border="1"> <thead> <tr> <th>Stage</th> <th>Case</th> <th>#</th> </tr> </thead> <tbody> <tr> <td>Stage II</td> <td>Moderate Periodontitis</td> <td><b>8</b></td> </tr> <tr> <td>Stage III</td> <td>Severe Periodontitis</td> <td><b>6</b></td> </tr> <tr> <td>Stage IV</td> <td>Very Severe Periodontitis</td> <td><b>3</b></td> </tr> <tr> <td>Grade B/C</td> <td>Moderate to Rapid Rate of Progression</td> <td><b>3</b></td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>• <b>Residents cases should cover the following criteria:</b> <ul style="list-style-type: none"> <li>○ The non-surgical management of a patient with Periodontitis</li> <li>○ The surgical management of a patient with Periodontitis</li> <li>○ The management of a patient requiring the placement of dental implant(s)</li> </ul> </li> </ul>	Stage	Case	#	Stage II	Moderate Periodontitis	<b>8</b>	Stage III	Severe Periodontitis	<b>6</b>	Stage IV	Very Severe Periodontitis	<b>3</b>	Grade B/C	Moderate to Rapid Rate of Progression	<b>3</b>	<b>20</b>
Stage	Case	#															
Stage II	Moderate Periodontitis	<b>8</b>															
Stage III	Severe Periodontitis	<b>6</b>															
Stage IV	Very Severe Periodontitis	<b>3</b>															
Grade B/C	Moderate to Rapid Rate of Progression	<b>3</b>															



	<ul style="list-style-type: none"> <li>○ The management of a patient requiring a multidisciplinary approach to treatment; and reflecting the interface between Periodontics and at least one of the other specialties of dentistry or of medicine</li> <li>● <b>Fully documented cases should include:</b> <ul style="list-style-type: none"> <li>○ Photographs</li> <li>○ Radiographs</li> <li>○ Cast Models</li> <li>○ Treatment Plan</li> <li>○ Prognosis</li> </ul> </li> </ul>	
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Table 23

- Course assessment further additional details will be provided for the residents by the course director at the beginning of each course.



## KB-Perio Residents Teaching

Residents teaching will be a fundamental part of the Kuwait Board Periodontology and implant surgery training. Teaching sessions will ensure that residents develop the attitude, knowledge, and skills for clinical teaching to dental students and/or junior colleagues in the future.

All residents will be required to participate in ongoing teaching during their third year in training (R5). Teaching opportunities may vary depending on the current circumstances and availability of resources. Teaching may include:

- Weekly teaching and supervision of undergraduate dental students at the dental clinics of the Kuwait University Faculty of Dentistry.
- Participation in didactic courses by delivering lectures for junior residents.
- Clinical observation and guidance teaching of junior residents in hands-on practical sessions at the simulation lab.

### **The intended residents' learning outcomes are:**

- To understand the concept of dental education.
- Demonstrate skills in student's supervision and assessment in clinical setting.
- To prepare and give lectures/seminars for students of all levels.
- To enhance knowledge of different didactic and clinical assessment methodologies.
- To develop self-instructional teaching material.



## KB-Perio Assessment System

- All assessment practices will comply with KIMS policies.
- For further assessment tools details and description, refer for Appendix A.

### KB-Perio Assessment System

- KB-Perio program is utilizing holistic assessment strategies that are CanMEDS-based and focus on different methods and approaches to ensure that a wide range of the desired competencies and skills are evaluated promptly. These strategies should be implemented to provide residents with informative feedback to enable them to shape their skills and knowledge.
- Moreover, these assessment tools should reflect the efficiency of the didactic and clinical curriculum and represent the eligibility of the KB-Perio program residents for becoming successful periodontists in the future. The Assessment and Evaluation strategy is compliant with KIMS vision and strategic plan as well as its rules and regulations.
- The academic year the KB-Perio program is divided into four quarters, starting from October and ending in September (Figure 4). Each resident will be given an annual report at the end of the year reflecting his academic and clinical performances.
- The KB-Perio program assessment system is designed based on a 100% evaluation score. Each quarter score is constitute of:
  - PCC course = 50%.
  - Didactic courses = 50%.



- At the end of each year of residency, the residents will receive a final score report that is divided into:
  - The total of four quarters scores = 80%
  - Final Promotion CPC Exam= 20%

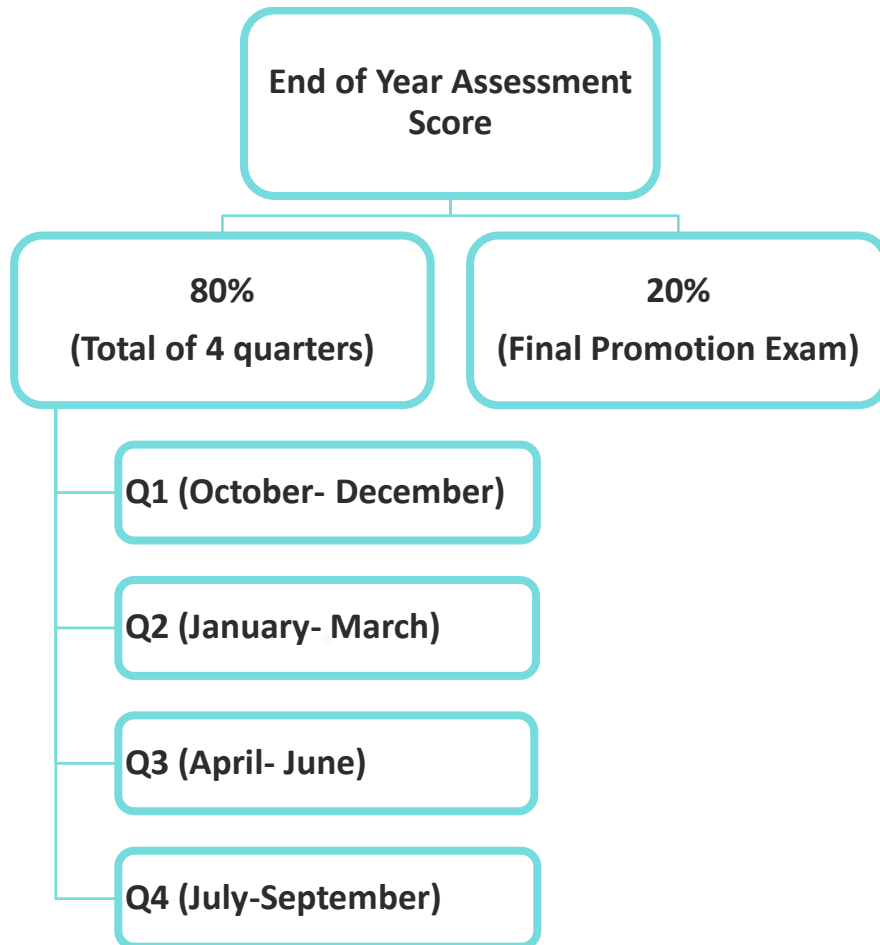


Figure: 4

- Final Promotion CPC Exam: At the end of each year residents ***MUST*** pass the Final promotion CPC Exam, in order to move to the following year of residency level. Residents must select a comprehensive case for their presentation. The following table (Table 24) provides a description for each final CPC exam:

Year of Residency	Description	Requirements
R3	<ul style="list-style-type: none"> <li>Limited Therapy CPC case</li> </ul>	<ul style="list-style-type: none"> <li>Residents should present nonsurgical and/or surgical periodontal therapy (R3/Q3).</li> <li>Residents can use the same case used in the (R3/Q2) Treatment plan CPC case as their limited therapy case presentation.</li> </ul>
R4	<ul style="list-style-type: none"> <li>Comprehensive CPC case</li> </ul>	<ul style="list-style-type: none"> <li>Residents should present Non-surgical + Surgical periodontal therapy cases with their post-treatment follow-up visits (R4/ Q3).</li> </ul>
R5	<ul style="list-style-type: none"> <li>Comprehensive CPC case</li> </ul>	<ul style="list-style-type: none"> <li>Comprehensive non-surgical/ surgical periodontal therapy cases with their post-treatment follow-up visits for patients requiring multi-disciplinary and/or advanced therapy (R5/ Q2).</li> </ul>

Table 24

- Residents' assessment and evaluation scores should be documented electronically on a daily basis.
- Residents must “Pass” all the year designated courses and the final promotion CPC exam, In order to get promoted to the following year of residency. The “Pass” grade is 65%.
- A “Fail” score (bellow 65%) will result in a remediation process determined by the Program Director and the course director.

- In order for the resident to “Pass” the year, he/she must achieve:
  - Completing of the designated clinical and academic requirements.
  - Successful completion of the year level minimal clinical requirements and (DAILY assessments).
  - Successful completion of CanMEDS competencies (Quarterly ITER assessments).
  - Compliance with KIMS policies for Resident’s attendance and professional conduct.
- Resident Final in-Training End Report (FITER): In addition to the completion of all competencies and assessments mentioned above, residents will need to submit and sign a Completion of the Program Requirements Note form. This form needs to be signed by the program director and Graduation Committee members.
- Resident’s continuous evaluation performed by the program director and designated faculty staff (daily and quarterly) is set for resident performance for each discipline, academic activities and participation, and Clinical performance.
- Resident’s failure to complete the required level of clinical and academic competency will result in a submitted action plan report by the program director. This report aims to assess the resident’s current status, expected progress, and needed resources. This plan should be submitted to KIMS.
- Mentors and faculty staff should be calibrated for the residents’ assessment for residency training quality assurance and must follow KIMS and periodontal scientific protocols.
- The clinical Logbook is an obligatory assessment tool, and each resident is responsible for the process of case data entry and supervising faculty approval/signature documented in his/her logbook.

- The resident clinical logbook should be reviewed quarterly by the KB-Perio Program Director, Assistant program Director, and PCC director to monitor residents' clinical progress and performance.

## Course and Instructor Evaluation

At the end of each quarter, residents are required to fill, sign, and submit a “Course and Instructor Evaluation Form” anonymously . Each instructor shall receive and evaluation once per year. This form represents a resident’s feedback to evaluate the performance of an instructor and it is to be collected and revised by the Program Director and The Assistant Program Director ONLY.

## KB- Perio Examination

The aim of the Kuwaiti Board of Periodontology and implant Surgery (KB-Perio) is to certify the achievement of in-depth knowledge, proficiency, and skills in the full scope of periodontology and dental implant surgery through assessment. The assessment will consist of two parts:

### Part 1 Written Component

The Written Examination is a multiple-choice question (MCQs) test format, that covers a broad range of aspects related to the science and practice of periodontics and dental implant dentistry. Subject areas include, but are not limited to, basic sciences, Oral Medicine/Oral Pathology, Periodontal Histology/Periodontal Pathology, Epidemiology/Statistics, Diagnosis, Etiology, Prognosis, Dental Implants, Periodontal Therapy, and evidence-based clinical practice.

### Part 2 Structured Oral Exam Component

The Structured Oral Exam (SOE) will be in clinical scenario-based exam format. It will consist of multiple structured oral scenarios, followed by an organized discussion. The goals of this (SOE) are to evaluate the candidates' diagnostics, therapeutics skills, and management of complications in the field of periodontology and implant dentistry. Candidates may request more information from the examiners to answer questions.



# APPENDIX A

## Assessment Methods in CanMEDS Educational System

Competency-based Education (CBE) is a learning assessment framework that is based on predetermined "competencies" and focuses on educational outcomes in clinical performance settings. Moreover, it is accepted worldwide now to implement Competence by Design (CBD) system in postgraduate educational programs.

In CBD, residents' overall process of teaching, learning, and assessment is integrated into their daily practice environment. The residents' assessment of competence requires observation and documentation of what they perform, in addition to testing their knowledge. This represents the foundation of Workplace-based assessment (WBA) and the highest level of Miller's pyramid (Figure 5).

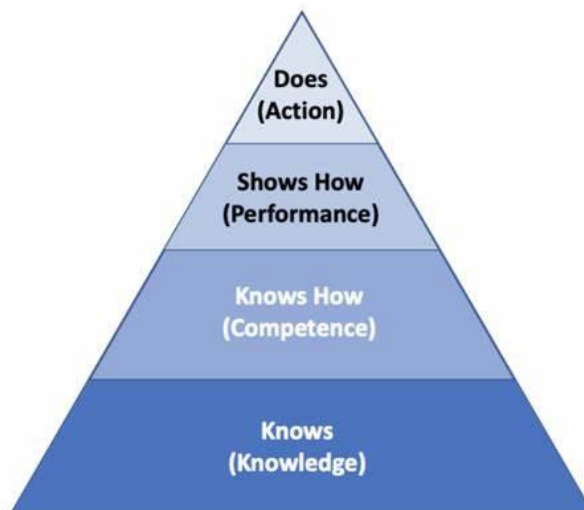


Figure (5) Miller's Pyramid – 1990



Workplace-based assessment (WBA) has become a widely used assessment cornerstone of most graduate educational programs. It requires the observation of residents' performance while they are performing Entrustable Professional Activity (EPA). EPAs are defined as the key tasks of each specialty discipline that can be learned and evaluated in any medical/dental practice environment. In KB-Perio assessment system, EPAs should integrate CanMEDS roles.

In KB-Perio assessment system, Work-Based Assessments (WBA's) are used to evaluate residents' performance at the workplace itself on daily basis, rather than relying solely on knowledge-based assessments. The primary aim of WBA's is to facilitate formative feedback, where residents can receive instant feedback, and allows them to self-assess simultaneously. This allows for better awareness of strengths and weaknesses that will constructively build on the residents' clinical development.

### Assessment System Goals

- Improve the learning process by implementing a well-structured assessment system.
- Provide the residents with an immediate feedback report that enables them to assess their own performance and identify areas of strengths, weaknesses, and development.
- Ensure that the residents are equipped with the essential knowledge, clinical skills, and professional ethics that represent an essential core for their specialty.
- Provide the residents with a clear set of requirements and anticipated skills to encourage them to ensure that they receive a proper program training and experience.
- Ensure that the residents are meeting the program curriculum standards and objectives by providing them a well-timed, strong, and cumulative evidence reports.

- Confirm that the residents are learning and practicing under the rules of safe and good medical practice.
- Measure the residents' actual performance during the program years.

### Assessment System Tools and Methods

Assessment tools can be defined as: a combination of tools for learning assessment that balance summative and formative assessments. Summative assessments are dependent on the student's overall performance outcomes at the end of the course (examples are: Final exams, Final in-Training Evaluation Report (FITER), and/or portfolios etc...). On the other hand, formative assessments are dependent on student's performance evaluation throughout the course and to evaluate his/her learning progress (examples are quizzes, projects, mini-Cex, In-training Evaluation Report (ITER) and/or presentations etc...). They should be applicable, reliable, valid, acceptable, and cost-effective. The KB-Perio program assessment system measures residents' performance while integrating CanMEDS roles<sup>4</sup>.

There are multiple assessment tools and methods that can be used by the postgraduate educational programs to evaluate residents' performance. The following table (Table 25) summarizes the most used assessment tools with their abbreviations and definitions:

Assessment Abbreviation	Assessment Definition
DOPS	Direct Observation of Procedural Skills
CEX	Clinical Evaluation Exercise
Mini-CEX	Mini-clinical Evaluation Exercise
CBD	Case-based Discussion

ITER	In-training Evaluation Report
FITER	Final In-training Evaluation Report
OSCE	Objective Structured Clinical Examination
SOE	Structured Oral Examination
MCQ	Multiple Choice Questions
MEQ	Modified Essay Questions
Logbook	Hard or soft copy

Table 25

The following table (table 26) categorizes different assessment methods and their clinical applications during the assessment process of residence clinical performance at PCC course:

Assessment Tool	Application
Mini Clinical Evaluation Exercise (Mini-CEX)	<ul style="list-style-type: none"> <li>• To observe the resident’s interaction with the patient during clinical settings. The competencies tested using this tool are: <ul style="list-style-type: none"> <li>○ Patient history recording</li> <li>○ Medical interview</li> <li>○ Physical examination</li> <li>○ Clinical judgment</li> <li>○ Professionalism</li> <li>○ Humanistic qualities</li> <li>○ Organization/efficiency</li> <li>○ Counseling skills</li> <li>○ Collaboration</li> <li>○ Communication skills</li> </ul> </li> </ul>

Direct observation of procedural skills (DOPS)	<ul style="list-style-type: none"> <li>• To assess the procedural and clinical skills essential for providing good clinical care on the specialty core procedures.</li> <li>• To assess the resident competence in performing basic diagnostic and interventional procedures. The assessor observes the resident performing a practical procedure.</li> <li>• To assess CanMEDS competencies: <u>Clinical knowledge</u>, and use of this information during a procedure, clinical skills and <u>professionalism</u> with <u>communication skills</u> are evaluated during this assessment.</li> </ul>
Multiple source feedback (360 assessment method)	<ul style="list-style-type: none"> <li>• To assess patient care, professionalism, collaboration, communication skills and practice-based learning.</li> </ul>
Clinical logbook (preferably electronic version)	<ul style="list-style-type: none"> <li>• Assessment of resident's clinical performance and technical skills.</li> <li>• Assessment of resident's clinical progress.</li> </ul>
Clinical supervisor's report (in training assessment)	<ul style="list-style-type: none"> <li>• Clinical skills and training assessment to meet all the standards</li> </ul>
Case-based discussion	<ul style="list-style-type: none"> <li>• Clinical knowledge</li> <li>• Data collection and documentation</li> <li>• History recording</li> <li>• Clinical findings and interpretation</li> <li>• Evidence-base data search</li> <li>• Diagnosis</li> <li>• Treatment plan</li> <li>• Consultations</li> <li>• Patient management</li> <li>• Patient Recalls and follow-up.</li> </ul>

Table 26



The Following Table (Table 27) summarizes how each tool and method is utilized to evaluate CANMEDs role and correlates with which stage of Miller’s pyramid during residency at KB-Perio program:

Miller’s Stage	Assessment Method	CanMEDs Competencies Assessment	Clinical Application
Shows How Stage	Clinical Oral Examination	<ul style="list-style-type: none"> <li>• Medical expert</li> <li>• Health advocate</li> <li>• Scholar</li> </ul>	Tests competency in clinical skills: <ul style="list-style-type: none"> <li>• Clinical examination</li> <li>• History recording</li> <li>• Dental procedures</li> <li>• Consultations</li> <li>• Radiographic evaluation</li> <li>• Investigation tools interpretation</li> </ul>
Does (workplace-based assessment)			
Does Stage	Mini-Clinical Evaluation exercise (Mini-CEX)	<ul style="list-style-type: none"> <li>• Medical expert</li> <li>• Communicator</li> <li>• Collaborator</li> <li>• Professional</li> </ul>	<ul style="list-style-type: none"> <li>• Patient history recording</li> <li>• Medical interview</li> <li>• Physical examination</li> <li>• Clinical judgment</li> <li>• Professionalism</li> <li>• Humanistic qualities</li> <li>• Organization/efficiency</li> <li>• Counseling skills</li> <li>• Collaboration</li> <li>• Communication skills</li> </ul>
	Direct observation of procedural skills (DOPS)	<ul style="list-style-type: none"> <li>• Medical expert</li> </ul>	<ul style="list-style-type: none"> <li>• Assesses the procedural skills essential for providing good clinical care</li> </ul>

			<ul style="list-style-type: none"> <li>• Focusing on especially important and technically demanding procedures.</li> <li>• Assesses CanMEDS competency.</li> </ul>
	Multiple source feedback (360 assessment method)	<ul style="list-style-type: none"> <li>• Communicator</li> <li>• Collaborator</li> <li>• Professional</li> <li>• Teacher</li> <li>• Leader</li> </ul>	<ul style="list-style-type: none"> <li>• Patient care, professionalism, collaboration, communication skills and practice-based learning.</li> </ul>
	Portfolios and logbook (preferably electronic version)	<ul style="list-style-type: none"> <li>• Medical expert</li> <li>• Communicator</li> <li>• Collaborator</li> <li>• Professional</li> <li>• Health advocate</li> <li>• Scholar</li> <li>• Leader</li> </ul>	<ul style="list-style-type: none"> <li>• Clinical performance and technical skills can be assessed using the portfolio approach.</li> <li>• Portfolios may be best used for assessment of competencies that are difficult to evaluate using other techniques, e.g., communication, risk management, problem-solving, response to feedback, decision-making, response to ethical and professional dilemmas, patient advocacy, scholarship, information, and change in management skills.</li> </ul>
	Clinical supervisor's report (in training assessment)	<ul style="list-style-type: none"> <li>• Collaborator</li> <li>• Communicator</li> <li>• Scholar</li> <li>• Health advocate</li> <li>• Leader</li> <li>• Professional</li> </ul>	<ul style="list-style-type: none"> <li>• Clinical skills and training assessment to meet all the standards.</li> </ul>



Know and Know How Stage	Case-based discussion	<ul style="list-style-type: none"> <li>• Medical expert</li> <li>• Scholar</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Clinical knowledge</li> <li>• Data collection and documentation</li> <li>• History recording</li> <li>• Clinical findings and interpretation</li> <li>• Evidence-base data search</li> <li>• Diagnosis</li> <li>• Treatment plan</li> <li>• Consultations</li> <li>• Patient management</li> <li>• Patient Recalls and follow-up.</li> </ul>
Know and Know How Stage	Scholarly projects	<ul style="list-style-type: none"> <li>• Scholar</li> <li>• Medical knowledge</li> </ul>	<ul style="list-style-type: none"> <li>• Project Planning</li> <li>• Research conducting</li> <li>• Presentations congregation</li> </ul>

Table 27





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