Kuwait Institute for Medical Specialization

Program Handbook

KUWAIT BOARD OF ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS

البـــورد الكـويتـي لتقـويـم الأسنـــان و عظـــام الـوجـــه و الفكيـــن

KBO Academic committee

Published and revised 2024

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KBO Establishment and General Structure

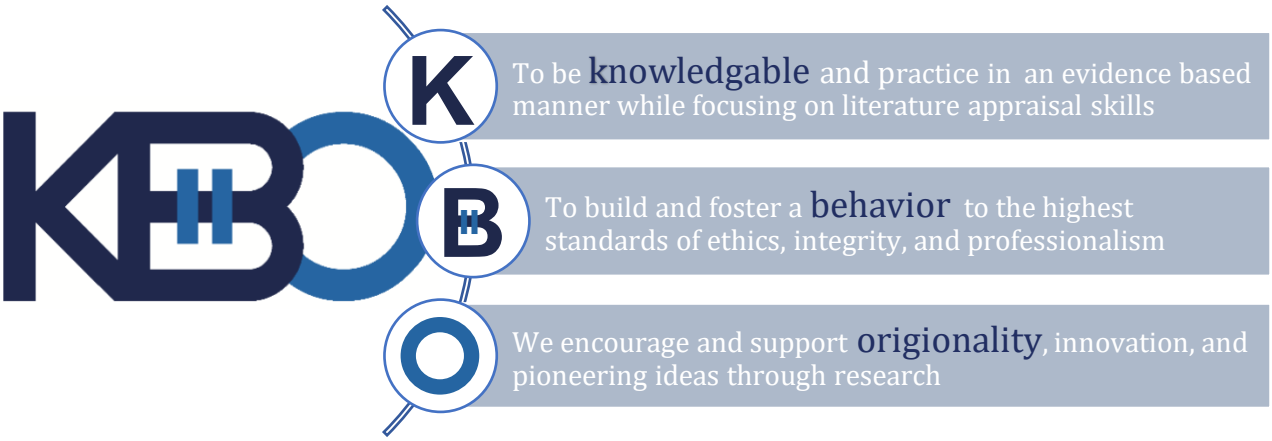
In 2022, the Board of Trustees of the Kuwait Institute for Medical Specialization (KIMS) has agreed to establish a comprehensive 3-year professional training program that prepares residents both didactically and clinically to competently practice the highest standards of care in Orthodontics and Dentofacial Orthopedics. Applicants can enroll into the program after the successful completion of the R2 examination of the Kuwait Board of Dentistry. Applicants with equivalent degrees must consult KIMS before applying to the program. The program accepts a limited number of residents per year, and the application cycle and announcement details are posted through KIMS website and media portals. All applicants/residents must adhere to the rules and regulations of the Kuwait Institute of Medical Specializations (KIMS). https://kims-pge.org/ . The program, which is located at Farwaniya Specialty Dental Center, Ministry of Health (MOH), begins with an intensive preclinical orthodontic course in addition to a set of basic science courses. Each academic year is divided into 3 rotations allowing for close monitoring and evaluation of residents' progress. The evaluation system will be in association with the KIMS rules and regulations including its remediation policies. The orthodontic courses include didactic, clinical, and lab-based sessions. At the end of the three years, residents who successfully complete all requirements and pass all examinations will be eligible to sit for the KBO Exit Exam. Upon successful completion of the examination residents will be awarded the Specialty certificate in Orthodontics and Dentofacial Orthopedics.

KBO AIMS

- Residents should acquire the appropriate knowledge, attitude and skills required to be competent, independent, and professional orthodontists.
- To encourage maintaining a competent level throughout their careers by instilling the importance of the life-long pursuit of continued professional development.
- To foster a collaborative behavior locally and internationally by actively participating in scientific conferences and meetings.
- Residents should possess a sense of professionalism, genuine interest, and curiosity.

KBO values, vision, and mission

Core values



Our mission

To provide exceptional education and clinical training to enable graduates to practice the best evidence based orthodontic care in the State of Kuwait.

Our vision

1. Be an internationally recognized residency program that brings forth professionalism, scientific curiosity, and fruitful collaborations Orthodontics and Dentofacial Orthopedics
2. Recruit elite board-certified orthodontists to provide outstanding education and clinical training.
3. Collaborate with national and international pioneers and programs in the field of Orthodontics and Dentofacial Orthopedics.
4. Foster an inquisitive environment that will encourage residents to practice orthodontics based on evidence and seek answers through research.

KBO Organizational structure

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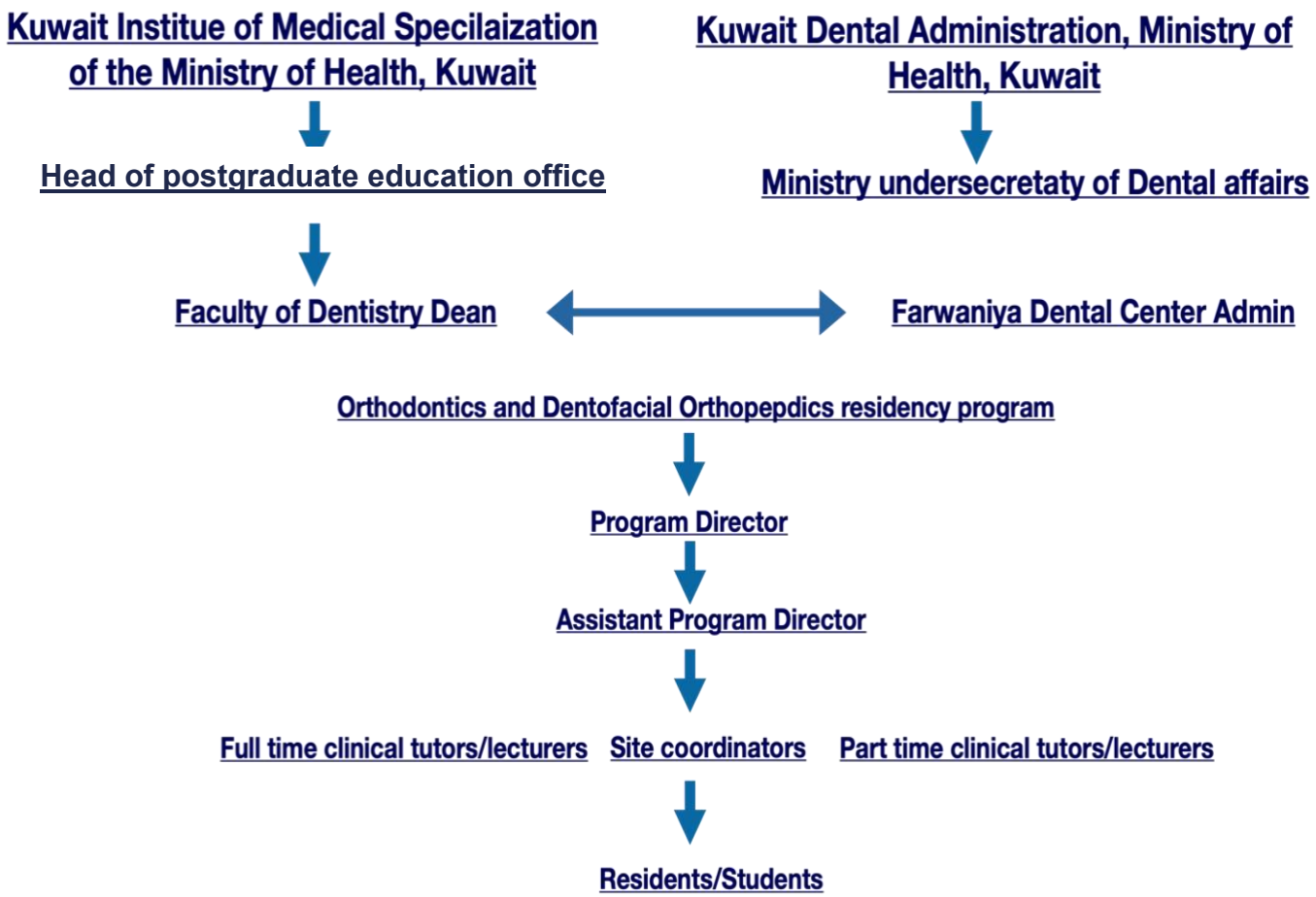
Organizational structure



KBO Administrative structure

KBO Faculty members and staff
Located at: Corridor5, Floor1, Farwaniya Specialized Dental Center, MOH. Kuwait
General enquiries : orthodontics@moh.gov.kw

Program Director/ Full-time Faculty member

Dr. Fawzi AlQatami,
Email: falqatami@moh.gov.kw

Assistant Program Director/ Full-time Faculty member

Dr. Saitah Alajmi
Email: sa.alajmi@moh.gov.kw

Clinic Director/ Full-time Faculty member

Dr. Sharifah Alrushaid
Email: salrushaid@moh.gov.kw

Full-time Faculty member

Dr. Salman Sarkhouh
Email: ssarkhouh@moh.gov.kw

Full-time Faculty member

Dr. Lateefa Alkharafi
Email: lalkharafi@moh.gov.kw

Full-time Faculty member

Dr. Hussain Alshatti
Email: hu.alshatti@moh.gov.kw

Administrative coordinator

Dr. Shahad Aladwani
Email:aladwani7955@moh.gov.kw

Program Director

The program director oversees the general structure of the program and is the direct responsible personnel for its success and development. He/ She is to be involved in overseeing and conducting activities related to the application and interview process, curriculum development, recruiting faculty, inviting guest speakers, administrative tasks, logistical support, evaluation and monitoring of program progress and assessment of course correction needs and its execution. He/ She reports directly to the head of post graduate education office of KIMS and must attend its meetings. The program director is part of KIMS-Care program and its activities. He/ She is considered a full-time faculty member conducting 2 full clinical days with the residents, 1-2 office/didactic days, and a day for his/her own clinical practice which can take place within the KBO facility or at the MOH specialized dental center that he/she is affiliated with. All other faculty members should report directly to the program director. The program director can also be involved in supervising research projects of residents and is highly encouraged to have their own research projects. See KIMS Manual of Policies for Postgraduate Medical Education.

Assistant Program Director

The assistant program director supports the program director vision and mission in managing the program by being involved in the application and interview process, curriculum development, recruiting faculty, inviting guest speakers, administrative tasks, logistical support, evaluation and monitoring of program progress and assessment of course correction needs and its execution. He/ She will overtake the duties of the program director in case of a leave/ emergency and should report directly to the program director. The assistant program director is also considered a full-time faculty member conducting 2 full clinical days with the residents, 1-2 office/didactic days, and a day for his/her own faculty clinical practice. Faculty clinical practice can take place within the KBO facility or at the MOH specialized dental center that he/she is affiliated with. The assistant program director can also be involved in supervising research projects of residents and have research of their own. See KIMS Manual of Policies for Postgraduate Medical Education.

Head of the examination committee

The head of the examination committee is a full-time faculty member, who is designated to establish and maintain an examination committee of 4 members. He/ She is to maintain the independence and confidentiality of this committee throughout its commitment. He/ She is to choose members with a considerable amount of experience and knowledge to formulate and conduct the final exit exam for the Kuwait Board of Orthodontics and Dentofacial Orthopedics. The head of the examination committee should meet regularly with the other members and report directly to KIMS examination office while following their rules and regulations with regards to the conductance of exams and the process of remediation. See KIMS Manual of Policies for Postgraduate Medical Education.

Full-time Faculty members

The program requires a minimum number of full-time faculty members that meets an optimal 2:1 resident to faculty ratio to efficiently achieve its objectives. Full time faculty are required to conduct 3 full clinical sessions in the teaching practice facility and one office day. They can have up to 1 day per week to attend to their own patients at faculty clinical practice at either the KBO facility or at their MOH Specialized Dental Center. They should be Board certified Orthodontists holding a minimum of One full board certification. Additionally, they are expected to support the educational process of the residents, supervise their research projects, and are encouraged to conduct their own research projects as well. See KIMS Manual of Policies for Postgraduate Medical Education.

Part-time Faculty

Part-time faculty members are additional members who can be involved in the clinical teaching practice covering a minimum of 2 sessions per week. Their recruitment depends on the likely need of the program to provide a variety of clinical skills according to different schools of thought within Orthodontics and it's based on their educational and clinical backgrounds. Part time members should be board certified Orthodontists affiliated with MOH. See KIMS Manual of Policies for Postgraduate Medical Education.

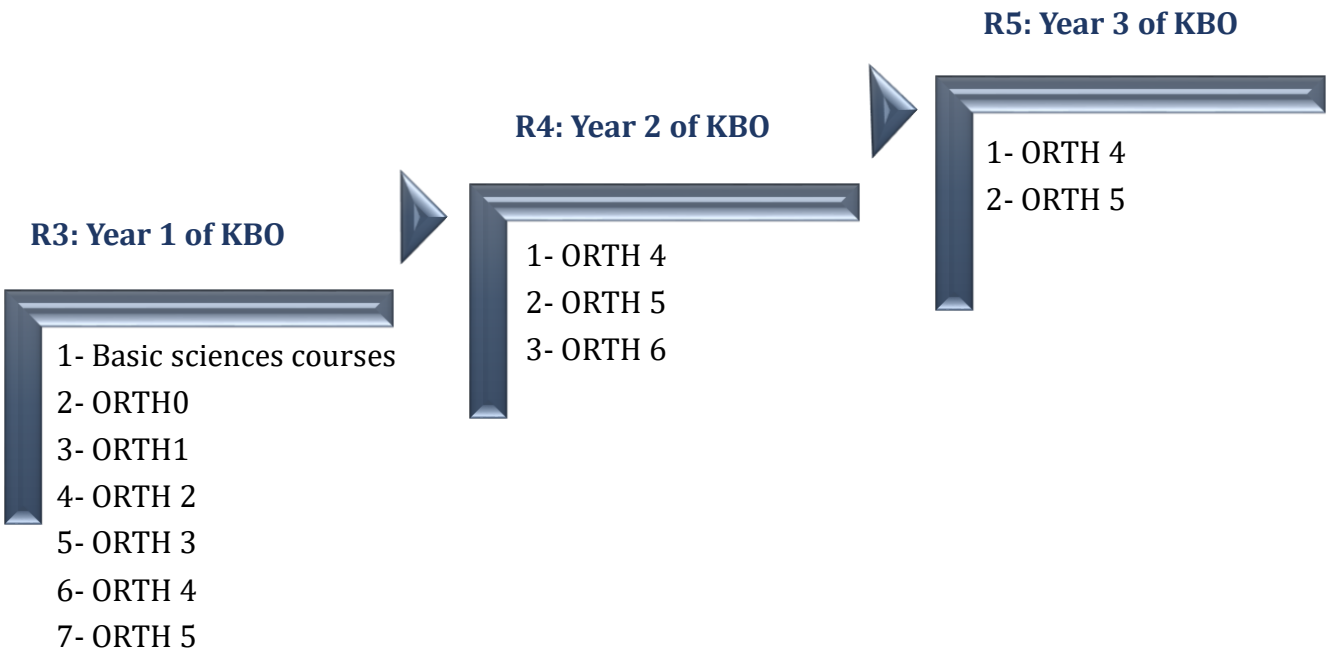
KBO committees

To ensure proper implementation, progress, and evaluation of the program, 3 main committees will be working towards achieving specific goals. Each committee is responsible for generating annual reports and documenting their meeting minutes.

- **KBO Post-graduate committee**
    a. Members:
        i. Program director
        ii. Assistant program director
        iii. Site coordinator
        iv. Chief resident
    b. Meetings:
        i. Minimum of 6 meetings / year (one meeting every 2 months)
- **KBO Academic committee**
    a. Members:
        i. All full-time faculty members of the Kuwait Board of Orthodontics and Dentofacial Orthopedics
        ii. External experts can be invited for key opinions.
    b. Meetings:
        i. Minimum of 6 meetings / year (one meeting every 2 months)
- **KBO Examination committee**
    a. Members:
        i. Head of Examination committee
        ii. Four committee members
    b. Meetings:
        i. Reports to Head of Examination office of KIMS
        ii. Follows the rules and regulation of KIMS Examination office
    c. Objectives:
        i. Prepare, organize, and conduct the KBO final exit exam
        ii. Maintain a record of candidate performance
        iii. Support the KBO faculty in areas related to examination, remediation, and appeal

KBO Academic structure and curriculum

The program academic structure is organized and delivered to ensure guidance and familiarity of residents to classic and current topics pertaining to Orthodontics and Dentofacial Orthopedics both theoretically and clinically. KBO curriculum covers core topics, classical subjects, and most relevant material, yet residents are highly encouraged to seek knowledge in a self-driven manner to achieve high academic rapport. They are required to successfully complete all academic courses in a timely manner. Each course director is responsible for overseeing the overall progress of his/her course including course examination, evaluation, and remediation. Residents should report to/contact the designated course director for any course related issue and/ or enquiry via email. In addition, residents will join the basic sciences courses during their 1st academic year in which they are accountable for the successful completion of the course and are expected to report to its coordinators. In the following section, we delineate in detail the curriculum of the program including details. The order of presentation follows the expected chronological order of course delivery.



1 Basic sciences courses

These series of interdisciplinary courses are designed to improve and expand knowledge in the basic science foundation for the practice of Paediatric Dentistry, Endodontics, Prosthodontics, and Orthodontics and Dentofacial Orthopedics. Some of the courses are brief and basic, while others are more extensive and comprehensive. Didactic lectures will be supplemented with active learning exercises in small-group environments allowing for implementation of these sciences in clinical scenarios. Completing and successfully passing the Basic Sciences course is a prerequisite to progressing towards clinical rotations and be eligible to sit the R3 final year exam. Failing to pass this course requirement will automatically result in an unsatisfactory ITER report. Please see the Remediation Policy section for further explanation.

Coordinators: Dr Ibrahim Seghayer, and Dr Rawan Al-Khuwaiteem

No.	Course Title
1	Research Methods in Clinical Dentistry
2	Embryology and Oral Histology
3	Head and Neck Anatomy
4	Local Anaesthesia in Dentistry
5	Medical Emergencies in the Dental Setting
6	Oral Pathology and Oral Medicine
7	Digital Dentistry and Dental Biomaterials
8	Oral Microbiology
9	Pharmacology in Dentistry
10	Introduction to Applied Clinical Dentistry
11	Infection Control in Dental Health Care Settings

Supplemental recommended courses must be arranged individually through a recognized institute or to ensure validity if completed before, by the residents prior to the start of clinical sessions as per the recommendations of the Ministry of Health of Kuwait. The courses ensure safety of patients in clinical settings and are highly recommended by the KBPD, KBO, KBP, and KBE. Residents that do not show evidence of a valid license for BLS will not be able to start clinical sessions in the second rotation. Although not compulsory, the other courses are highly recommended. These courses include:

No.	Course Title
1	Basic Life Support (BLS)
2	Paediatric Advanced Life Support (PALS)*
3	Advanced Cardiovascular Life Support (ACLS)

*Paediatric Dentistry Residents Only or BLS

Examination Policy

Exams will be held after completion of all basic sciences subjects, during the month of December.

There are four examinations, which all have a passing score of 70%:

- Two written exam papers
- Objective Structured Clinical Examination (OSCE)
- Research Methods in Clinical Dentistry Exam

Examination	Details
Written Exam	Two written exam papers which includes multiple choice questions (MCQ) and short answer questions (SAQ) to assess knowledge in the following disciplines of the Basic Sciences Course: ● Embryology and Oral Histology ● Head and Neck Anatomy ● Local Anesthesia in Dentistry ● Medical Emergencies in the Dental Setting ● Oral Pathology and Oral Medicine ● Oral Microbiology ● Digital Dentistry and Dental Biomaterials ● Pharmacology in Dentistry ● Introduction to Applied Clinical Dentistry

OSCE	The OSCE is a practical examination with multiple stations. This exam will be used to assess clinical competencies in the different disciplines of the Basic Sciences Course, including: ● Embryology and Oral Histology ● Head and Neck Anatomy ● Local Anesthesia in Dentistry ● Medical Emergencies in the Dental Setting ● Oral Pathology and Oral Medicine ● Oral Microbiology ● Digital Dentistry and Dental Biomaterials ● Pharmacology in Dentistry ● Introduction to Applied Clinical Dentistry

Research Methods in Clinical Dentistry Exam	The Research Methods in Clinical Dentistry Exam is a written exam with MCQ and SAQ questions.

Remediation Policy

Course organizers will offer remediation if a resident is unsuccessful in passing any of the four exams. This remediation policy covers qualification criteria, remediation process, remediation grading, maximum remediation attempts, and examination schedules.

1. **Qualification criteria for remediation:**
   - The resident has completed all assigned work for the course
   - The resident has attended the course regularly – not less than 80% of the sessions
   - The resident has demonstrated competency in some, but not all, areas of the course

2. **Remediation process:**

i. Reset Exam 1:

If a resident has failed one, or more, exams, he or she will complete the following components within four weeks of the unsuccessful exam date: a reset exam within four weeks (reset exam number 1).

ii. Reset Exam 2:

If a resident was unsuccessful in passing the reset exam number 1, he or she will resume regular academic duties. The resident will attend clinical duties as an *observer* only. A further attempt to take the exam will take place four to six weeks after the second rotation starts in January.

Format of Reset Exam 2 will be as follows:

1. A written essay (5,000 - 10,000 words) on a topic agreed on by the course organizer
2. A 20-minute presentation on the topic agreed on

3. Reset exam of the same format as Exam 1 and Reset Exam 1.

In the event the resident is unsuccessful in passing Reset Exam number 2, the resident will **not** be eligible to take the end-of-year R3 exam because they have not passed the Basic Sciences Course which is a prerequisite to taking the exam. The ITER evaluation will report the resident as **not eligible to progress** to the next academic level (R4).

The Resident will be placed on probation immediately and will be limited to the following:

- Attend academic classes: as a listener and will not be tested or evaluated like their R3 peers
- Attend clinical duties as an observer **only** as passing the Basic Sciences course is a prerequisite to start clinical duties on patients
- Resident will repeat the year

iii. Reset Exam 3:

The second failure will place the resident on probation according to KIMS policy. The resident will join the new junior residents in the following academic year for the Basic Sciences course and exam (reset exam number 3).
If successful in passing the exam, the resident resumes his clinical and academic work. **If the resident is unsuccessful in passing reset exam number 3, they will no longer be eligible to complete their training and will exit the program, in line with KIM'S policy.**
Residents should note that they are allowed two probation periods during their studies. Any future probations and failures will result in immediate dismissal from the program.

3. Remediation grading

Grading for reset exams is individually defined for each subject, as outlined in the handbook. It is important to note that the passing mark for the reset exam is 70%.

Reset Exam 2: The resident must pass each section of the remediation exam. The resident must score no less than 70% in each of the following:

1. Essay
2. Presentation
3. Written exam

Reset Exam 3: the resident is required to repeat the whole course. The resident will be evaluated on the following:

1. Attendance: Excused absences should **not exceed 15%** of the total course content. Failure to attend without a reasonable excuse will result in immediate failure.
2. Course participation and homework must be completed and passed according to each course requirement.
3. End of course exam must be passed with a 70% passing mark.

4. Maximum remediation attempts – 3 attempts

- Remediation attempt number 1: within four weeks of the failed exam: reset exam
- Remediation attempt number 2: within 4-6 weeks after the end of the basic sciences course (along with the essay and presentation)
- Remediation attempt number 3: repeat course attendance and requirements in the following academic year

5. Examination scheduling

Exams dates are set and will be completed within four weeks. The only acceptable excuse for rescheduling an examination, or oral evaluation, is a valid medical excuse. These excuses must be received in advance and accompanied by a letter from the Program Director

6. Attendance

Attendance is an essential part of the program. Although medical leave of absence is accepted, it is essential that residents comply with the policies and procedures for leaves during postgraduate training. Please note that this rotation is a three-month rotation, and therefore leaves must not exceed 10 working days with 75% attendance. Leaves must be approved by the program director/ designee. For a detailed description of various leaves and circumstances, please refer to the 'KIMS manual of policy and procedure' ('policy and procedures for leaves during postgraduate training' section 2.1-2.8.7). Unjustified leaves may not be accepted at the discretion of the Program Director. Any unjustified absences will be reported by course coordinators to their respective Program Directors. Appropriate actions will be agreed upon by the Program Director and KIMS postgraduate office. Further actions will be carried out according to the KIMS rules and regulations. Please refer to the 'KIMS manual of policy and procedure' for further information.

Research Methods in Clinical Dentistry

This course provides a practical introduction to research methodology in clinical dentistry. It is designed to enable residents to gain a familiarity with research in the field, to become conversant in selected methods, and apply principles to issues in public health, medicine, dentistry, and related fields.
The course starts with basic principles of how, where, and what information residents should search for. It then goes on touching on essential topics in epidemiology and biostatistics. Epidemiology is the science underlying public health and is used by individuals in almost all arenas of health. Epidemiology can be used to address issues of environmental health, medicine, dentistry, injuries, psychiatric disorders, genetics, and social inequities, among other topics. Biostatistics is often used to investigate the epidemiology of a disease or health issue, and the course will discuss biostatistics concepts as part of the science of population health. During the course, residents will learn about the design and interpretation of epidemiological studies and the statistical methods that underpin many of their founding principles. This short course is intended to be an intensive introduction to epidemiology and biostatistics and at the end of the course residents will learn what Evidence-Based Dentistry (EBD) is, how to read a scientific article and be able to critically appraise it well.

Aims:

- Residents should understand how epidemiology and biostatistics can be applied to the scientific methodology in clinical dentistry.
- Residents should be able to read, evaluate and critique scientific articles
- Residents should demonstrate knowledge in evidence-based dentistry and its importance in clinical practice

Learning Outcomes:

At the completion of the course residents will be:

- Able to understand the meaning and importance of research to science and to clinical dentistry.
- Critical consumers of the public health, medical, and dental literature by understanding the basic principles and methods of epidemiology, including disease (outcome) measures, measures of association, study design options, bias, confounding, and effect modification
- Able to interpret descriptive epidemiologic results in order to develop hypotheses about possible risk factors for a disease
- Able to design valid and efficient studies to address public health and clinical problems
- Able to organize, summarize, and display quantitative data

- Be capable of critically reading and reviewing scientific articles in their area of specialization, with special attention to understanding whether correct statistical analyses were chosen and properly applied
- Able to understand the hierarchy of strength of evidence and the concept of evidence-based practice
- Comfortable interpreting statistical methods for calculating summary estimates, measures of variability, and confidence intervals

Lecturer(s): Dr Saad Alqahtani, Dr Amritha Geevarghese, and Dr Jagan Baskaradoss

Lectures' Timetable:

No.	Session Title	Intended Learning Outcome	Readings	Assignments
1	Introduction to Course and Research (Lecture)	– Describe the course to the student –Outline student responsibility –Outline grading system in the course –Outline the distribution of lectures –Define the meaning of the research –Outline the importance of research –Outline the research process and type of research –Describe writing-up articles	Handout distributed to residents	
	Searching for Scholarly Dental Information (PBL – Self-directed Learning)	–Demonstrate the ability to browse the articles by name or subject –Demonstrate the ability to form a dental search strategy –Compose a keyword for searching procedures –Prepare a search strategy for the topic –Choose the appropriate key words	Handout distributed to residents	

		–Operate PUBMED search using the internet –Illustrate how to save and use searched strategy and search output		
	(PBL - Resident Presentations)		COURSERA Online	
2	Epidemiology I Lecture	–Define epidemiology, epidemic, epidemic and pandemic –Differentiate between prevalence and incidence –Calculate prevalence and incidence –Define exposure, outcome, and covariate –Differentiate between descriptive and analytical studies –Differentiate between observational and interventional studies –Recognize types, advantages, and disadvantage of each study design	Handout distributed to residents	
	Identifying different study designs (PBL – Self-directed Learning)	–Demonstrate the ability to identify the study designs –Demonstrate the ability to form a dental search strategy to identify studies based on design	Handout distributed to residents	
	(PBL - Resident Presentations)		COURSERA Online	Quiz 1

3	Epidemiology II (Lecture)	–Recognize the types of variables –Recognize the confidence interval –Recognize specificity and sensitivity –Recognize steps for hypothesis testing	Handout distributed to residents	
		–Recognize the errors of hypothesis testing –Interpret the meaning of p value in hypothesis testing –Understanding errors in hypothesis testing		
	Understanding hypothesis testing (PBL – Self-directed Learning)	–Demonstrate the ability to identify the terms p value, type 1 and 2 errors, bias confounding –Demonstrate the ability to identify bias in studies	Handout distributed to residents	
	(PBL - Resident Presentations)		COURSERA Online	Quizzes #10, 11, 16
4	Epidemiology III (Lecture)	–Understand different terms for measurement of association (Odds ratio, risk ratio, etc) –Calculate measure of association for cross sectional, cohort, case control and RCT	Handout distributed to residents	
	Searching for Scholarly Dental Information (PBL – Self-directed Learning)	–Demonstrate the ability to identify and interpret the measures of association in studies	Handout distributed to residents	
	(PBL - Resident Presentations)		COURSERA Online	Quizzes #17, 18

5	Biostatistics I (Lecture)	–Recognize basic terminology in statistics –Describe types and level of measurement of variables –Recognize sampling techniques –Differentiate between probability and non-probability sampling –Interpret frequency tables	Handout distributed to residents	

		–Interpret measures of central tendency –Recognize advantages of mean, median and mode –Recognize circumstances whereby measured of central tendency should not be used		
	Reviewing Statistics of published literature (PBL – Self-directed Learning)	–Interpret results of statistical analysis –Differentiate clinical from statistical significance – Summarize the role of the editor add other scientists in the peer review process – Describe levels of measurement	Handout distributed to residents	
	(PBL - Resident Presentations)		COURSERA Online	Quizzes #2-5, 12-15

6	Biostatistics II (Lecture)	–Recognize features of a box plot –Recognize bar and pie charts as charts used in nominal/ordinal data –Describe features of histogram and stem and leaf plot –Describe trends in a line chart –Recognize advantages of standard deviation, range, variance and interquartile range –Recognize circumstances whereby measured of spread should not be used –Describe the meaning of precision in statistics –Interpret standard error and confidence intervals –Choose an appropriate statistical test for hypothesis	Handout distributed to residents	

	Training on SPSS Statistical Package (PBL – Self-directed Learning)	–Demonstrate who to manipulate and recode numbers in the data sheet –Calculate mean median mode central tendency and central dispersion –Demonstrate ability to categorize variables according to their frequency distribution –Perform recoding of the variables into new variables –Calculate the p value and values of chi square, t-test and ANOVA –Interpret the meaning of significant association between variables	Handout distributed to residents	

	PBL - Resident Presentations:		COURSERA Online	Quizzes #6-9
7	Evidence Based Dentistry I (Lecture)	–Define evidence-based dentistry –Define the art and science of dentistry –Rate the quality of the literature –Define systematic review –Recognize how to conduct a systematic review –Recognize examples of evidence-based dentistry	Handout distributed to residents	
	End Note Hands-on (PBL – Self-directed Learning)	–Explain the different styles of reference –Demonstrate how to manually write reference in Harvard and Vancouver styles –Demonstrate the skill in writing references	Handout distributed to residents	

		–Understand the reference styles used in some of the popular dental journals –Explain the process of uploading and importing references from PubMed, google scholar –Demonstrate how to import references from web of science –Explain the process of searching for full text using endnote software –Demonstrate the process of adding a new reference –Explain on how to insert one or move references in a word document –Demonstrate how to format and edit bibliography		
	(PBL - Resident Presentations)		COURSERA Online	Quiz
8	Evidence Based Dentistry II (Lecture)	–Define the responsibilities of practitioners –Recognize the current state of the science –Recognize the limitations of evidence-based dentistry –Recognize the sources of literature including textbooks and peer-reviewed journals –Judge the quality of a journal including: a) peer review b) journals' sponsorship c) editorial board, advisory board, consultants d) nature of the papers e) advertisement f) production standards.	Handout distributed to residents	

	Discussion of Critical Appraisal I	–Illustrate the ability of students to critically appraise the literature and present it in a logical manner.	Handout distributed to residents	

	(PBL – Self-directed Learning)	–Explain the process of performing critical appraisal of cohort and case control studies –Demonstrate the skill of appraising cohort and case control studies		
	(PBL - Resident Presentations)		COURSERA Online	Quiz

9	Evidence Based Dentistry III (Lecture)	–Recognize the critical reading-evaluating the quality of a published paper –Recognize the hierarchy of the quality of information –Recognize the quality issues in judging research reports –Judge the quality issues in narrative reviews of the literature –Judge the quality issues in commentaries –Understand the principles of critical appraisal and its role in evidence-based practice –Appraise the validity and reliability of research papers –Recognize the relevance of published research –Recognize the critical appraisal of different types of study designs –Appraisal of an RCT and Systematic Review using a critical appraisal checklist –Appraise the validity and reliability of research papers –Assess the relevance of published research to your own work	Handout distributed to residents	
	Discussion of Critical Appraisal II	–Illustrate the ability of students to critically appraise the literature and present it in a logical manner.	Handout distributed to residents	

	PBL – Self-directed Learning	–Explain the process of performing critical appraisal of systematic reviews and controlled trials –Demonstrate the skill of appraising systematic reviews and controlled trials		
	PBL - Resident Presentations		COURSERA Online	Quiz
10	**Final Exam**	**THEORY EXAM** Comprehensive		
		PRACTICAL EXAM Journal Review and Viva		

Assessment Methods:

- **30% Attendance and participation in class discussion- questions and critiques**
- **70% - Final Exam**

During the exam week of the course, each resident will sit for a written exam which consists of multiple-choice questions. The exam will count towards 70% of the grade.

Recommended Reading:
There are two suggested textbooks for this course, one for the epidemiology part and another for the statistical part.

- **Epidemiology Text:** The epidemiology textbook is *Oral Health Epidemiology: Principles and Practice, 1st Edition by Amit Chattopadhyay.* Other class readings material will be available either in class or online, including journal articles, citations, and weblinks. Please review the syllabus to determine which readings are required and which are optional.
-
- **Biostatistics Text:** The statistical textbook is *Biostats: Data Analysis for Dental Health Care Professionals, Revised Edition by Jane A. Weintraub.* Other textbooks that a resident may already own may also be acceptable, since the material covered during the course is basic and included in most introductory texts.

Embryology and Oral Histology

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.

Aims:

- 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

Learning Outcomes:

Have a thorough understanding of:

- The general development of face and nasal cavity
- The development of the palate
- The development of the tongue
- The development of salivary gland
- The development of tooth structures and supporting tissues
- The development of facial malformation and dental anomalies
- Structure of enamel, dentine pulp, cementum, and bone
- Structure of periodontal ligament
- Formation stages and composition of tooth apparatus **Lecturer(s):** Dr Mashael AlNaser and Dr Bader Albaqshi **Lectures' Timetable:**

No.	Topic
1	Histology of the oral cavity and surrounding structures
2	Dental Embryology
3	Development of face, oral soft and hard tissues: "Face and teeth disclosed"

Assessment Methods:

- 70% - Final Written Exam and OSCE
- 30% - Attendance and participation in class discussion- questions and critiques

Recommended Reading:

- Langman's Medical Embryology - TW Sadler (14th ed.)
- Student Workbook for Illustrated Dental Embryology, Histology and Anatomy. Mar 12, 2015 – Margaret J. Fehrenbach RDH MS

Head and Neck Anatomy

This course will cover the basic anatomy of the head and neck, with emphasis on the clinical significance of the structures and processes of each region. Lectures will provide an overview of the surface anatomy, osteology, blood supply, innervation, and lymphatic drainage of each of the structures in the head and neck. Small group clinical sessions will allow the residents to assess and transfer theoretical knowledge to clinical situations, such as recognizing developmental deformities, infections, and head traumas.

Aims:

Be familiar and recognize important structures in the head and neck region, and transfer this knowledge to clinical applications, and relate to radiological images and studies

Learning Outcomes:

Upon completion of this course, all dental residents should be able to:

- Use appropriate terminology to effectively communicate information related to the anatomy of the head and neck
- Identify anatomic landmarks of the head, face, neck, and oral cavity
- Describe the anatomy of the oral structures including skeletal, muscular, lymphatic, circulatory, and nervous systems. Specifically, students will be able to:
    a. Identify and describe the features of cranial and facial bones.
    b. Identify and describe the anatomy and functions of the temporomandibular joint, in health and disease.
    c. Identify the origin, insertion, and describe the actions of all muscles of mastication and face.
    d. Identify and describe the location, structure, and function of the cranial nerves, including the structures they innervate.
    e. Identify and describe the location, structure, and function of the salivary glands.
    f. Identify the location and structure and describe the function of the lymph nodes of the head and neck.
    g. Identify and describe the location, structure, and function of the major blood vessels of the head and neck.
- Identify all extra-oral and intra-oral structures and landmarks that are visible or palpable on a resident partner, including muscles, lymph nodes, bones, nerves, and mucosal landmarks
- Accurately locate all oral structures, discuss their clinical significance, and demonstrate an understanding of the complete anatomy of the head and neck
- Apply all reviewed information in daily clinical practice

Lecturer(s): Dr Thamer AlAnezi/ Dr Yahya AlYahya

Lectures' Timetable:

No.	Topic
1	Triangles of the Neck
2	Skull, Cranial Cavity, Foramens and Cranial Nerves
3	Infratemporal Region- Muscles of Mastication
	Infratemporal Region- Mandibular n. and Maxillary n.
	Infratemporal Region- Maxillary artery
4	TMJ
5	Oral Cavity and Palate
	Salivary Glands
6	Nasal Cavity and Nasal Sinuses
	Summary of Blood Supply and Lymphatic Drainage
7	Principles of Management of Odontogenic Infections

Assessment Methods:

- 70% - Final Written Exam and OSCE
- 30% - Attendance and participation in class discussion- questions and critiques

Recommended Reading:

- Illustrated Anatomy of the Head and Neck. Jan 19, 2016 – Margaret J. Fehrenbach RDH MS, Susan W. Herring PhD
- Student Workbook for Illustrated Dental Embryology, Histology and Anatomy. Mar 12, 2015 – Margaret J. Fehrenbach RDH MS

Presentation List:

No.	Topic	Reading Materials
1	Anterior and Posterior Triangle of the Neck	Chapter 2 and 11 of M.J. Fehrenbach textbook
2	Skull, Cranial Cavity (The bones of skull, foramens, and cranial nerves only	Chapter 3 and 4 of M.J. Fehrenbach textbook
3	Face and Scalp (Muscles of facial expression with blood and nerve supply)	Chapter 4 of M.J. Fehrenbach textbook
4	Temporal fossa AND Infratemporal Fossa (Mandibular nerve, Maxillary nerve and Maxillary artery)	Chapter 6 and 8 of M.J. Fehrenbach textbook
5	TMJ and Muscles of Mastication	Chapter 5 of M.J. Fehrenbach textbook and Chapter 8: Fundamentals of Oral Histology and Physiology by Hand and Frank
6	Oral Cavity and Palate	Chapter 4 and of M.J. Fehrenbach textbook
7	Parotid Gland and Salivary glands	Chapter 7 of M.J. Fehrenbach textbook and Chapter 11 of Fundamentals of Oral Histology and Physiology by Hand and Frank
8	Nasal Cavity and Nasal Sinuses	Chapter 4 of Clinical Head and Neck Anatomy for Surgeons by Brennan, Mahadevan and Evans
9	Head and Neck Lymphatics	Chapter 10 of M.J. Fehrenbach textbook

Local Anesthesia in Dentistry

This course comprises concise lectures in local anesthetics used in dentistry, including their pharmacokinetics, dosages, modes of use and administration techniques. This course will be a reintroduction to dental anesthesia and aims to improve the resident's local anesthesia (LA) clinical skills.

Aims:

- Thorough review of the fundamentals of local anesthesia
- Lay down the foundation for safe practice in dentistry
- Teach the residents how to calculate the maximum dose of different types of LA used in the dental clinic.

Learning Outcomes:

- To be able to perform all intra-oral LA techniques
- To encourage the residents to be confident making decisions with regards to administering local anesthesia
- To enable the residents to recognize incidents related to administering LA and be able to manage them
- By the end of this course, residents should know the maximum recommended dose of each local anaesthetic and be able to administer an effective adequate local anaesthesia without exceeding the maximum dose

Lecturer(s): Dr Mahmoud Anous , and Dr Fatma Alherz
Lectures' Timetable:

No.	Topic
1	Local anaesthesia review a. Structures b. pH c. MOA d. Onset, potency and duration e. Types of LA f. Systemic effect g. Metabolism
2	Calculating the correct dose
3	Management of failed local anaesthesia
4	New devices for local anaesthesia delivery

5	Complications and management of local anaesthesia administration
6	Anxiety control in the dental field

Assessment Methods:

- 70% - Final Written Exam and OSCE
- 30% - Attendance and participation in class discussion- questions and critiques

Recommended Reading:

- Fonseca R, Barber H, Matheson J, 2009 Oral and Maxillofacial Surgery 2nd Edition. US Saunders.
- Andersson L, Kahnberg K, Pogrel MA 2010 Oral and Maxillofacial surgery. UK, Wiley-Blackwell
- Moore P & Hersch E Local anesthetics: Pharmacology and toxicity. Dent Clin N Am 2010; 54: 587-599
- Baker E 2010 Head and Neck Anatomy for Dental Medicine. New York, Thieme Medical Publishers
- Meechan J, How to overcome failed local anaesthesia. BDJ 1999; 186(1): 15-20
- Malamed et al, Needle Breakage: incidence and prevention. Dent Clin N Am 2010; 54: 745-756.

Medical Emergencies in the Dental Setting

This one-day course is intended to provide the residents with fundamental knowledge of the most commonly occurring medical emergencies in the dental setting. It enhances knowledge on the practical aspects of recognizing and managing these cases. Additionally, the residents will review the updates on the basic life support (BLS) protocols and have the chance to practise them. Also, each resident will be assigned a topic and will be asked to make a presentation on that topic and should include all relevant information from the scientific literature. The residents will be assessed based on the accuracy, suitability, and completeness of the information provided as well as ability to answer questions.

Aims:

- Thorough review of the most common medical emergencies that occur in the dental setting
- Lay down the foundation of safe practice in the dental clinic

Learning Outcomes:

- To understand the importance of obtaining a thorough medical history
- To be able to recognize the occurrence of the most common medical emergencies
- To be able to act promptly upon medical emergencies if they occur
- To understand the local policies of managing medical emergencies in the dental setting
- To be competent in providing BLS when required
- To understand one limitation when dealing with medical emergency cases

Lecturer(s): Dr Mahmoud Anous and Dr Dalal AlOmar

Lectures' Timetable:

No.	Topic
1	Obtaining medical history
2	The most common medical emergency occurring in the dental setting
3	Recognise the signs and symptoms of medical emergencies
4	Management of the most common medical emergency cases
5	Reviewing the BLS protocol
6	Introduction to the crash cart's medication and how to use them
7	The local protocol for dealing with medical emergencies

Assessment Methods:

- 50% - Final Written Exam and OSCE
- 20% Attendance and participation in class discussion- questions and critiques

- 30% - Presentation:
  - 10% - Outline and preparation
  - 10% - Content
  - 5% - Adhering to allocated time (40–45-minute presentation)
  - 5% - Captivating audience attention

Recommended Reading:

- Scottish Dental Effectiveness Programs (SDCEP), Emergency Dental Care, Dental Clinical Guidance

Oral Pathology and Oral Medicine

This course is designed to advance residents' clinical knowledge of the principles that govern oral diseases, and the clinical and patho-biological aspects of diseases that affect the oral and maxillofacial region. Residents will build on basic knowledge and expand their understanding of the clinical signs and symptoms of oral diseases and their management in view of known physiological, biochemical and histopathological alterations. The course will provide residents with enhanced knowledge of common oral mucosal and salivary gland disorders, oral manifestations of systemic diseases, orofacial pain conditions including temporomandibular disorders and the dental management of medically compromised patients. Residents will also be able to apply the principles of radiographic interpretation for identification and differentiation of maxillofacial hard tissue lesions.

Aims:

- Provide opportunities for review and analysis of a wide range of oral disorders and orofacial pain conditions
- Expand the analytical and clinical skills of residents relative to clinical signs and symptoms of oral diseases and oral manifestations of systemic diseases
- Provide fundamental knowledge on the dental management of medically compromised patients

Learning Outcomes:

Upon completion of this course residents will have an increased ability to:

- Adopt a systematic approach to extra and intra-oral examinations, including screening for head and neck cancers
- Perform full documentation of cases by taking extra-oral and full mouth intra-oral photographs, and recording of all patient data
- Describe clinical and radiographic images and formulate differential diagnoses of common oral soft and hard tissue lesions
- Differentiate between normal oral variants and pathological lesions, and distinguish suspicious or difficult to manage lesions for consultation referral
- Select appropriate diagnostic aids and interpret their results to reach diagnosis of a variety of oral lesions
- Demonstrate knowledge of the indications of other extra-oral imaging techniques like sonography, sialography, MRI, CT and PET scans in the aid of the diagnosis of common orofacial conditions
- Display proper evaluation and risk assessment of the medically compromised patients and make appropriate modifications to dental treatment based on the medical history, medications, and interpretation of basic laboratory testing results and imaging

- Demonstrate adequate knowledge concerning the mechanisms of action, clinical use, side effects and drug interactions of commonly prescribed drugs in dental practice, including local anaesthetic, analgesic, and antimicrobial drugs
- Recognize common oral lesions in the paediatric population
- Understanding the role of the paediatric dentist in early diagnosis of oral conditions, and referral or consultation for advanced cases and cases that need different treatment considerations
- Describe the anatomical and physiological substrates of pain, and recognize the most common pain disorders in the orofacial region, including temporomandibular pain disorders
- Screen for non-odontogenic orofacial pain conditions by completing comprehensive history and clinical examinations, and be familiar with current pharmacological and non-pharmacological treatment modalities for chronic pain conditions
- Show efficient and professional communication with patients, colleagues, instructors, clinical and laboratory staff
- Illustrate the importance of lifelong learning and exploring evidence-based research

Lecturer(s): Dr Dalal AlOmar, Dr Anwar Almuzaini and Dr Fatma Alhendi
Lectures' Timetable:

No.	Topic
1	Introduction: Evaluation of the Dental Patient
2	Management of the Medically Compromised Patients – I
3	Management of the Medically Compromised Patients – II
4	Common Oral Mucosal Disorders – I
5	Common Oral Mucosal Disorders – II
6	Oral Cancer and Precancerous Lesions
7	Oral Manifestations of Systemic Diseases
8	Orofacial Pain Disorders
9	Temporomandibular Joint Disorders
10	Developmental Defects of the Oral and Maxillofacial Region
11	Oral Radiology: Interpretation of Common Jaw Lesions
12	Odontogenic Cysts and Tumours

Assessment methods:

- 70% - Final Written Exam and OSCE
- 30% Attendance and participation in class discussion- questions and critiques

Recommended Reading:

- Burket's Oral Medicine, 12th edition
- Dental Management of the Medically Compromised Patients - Little and Falace, 9th edition
- Orofacial pain: Guidelines for Assessment, Diagnosis, and management 5th edition
- Oral and Maxillofacial pathology - Neville, 4th edition
- Oral Radiology principles and interpretation - White & Pharoah's, 8th edition

Digital Dentistry and Dental Biomaterials

This program will equip you to be a leader in the future of dentistry. Digital dentistry is revolutionizing every aspect of dental care, from diagnosing problems with intraoral scanners and 3D imaging to planning treatments with computer-aided design (CAD) software and creating custom restorations with computer-aided manufacturing (CAM) technology. This course will get you up to speed on these cutting-edge tools and techniques, so you can integrate them seamlessly into your practice and improve efficiency, accuracy, and patient satisfaction. We will also delve into the materials used in modern dentistry, across various applications in the clinic and lab. You will learn to critically evaluate information about these materials to make informed choices for each patient's treatment. The course covers the fundamental science of dental materials, including polymers, composites, metals, and ceramics, used in all branches of dentistry. By understanding their chemical, physical, and mechanical properties, you will gain a strong foundation for selecting the most suitable material for any dental situation. You will graduate from this course with a comprehensive grasp of how these materials behave in the clinic and lab, allowing you to make evidence-based decisions for optimal patient care.

Aims:

- To maintain up-to-date knowledge related to dental materials.
- To sufficiently understand the benefits and shortcomings of digital dentistry on a didactic and practical level to be able to apply this technology predictably in the dental practice.

Learning Outcomes:

- Critically evaluate digital dentistry technologies: Analyze the advantages and limitations of intraoral scanners, 3D imaging, and CAM technology for diagnosis, treatment planning, and restoration manufacturing.
- Integrate digital workflows into multidisciplinary dental care: Develop a solid understanding of how to seamlessly incorporate digital tools and techniques into existing clinical procedures to improve efficiency and accuracy.
- Apply knowledge of biomaterials to patient care: Critically evaluate information on various dental materials (polymers, composites, metals, ceramics) used in different applications across dentistry.
- Select appropriate materials based on scientific principles: Utilise knowledge of the fundamental science behind dental materials (chemical, physical, and mechanical properties) to choose the most suitable material for specific clinical situations.
- Stay informed about advancements in digital dentistry: Develop skills to continuously learn and adapt to emerging technologies and trends in the field of digital dentistry.

- Understand the principles and uses of artificial intelligence in multiple specialties.
- Communicate the benefits of digital dentistry to patients: Effectively explain how digital tools and advanced materials contribute to improved accuracy, efficiency, and overall patient experience in dental care.

Lecturers: Dr. Basil Basha, Dr. Aseel Altemimi, and Dr. Maria Alkhabbaz
Lecture timetable:

No.	Topic
1	Impression materials
2	Introduction to digital dentistry – Present and future
3	Intra oral scanning & data acquisition
4	Introduction to dental materials
5	Computer aided manufacturing in dentistry
6	Multidisciplinary approaches
7	Dental Restorations

Assessment method:

- 70% - Final written exam and OSCE
- 30% - Attendance and participation in class discussion- questions and critiques

Recommended Reading:

1. Sakaguchi and Powers. Craig's Restorative Dental Materials, 13/14th ed. Mosby
2. Shen, C., Rawls, H. R., & Esquivel-Upshaw, J. F. (2022). Phillip's Science of Dental Materials, 13th ed. Elsevier
3. Sakaguchi, R., Ferracane, J., & Powers, J. (2018). Craig's Restorative Dental Materials, 14th ed. Elsevier
4. Ritter, A. V., Boushell, L. W., & Walter, R. (2019). Sturdevant's Art and Science of Operative Dentistry, 7th ed. Elsevier
5. Rosenstiel, Land, Fujimoto CONTEMPORARY FIXED PROSTHODONTICS, FIFTH EDITION
6. Herbert T. Shillingburg,Donald L. Mitchell, Edwin L. Wilson, FUNDAMENTALS OF FIXED PROSTHODONTICS, FOURTH EDITION

Oral Microbiology

This course is based on a series of lectures on oral microbiology and its clinical application in dental practice. Residents will develop a better understanding of oral infectious diseases and related pathogens as this short course is intended to be an intensive review of oral microbiology and related topics. Lectures and discussions will be based on published scientific papers whether classic or current literature. The course starts with an introduction to oral microbiology, oral microbiome, and oral ecosystem. It then touches on topics related to different dental specialties, such as endodontics, periodontics, and orthodontics and their interaction with oral microbiology. Lastly, the course will cover the subject of immunology and immune system in the oral cavity.

Aims:

By completing this course, residents will be able to understand and discuss a wide range of topics in oral microbiology and microbial diseases of the oral cavity. In addition, residents will understand the clinical implications of oral microbiology.

Learning Outcomes:

Upon completing this course, residents should be able to:

- Have basic education in oral microbiology, oral microbiome, and oral ecosystem, and their relevance in dental practice.
- Have basic understanding in immunology and the immune system, both the innate and the adaptive.
- Have knowledge about normal oral flora and their characteristics.
- Describe different methods in identifying pathogens, which include early microscopic and cultural microbiology investigations to targeted microbiologic analysis, such as immunochemical studies and nucleic acid-based techniques for bacterial identification.
- Have knowledge about dental biofilm, its formation, structure, and significance.
- Understand the aetiology and microbiology of dental caries, periodontal disease, and endodontic infections.
- Develop basic understanding of oral infectious diseases, including bacterial, viral, and fungal infections and the virulence factors of pathogens involved.
- Understand the interaction between orthodontics, periodontics, and endodontics and oral microbiology.

Coordinator: Dr Aaeshah Alkanderi

Lecturer(s): Dr. Aaeshah AlKanderi, Dr Ruqaya Almutairi, Dr Dalal Alrashidi, Dr Hessa Albader, and Dr Dr Sherifa Almokhaizeem

Lectures' Timetable:

No.	Lecture's Title
1	Introduction to Oral Microbiology
2	Oral microbiome and the oral ecosystem
3	Microbiology of periodontal disease
4	Microbiology in dental caries
5	Microbiology in orthodontics
6	Microbiology in endodontics and dental caries

Assessment Methods:

- 70% Final written exam and OSCE
- 30% Attendance and participation in class discussion- questions and critiques

Recommended Reading:

1. Essential Microbiology for Dentistry by Lakshman Samaranayake (4th or 5th Edition); Churchill, Livingstone
2. He, X. S., & Shi, W. Y. (2009). Oral microbiology: past, present and future. International journal of oral science, 1(2), 47-58.

Pharmacology in Dentistry

This course is intended to provide the residents with fundamental pharmacological knowledge in dentistry. It will go through a brief revision and updates of basic pharmacological principles, such as drug actions, interactions, and adverse reactions. Residents will learn how to manage pharmacotherapy of medically compromised and special needs populations. Residents will also be familiar with different medications used in dentistry, such as analgesics, antibiotics, antivirals, antifungals, and antiseptics. The course will also provide residents with enhanced knowledge of oral manifestation of medications' side effects.

Aims:

Establish the core pharmacological knowledge and attitude to drug information that will ensure comprehensive and safe dental practice throughout a dentist career.

Learning Outcomes:

- To understand the basic pharmacological principles such as drug actions, interactions, and adverse reactions
- To be familiar with different medications used in dentistry, such as analgesics, antibiotics, antivirals, antifungals, and antiseptics
- To be familiar with important drugs interactions and how they affect patient's management
- To be familiar with the potential oral manifestation of medication side effects
- To be competent in prescribing relevant medications
- To understand the current guidelines of prophylactic antibiotics

Lecturer(s): Dr Rawan Al-Khwaiteem

Lectures' Timetable:

No.	Lecture's Title
1	Introduction
2	Assessment of the patient
3	Prescribing for special patients' groups
4	Prescription writing
5	Pain (Odontogenic pain and Facial pain)
6	Bacterial infections
7	Viral infections
8	Fungal infections

9	Mucosal ulceration and inflammation
10	Dose calculation for commonly used medications
11	Oral manifestation of medications
12	Drug interactions

Assessment Methods:

- 70% - Final Written Exam and OSCE
- 30% Attendance and participation in class discussion- questions and critiques

Recommended Reading:

- The Dentist's Drug and Prescription Guide, Second Edition, 2020
- Antimicrobial Prescribing in Dentistry – Good Practice Guidelines, Third Edition, 2020, Faculty of General Dental Practice (FGDP), UK.
- Drug Prescribing for Dentistry – Dental Clinical Guidance, Third Edition, 2016, Scottish Dental Clinical Effectiveness Programme (SDCEP), UK.
- Useful Medications for Oral Conditions, The Reference Manual of Pediatric Dentistry, 2020, American Academy of Pediatric Dentistry
- Prevention of Viridans Group Streptococcal Infective Endocarditis, A Scientific Statement from the American Heart Association, 2021
- Oral Health Management of Patients at Risk of Medication-related Osteonecrosis of the jaw, Guidance in Brief, 2017, Scottish Dental Clinical Effectiveness Programme (SDCEP), UK.

Applied Clinical Dentistry

This intensive two-day module is designed to provide hands-on training and practical application of essential skills required across all dental specialties. It aims to equip residents with the skills necessary to link theoretical concepts covered in the basic sciences course to clinical practices, emphasizing key aspects of holistic patient care such as history taking, and examination. In addition to mastering basic clinical competencies, residents will gain a thorough understanding of the legal and regulatory frameworks governing dental practice in Kuwait, ensuring compliance and ethical decision-making in clinical settings. The module aims to prepare residents for clinical practice by offering practical experiences and real-world scenarios that reinforce the core competencies necessary for comprehensive patient management.

Teaching Methods:

- Practical sessions on history taking and patient examination
- Hands-on practice with simulated cases and peer-to-peer exercises
- Workshops on interdisciplinary communication and referral writing
- Review and application of legal and ethical considerations in dental practice

Aims:

- Develop essential clinical competencies
- Hands on training
- Interdisciplinary collaboration
- Understanding legal and regulatory framework
- Preparation for clinical practice

Learning Outcomes:

- To equip residents with the fundamental skills required for patient assessment, including thorough history taking, and accurate clinical examination
- To provide hands-on experience in essential clinical examination, allowing residents to practice and refine their skills in a controlled environment
- To foster an understanding of the importance of interdisciplinary communication and collaboration in delivering high-quality dental care
- To review and master the basics of relevant laws and regulations in Kuwait, ensuring residents are competent in navigating the legal and ethical aspects of dental practice
- To prepare residents for real-world clinical scenarios, ensuring they are confident and competent in performing basic history taking and examination and delivering holistic care

Sessions' Timetable:

No	Day	Date	Time	Topic	Lecturer
1	Sunday	24/11/24	08.00-08.30	History Taking (Medical History)	Dr Anfal Fraidoon
2	Sunday	24/11/24	08.30-09.30	Examination Extra-Oral Exam Lymph Nodes, Muscles of Mastication, Facial Nerves, TMJ)	Dr Thamer AlAnezi
3	Sunday	24/11/24	09.30-10.00	Break	
4	Sunday	24/11/24	10.00-11.00	Examination Intraoral Exam (Molar, Incisor, Canine relationship) Extra-oral Exam (Facial Symmetry, AP Skeletal Classification, ect)	Dr.Salman Sarkhouh
5	Sunday	24/11/24	11.00-11.30	Break	
6	Sunday	24/11/24	11.30-14.30	Cases and Practical	Dr. Anfal Fraidoon Dr Thamer Alanezi Dr Salman Sarkhouh
7	Monday	25/11/24	08.00-09.00	Interdisciplinary Management	Coordinators from all programs
8	Monday	25/11/24	09.00-10.00	Practical and Cases	Coordinators from all programs

9	Monday	25/11/24	10.00-10.30	Break	
10	Monday	25/11/24	10.30-12.00	Laws and Ethics	Dr Meshal Alzoubi
11	Monday	25/11/24	12.00-12.30	Break	
12	Monday	25/11/24	12.30-14.30	Case Based Discussion	Dr Meshal Alzoubi Coordinators from all programs

Assessment Methods:

- 50 % participation in the sessions
- 50 % Final written exam and OSCE

Recommended Reading:

- Head and neck anatomy lecture notes

Infection Control in Dental Health Care Settings

This one-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. This course is not compulsory, but attendance is highly recommended.

Aims:

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.

Learning Outcomes:

- To provide basic infection prevention principles and recommendations for dental health care settings
- To reaffirm that following standard precautions is the foundation for preventing transmission of infectious agents during patient care in all dental health care settings

Lecturer(s): Dr Hanouf Al-Buaijan

2 KBO orthodontic core courses

During this residency program, a set of mandatory courses **(Table2)** will be delivered to the residents to achieve the learning objectives outlined for each course within the context of the CAN-MED framework (Appendix 2). The curriculum of the KBO core courses delineates in detail the structure, aims, assessment, and topics to be covered in each course including course director contact information. It is the resident responsibility to be familiar with each course and its components in order to satisfy its requirements.

Table 2: List of KBO core courses

1)	Introduction to Orthodontics	ORTH0
2)	Craniofacial Growth and Development	ORTH1
3)	Orthodontic Diagnosis and Treatment Planning	ORTH2
4)	Biomechanics, Appliances, and Biomaterials in Orthodontics	ORTH3
5)	Clinical Orthodontic Seminars	ORTH4
6)	Literature review	ORTH5
7)	Advanced Orthodontics	ORTH6

* The list is subject to change, contact course director for updates

General rules and regulations

- There is a total of 7 KBO core courses delivered throughout the program.
- Each course is further divided into rotations based on the year of residency.
- A detail scheduled is provided for each course as the following pages show.
- There will be a shared calendar that is updated regularly, and the resident is responsible for **checking the calendar daily**/ confirm with course director.
- Attendance is mandatory.
- In case of an emergency, both the course director and program director should be informed, and the necessary paperwork filled in a timely manner.
- At the end of each rotation, the resident is required to complete a tutor evaluation and a course evaluation form.

Course title	**Introduction to Orthodontics**
Course Code	ORTH0 Year 1
Course director	**Salman Sarkhouh BDS, BSc, MFDS RCSEd, DDSc, MOrth RCSEd**
Teaching Staff	Kuwait Board of Orthodontics and Dentofacial Orthopedics staff and guest speakers
Venue	1065-KBO Auditorium room, Kuwait Board of Orthodontics and Dentofacial Orthopedics department, 1st Floor, Farwaniya Specialized Dental Centre, Ministry of Health, Kuwait KBO simulation lab room, Kuwait Board of Orthodontics and Dentofacial Orthopedics department, 2nd Floor, Farwaniya Specialized Dental Center, Dental Administration, Ministry of Health, Kuwait
Time	During first rotation of 1st year (check department calendar)
Course/rotation	**ORTH0** Rotation I: Oct-Dec 2024
Course Description	This course is a preclinical intensive preparation course for the residents aiming to develop the necessary clinical skills through a series of lectures and practical hands-on sessions. It is intended to introduce the basic concepts of orthodontics, beginning with skeletal and dental classifications, types of malocclusions in addition to gathering and analyzing orthodontic records which including radiographs, dental models, and photographs. This course is also intended to provide the basic mechanics of fixed orthodontic treatment required for patients with a variety of orthodontic needs in a simulated setting. It will also provide the basic skills required to place, modify, design, and adjust orthodontic appliances.
Course Goals	• Have a thorough understanding of the etiology and classification of malocclusion. • Understand the need for orthodontic records. • Ensure competence in collecting and analyzing orthodontic records.

- Be able to undergo orthodontic procedures following simulation in a laboratory setting
- Provide experience in bracket and band positioning in addition to adjusting fixed orthodontic appliances

Course Evaluation

Work Based Assessment (WBA)

1 Total number of hours
   - 85 hours

2 WBA → Pass/ Fail

Communication

All Class announcements will be sent through emails. Individual communications **need to be through your email account.** Course director email: ssarkhouh@moh.gov.kw

Recommended readings/resources

1. An Introduction to Orthodontics – Simon J. Littlewood, Laura Mitchell.
2. Contemporary Orthodontics – W. Proffit, H. Fields, Brent Larson, D. Sarver.
3. Diagnosis of the Orthodontic Patient – F. McDonald & A. Ireland.
4. The Orthodontic Patient: Treatment and Biomechanics – F. McDonald & A. Ireland.
5. Handbook of Orthodontics – M. Coubourne & A. DiBiase.

ORTH 0 — *Rotation I: Oct-Dec 2024* — *85hours*

Lecture and Learning Objectives

1 **Orientation**

a. Welcome Residents to the Board
b. Tour of the facility
c. Discuss timetable and schedule
d. Provide copy of the residents' handbook and syllabi
e. Cover the basic expectations in the program
f. Navigating google drive

2 **Orthodontic Classification and Diagnosis I**

a. Discuss the importance of assessing: Patient's concerns, Dental History, Medical History, and consent
b. Identify the steps in extra-oral examination
c. Describe the skeletal extra-oral features
d. Describe the soft tissue features
e. Identify the TMJ examination

3 **Orthodontic Classification and Diagnosis II**

a. Identify the steps in intra-oral orthodontic patient examination
b. Recognize the different occlusal classifications (Incisor, Canine, and molar)
c. Identify the normal/abnormal overjet
d. Identify the normal/abnormal overbite
e. Identify the upper/Lower centerlines
f. Recognize the different types of crossbites
g. Sleep Assessment

4 **Orthodontic Classification and Diagnosis III**

a. Clinical application of previous sessions
b. Introduce residents to the patient form/ template to be used for all cases on clinic
c. List the orthodontic problems in the template and a summary of the diagnosis
d. Review the various clinical forms

5 **Radiographic Assessment I**

a. Recognize normal and abnormal findings of an OPG, occlusal radiographs, periapical radiographs, CBCTs and lateral cephalograms
b. Understand the justification for orthodontic radiographs in general in addition to related guidelines
c. Protocols used in the KBO for radiographic imaging

6 **Radiographic Assessment II**

a. Indications for cephalometric assessments
b. The methods for cephalometric assessments in general
c. Identify the cephalometric landmarks on a cephalogram, general points
d. Determine the commonly used reference lines and angles
e. Describe the main analysis to be used (KBO analysis)
f. Recognize the errors that may occur during assessment and analysis
g. Introduction to the cephalometric analysis form

7 **Radiographic Assessment III**

a. Hands on cephalometric analysis session
b. Complete cephalometric tracings on paper and digitally

8 **Indices**

a. Describe the IOTN and its various components
b. Describe its uses and identify the dental health and aesthetic components
c. Discrepancy Index of the American Board of Orthodontics

9 **Impression Taking and Cast Trimming (Practical session)**

a. Expectations for orthodontic study casts
b. Alginate impression taking
c. Intra-oral Scanning
d. Face bow, CR record

10 **Space Analysis**

a. Describe the use of various space analyses including Bolton's discrepancy
b. Application of the space analysis and mixed dentition analysis

11 **Photography Course**

a. Identify the need of photographic records
b. Identify the various extraoral and intraoral photographs
c. Hands on element on clinics which includes critiquing the various photographs taken using stand flashes in the photography room and ring flashes on clinic
d. Understanding the various settings of cameras used on clinics

12 **Introduction to Dolphin**

a. Identify the various components of the Dolphin Imaging software
b. Upload photographic images and arrange them properly
c. Upload radiographic images into the patient's digital file.
d. Perform cephalometric analysis digitally

13 **Filling a Database**

a. Systems used to upload records and create a database for patients
b. Introduce various aspects of admin needed throughout the course
c. Data collection and case presentation ppt set up including patient list and archiving

14 **Typodont Course and Wire Bending I/II**

a. Complete basic orthodontic procedures such as
    a. Fixed orthodontic appliance bond up and adjustment
b. Identify the types & uses of the orthodontic instruments and materials including:
    i. Pliers
    ii. Wires
    iii. Brackets (types & prescriptions)
    iv. Intermaxillary elastics
    v. Power chains
    vi. Ligatures, O-rings, coils & miscellaneous
    vii. Anchorage appliances including TADs
c. Understand the principles of wire bending

15 **End of rotation exam (WBA)**

- To be completed during the clinical sessions

Course title	**Craniofacial Growth and Development**
Course Code	ORTH1
Course director	**Fawzi M. AlQatami, DMD, MSc, MscLO, FRCDC**
Teaching Staff	Kuwait Board of Orthodontics and Dentofacial Orthopedics staff and guest speakers
Venue	1088-KBO Auditorium room, Kuwait Board of Orthodontics and Dentofacial Orthopedics department, 1st Floor, Farwaniya Specialized Dental Centre, Ministry of Health, Kuwait
Time	8:00-9:30 am on Thursdays of rotation II of first year (R1)
Course/rotation	ORTH2.12 Rotation II: Jan-May 2025
Course Description	This course is intended to provide a broad overview of human growth and development focusing mostly on the craniofacial, physical, dental, psychosocial, and cognitive components. In addition, it is intended to provide basic knowledge regarding skeletal morphogenesis, growth principles, growth of the craniofacial complex, development of cleft lip and palate, craniofacial syndromes, and development of dentition. This course will also provide a comprehensive understanding of the basic concepts of occlusion, and management of temporomandibular joint disorders (TMD).
Course Goal	Orthodontic treatment is often carried out on growing patients. In order to optimally diagnose and treat these patients, a comprehensive knowledge of all aspects of human growth and development is required. The goal of this course is to understand the fundamental aspects of growth and development and its impact on orthodontic diagnosis, treatment, and dentition. In addition, the anatomy and physiology of the TMJ will be discussed along with its importance to orthodontists. Furthermore, the residents will learn about diagnosing and monitoring the presence of TMD, its progress if present and how to manage it.

Course Evaluation	Total number of hours	○ 22 hours
	Written examination	65%
	Project/paper	35%
Communication	All Class announcements will be sent through emails. Individual communications **need to be through your email** account. Course director email: falqatami@moh.gov.kw	
Recommended readings/resources	1. Enlow DH. Facial Growth, 3rd Edition. Philadelphia, WB Saunders Company, 1990. 2. Lieberman D. The Evolution of the Human Head. Cambridge MA, Belknap Press of Harvard University. 3. Various articles from the literature.	

ORTH 0

Rotation II: Jan-May 2025

Lecture and Learning Objectives

Introduction to Craniofacial Growth & Development

a. To understand the course syllabus, expectations, and schedule.
b. To understand the importance of facial growth.
c. To learn the components of the skull.
d. To differentiate between the different processes involved in skeletal growth.
e. To discuss the different theories of facial growth
f. To learn more about growth prediction.

Craniofacial Embryology

a. Understand the embryonic development of the head and craniofacial structures in the intrauterine life (skeletal and soft tissue).
b. Understand the development of trilaminar germ disc and the contribution of each layer to the development of craniofacial structures.
c. Learn the role of neural crest cells in development of craniofacial structures.
d. Differentiate between endochondral and intramembranous bone formation.
e. Discuss basic craniofacial growth concepts (functional matrix, area relocation, bone displacement, appositional growth and depositional resorption, modeling & remodeling and the v-principle, primary displacement and secondary displacement).

Midfacial/Maxillary Growth

a. Understand the embryological development of the maxillary structures.
b. Understand the growth and development of craniofacial components: cranial base, maxilla, mandible and interrelationships at different stages of growth.
c. Define sites and mechanisms of growth of cranial base and its influence on growing maxilla and mandible and factors that lead to anomalies of cranial growth.
d. Explain the pattern and mechanism of maxillary growth in all 3 planes and influence of sutural growth on maxillary development.
e. Understand the function of maxillary sutures and synchondrosis in midface and maxillary growth and development.

Mandibular growth and development

a. Understand the embryological development of the mandibular structures.
b. Understand the ossification process in the mandible.
c. Outline the pattern and mechanism of mandibular growth in all 3 planes of space and the role of condylar growth in mandibular development.
d. Understand the difference between growth site and growth center.
e. Explain postnatal growth and development of the facial soft tissue components from birth to adulthood.

Soft tissue growth and development

a. To understand how the soft tissue changes affect orthodontic treatment stability.
b. To understand the growth of the lips, nose and chin overtime.
c. To understand how soft tissue changes occur with facial aging.

Soft Tissue and function, Development of the dentition

a. Understand the role of soft tissues in orthodontics and how they contribute to facial aesthetics and function.
b. Analyze the growth patterns of soft tissue and its impact on craniofacial development.
c. Learn the principles of the Functional Matrix Theory and its relevance to soft tissue and skeletal interactions.
d. Identify the effects of functional habits (e.g., mouth breathing, thumb-sucking, tongue posture) on craniofacial growth.
e. Evaluate how muscular function influences malocclusion and orthodontic treatment outcomes.
f. Identify the stages of tooth eruption and the timeline for the development of primary and permanent dentition.
g. Learn about the changes in sagittal growth patterns and the dimensional changes in dental arches during growth.

Class II growth and growth modification

a. Understand condylar growth and remodeling.
b. Understand the craniofacial growth of patients with class II malocclusions.
c. Understand how the skeleton responds to external forces (Tension vs. pressure).
d. Understand the principles of growth modification by posterior and/or superior forces.
e. Explain and analyze the effects of orthodontic/orthopedic forces on the maxilla and the midface growth
f. Explain and analyze the effects of orthodontic/orthopedic forces on the mandible and the TMJ.

Class III growth and growth modification

a. Understand craniofacial growth of patients with class III malocclusion.
b. Understand the principles, skeletal and dental effects of class III growth modification with different treatment modalities: Facemask, Chin cup, Bone anchorage, Frankl III.

Required Reading list:

1. Semilongitudinal cephalometric study of craniofacial growth in untreated Class III malocclusion - Ann E Alexander, James A. McNamara, Jr, Lorenzo Franchi, and Tiziano Baccetti
2. Skeletal effects of early treatment of Class III malocclusion with maxillary expansion and face-mask therapy - Tiziano Baccetti, Jean S. McGill, Lorenzo Franchi, James A. McNamara Jr., and Isabella Tollaro
3. Growth modification of the face: A current perspective with emphasis on Class III treatment –pages 40-45. Hugo J. De Clerck, and William R. Proffit
4. Treatment effects of Fra¨nkel functional regulator III in children with Class III malocclusions - Hyoung S. Baik, Sung H. Jee, Kee J. Lee, and Tae K. Oh

Optional:

1. Components of Class III Malocclusion in Juveniles and Adolescence – Edmund Guyer, Edward Ellis, James McNamara, Rolf Behrents
2. Long-term effects of chincup therapy on skeletal profile in mandibular prognathism - Junji Sugawara, Teruo Asano, NoriakiEndo, and Hideo Mita

Cleft lip & palate treatment timeline

a. Understand the development of oral clefts.
b. Explain the different classifications used to describe oral clefts.
c. Define prevalence of orofacial clefts.

d. Review the effects of genetic and environmental factor on cleft development.
e. Explain the various component of craniofacial/cleft team.
f. Understand the detailed treatment timeline of patients with cleft lip and palate from diagnosis prenatally and until age of skeletal maturity.
g. Learn the orthodontist role in a cleft team.
h. Learn the orthodontic treatment approaches in childhood and adolescence in clefts.

Pre-surgical Infant Orthopedics

a. List various pre-surgical infant orthopedic options available.
b. Explain the detailed treatment process of NasaoAlveolar Molding technique.

Non-Surgical Correction of Deformational Auricular Anomalies

Developmental deformities & Craniofacial Anomalies I

a. To Understand the etiology of developmental deformities: Hereditary/congenital, acquired and idiopathic.
b. To understand the function of fontanelles and sutures in craniofacial developments.
c. To understand diseases and syndromes associated with craniofacial development: Craniosynostosis (Dysostosis): Crouzon and Apert Syndromes.

Required Reading list:

1. Panchal, Jayesh, and Venus Uttchin. "Management of craniosynostosis." Plastic and reconstructive surgery 111.6 (2003): 2032-2048.
2. Vargervik, Karin, et al. "Parameters of care for craniosynostosis: dental and orthodontic perspectives." American Journal of Orthodontics and Dentofacial Orthopedics 141.4 (2012): S68-S73.
3. Cohen Jr, M. Michael, and Sven Kreiborg. "A clinical study of the craniofacial features in Apert syndrome." International journal of oral and maxillofacial surgery 25.1 (1996): 45-53.

Developmental deformities & Craniofacial Anomalies II

a. Understanding Pathogenicity, Prevalence, Etiology, and Craniofacial characteristics, and Treatment (multidisciplinary approaches in phases of life - Surgical and orthodontic treatment), Role of the Orthodontist In cases of:
   - Pierre Robin Sequence
   - Hemifacial Microsomia
   - Cleidocranial dysplasia (CCD)

Required Reading list:

1. Daskalogiannakis, John, R. Bruce Ross, and Bryan D. Tompson. "The mandibular catch-up growth controversy in Pierre Robin sequence." American journal of orthodontics and dentofacial orthopedics 120.3 (2001): 280-285.
2. Suri, Sunjay, R. Bruce Ross, and Bryan D. Tompson. "Craniofacial morphology and adolescent facial growth in Pierre Robin sequence." American journal of orthodontics and dentofacial orthopedics 137.6 (2010): 763-774.
3. Farias, Maria, and K. Vargervik. "Dental development in hemifacial microsomia. I. Eruption and agenesis." Pediatr Dent 10.2 (1988): 140-143.
4. Vargervik, Karin. "Mandibular malformations: growth characteristics and management in hemifacial microsomia and Nager syndrome." Acta Odontologica Scandinavica 56.6 (1998): 331-338.
5. Golan, I., et al. "Dentomaxillofacial variability of cleidocranial dysplasia: clinicoradiological presentation and systematic review." Dentomaxillofacial radiology 32.6 (2003): 347-354.

6. Roberts, Tina, Lawrence Stephen, and Peter Beighton. "Cleidocranial dysplasia: a review of the dental, historical, and practical implications with an overview of the South African experience." Oral surgery, oral medicine, oral pathology and oral radiology 115.1 (2013): 46-55. – assigned Pages 51- 53

Optional:

1. Oberoi, Snehlata, et al. "Combined orthodontic and surgical treatment for a patient with cleidocranial dysplasia." AJO-DO Clinical Companion 1.4 (2021): 259-269

Clinical evaluation of Craniofacial growth and development

a. Understand the biological and embryonic foundations of craniofacial growth relevant to orthodontics.
b. Learn various methods for assessing growth in clinical settings, including Cervical Vertebral Maturation Staging and Skeletal Maturation Index.
c. Identify growth patterns of the maxilla and mandible and their clinical implications for orthodontic treatment.
d. Evaluate techniques for growth superimposition and its use in determining craniofacial growth progress.
e. Apply knowledge of craniofacial growth to the timing and modification of orthodontic treatment, including growth modification and orthognathic surgery decisions.

Surgical management of Craniofacial Syndromes

a. Understand the importance of time and growth in surgical intervention.
b. Discuss the types, advantages, and disadvantages of surgical interventions in craniofacial syndromes chronologically:
    a. Lip closure.
    b. Palate closure.
    c. Ear surgery.
    d. Bone grafts.
    e. Jaw surgery.
    f. Rhinoplasty.
    g. Lip surgery revision.
c. Be familiar with the potential complications associated with each surgery.

Airway & Breathing Disorders

a. To understand the airway's: Development, Function and Component.
b. To understand the formation of upper and lower respiratory tract.
   To understand the association between craniofacial development and normal respiration/ breathing disorders.
c. Adenoid faces.
d. Sleep disordered breathing and Obstructive Sleep Apnea.
e. To understand treatment alternatives for sleep disordered breathing and obstructive sleep apnea.

Required Reading list:

1. Marcus, Carole L. "Sleep-disordered breathing in children." American journal of respiratory and critical care medicine164.1 (2001): 16-30. Pages 16-21
2. Katyal, Vandana, et al. "Craniofacial and upper airway morphology in pediatric sleep-disordered breathing: systematic review and meta-analysis." American Journal of Orthodontics and Dentofacial Orthopedics 143.1 (2013): 20-30.

3. Pirelli, Paola, Maurizio Saponara, and Christian Guilleminault. "Rapid maxillary expansion (RME) for pediatric obstructive sleep apnea: a 12-year follow-up." Sleep Medicine 16.8 (2015): 933-935.
4. Hänggi, Michael P., et al. "Long-term changes in pharyngeal airway dimensions following activator-headgear and fixed appliance treatment." The European Journal of Orthodontics 30.6 (2008): 598-605.
5. Valiathan, Manish, et al. "Effects of extraction versus non-extraction treatment on oropharyngeal airway volume." The Angle Orthodontist 80.6 (2010): 1068-1074

Early Childhood

a. Understand how the cognitive and psychosocial development of children affects their understanding of orthodontic visit and their behavior in an orthodontic office.
b. Understand the type of management principles and techniques that can be most effective to help children succeed.

Adolescence

a. Understand the psychosocial and cognitive development of adolescents and how this can affect their orthodontic treatment.
b. Learn the issues that adolescents face in contemporary society.
Discuss how to manage adolescent patients as individuals with respects and understanding.

Psychosocial aspects

a. Understand how various psychological problems in orthodontic patients can affect their orthodontic treatment and patient management.
b. Understand how psychological problems can be managed in order to successfully carry out orthodontic treatment.

Asymmetries

a. Define facial asymmetry in 3 planes of space.
b. Differentiate the dental and skeletal asymmetry.
c. Understand the etiologies of facial asymmetry.
a. Understand different treatment approaches in dental and skeletal asymmetries (conservative and surgical approaches).

Treatment timing

a. Understand different assessment techniques for skeletal maturation and signs of pubertal growth (Hand-wrist radiographs/Fishman method, Cervical Vertebrae Maturation and Secondary sexual characteristics).
b. Understand timing of permanent teeth eruption, etiologies for delayed or failure of teeth eruption and treatment approaches.
c. Review indication for interceptive treatment (Maxillary constriction, anterior crossbites).
d. Understand adequate treatment timing for skeletal discrepancies.

Occlusion in Orthodontics

a. Describe the six keys of occlusion.
b. Understand the development of curve of Spee.
e. Understand normal development of the occlusion and dentoalveolar process:
   - Eruption in primary and permanent dentition.
   - Space relationships.

Required Reading list:

1. Andrews, Lawrence F. "The six keys to normal occlusion." Am J orthod 62.3 (1972): 296-309.
2. Marshall, Steven D., et al. "Development of the curve of Spee." American Journal of Orthodontics and Dentofacial Orthopedics 134.3 (2008): 344-352.
3. Braun, Stanley, William P. Hnat, and Baxter E. Johnson. "The curve of Spee revisited." American journal of orthodontics and dentofacial orthopedics 110.2 (1996): 206-210.
4. Contemporary orthodontics book, 4th edition : chapter 4 , pages 86-103

Optional:

1. Al-Ubaydi, Ammar Sh, and Nagham MJ Al-Mothaffar. "Evaluation of Andrews' six keys of normal occlusion in a sample of Iraqi adults in Baghdad city." Journal of baghdad college of dentistry 25.2 (2013): 130-139.
2. Jiménez Caro, María del Carmen, et al. "Are the orthodontic basis wrong? Revisiting two of the keys to normal oclusion (Crown Inclination and Crown Angulation) in the Andrews Series." Orthodontics. Basic Aspects and Clinical Considerations (2012).

End of rotation exam.

Course title	**Orthodontic Diagnosis and Treatment Planning**
Course Code	ORTH2 ORTH2.11, ORTH2.12 (1st year: R3)
Course director	**Salman Sarkhouh BDS, BSc, MFDS RCSEd, DDSc, Morth RCSEd**
Teaching Staff	Kuwait Board of Orthodontics and Dentofacial Orthopedics staff and guest speakers
Venue	1065-KBO Auditorium room, Kuwait Board of Orthodontics and Dentofacial Orthopedics department, 1st Floor, Farwaniya Specialized Dental Centre, Ministry of Health, Kuwait
Time	9:30-11:00 pm on Thursdays of first year (R3)
Course/rotation sessions table	**ORTH2.11** Rotation II: Jan-May 2025 **ORTH2.12** Rotation III: Jun-Sept 2025
Course Description	This course is intended to provide the basic knowledge that enables residents to perform a thorough diagnosis and provide a treatment plan accordingly. It equips them with skills to perform and analyze clinical examinations to formulate a treatment plan. This course will also provide knowledge that enables residents to utilize various indices to ensure adequate acceptance and referral of cases. The use of these indices will also provide residents with the ability to assess treatment outcomes.
Course Goal	○ Understand the basic scope and field of orthodontics. This includes: ▪ Defining normal occlusion and malocclusion ▪ Explaining the etiology of malocclusion ▪ Applying the basic concepts related to orthodontic diagnosis ▪ Applying cephalometric analyses and various radiographic imaging in an aid for diagnosis and treatment planning Application of indices and understanding the need for their use

- Experience in treatment planning related to various malocclusions and discrepancies

Course Evaluation

Written examination (MCQs)
Structured oral examination (clinical reasoning exam)
Work Based Assessment (WBA)

- Total number of hours
  - 52 hours
- **ORTH2.11**
  - End of rotation written examination (MCQs)
    - 28 hours
    - 50%
- **ORTH2.12**
  - End of rotation written examination (MCQs)
    - 24 hours
    - 50%

Communication

All Class announcements will be sent through emails.
Individual communications **need to be through your email account.** Course director email**:** ssarkhouh@moh.gov.kw

Recommended readings/resources

- An Introduction to Orthodontics – Simon J. Littlewood, Laura Mitchell.
- Contemporary Orthodontics – W. Proffit, H. Fields, Brent Larson, D. Sarver.
- Diagnosis of the Orthodontic Patient – F. McDonald & A. Ireland.
- The Orthodontic Patient: Treatment and Biomechanics – F. McDonald & A. Ireland.
- Handbook of Orthodontics – M. Coubourne & A. DiBiase.
- Guidelines (to be distributed by lecturer)
- References (to be distributed by lecturer)

ORTH 2.11 Rotation II: Jan-May 2025 28 hours

Lecture and Learning Objectives

1 Etiology of Malocclusion
- a. List the possible causes of malocclusion
- b. Describe the genetic and environmental influences on malocclusion
- c. Discuss the soft tissue role on malocclusion
- d. Discuss a habits role on malocclusion

2 Medical History
- a. Identify the importance of a comprehensive medical history
- b. Identify the various medical complications that may have an effect on orthodontic treatment
- c. Identify the various orthodontic considerations for patients with medical complications
- d. Identify the allergic reactions to various orthodontic appliances and management options

3 2D Radiological Imaging Techniques
- a. Interpreting 2D images and anatomy of each including:
  - Pas
  - OPGs
  - Lateral Cephalometrics
  - Occlusal radiographs
- b. Various uses of 2D images in orthodontics
- c. Errors in 2D imaging

4 3D Radiological Imaging Techniques
- a. Uses of CBCT in orthodontics
- b. Anatomy related to CBCT imaging
- c. Assessing orthodontic related cases
- d. Errors related to 3D imaging and CBCT

5 Cephalometrics I
- a. Describe the history in relation to Cephalometrics
- b. Cephalometric Anatomy

6 Cephalometrics II
- a. Measurements and errors
  - Types of Errors
  - Reducing Errors
- b. Other cephalometric analyses (continuing from ORTH0)
- c. Concepts of superimposition

7 Class I malocclusion
- a. List and describe the following in relation to Class I incisor relationship
  - Definition
  - Incidence
  - Etiology
  - Features
- b. Explain the rationale behind using each treatment approach for each presentation
  - Crowding
  - Spacing
  - Bimaxillary proclination (basics)
  - Vertical anomalies (basics)
  - Transverse anomalies (basics)

8 **Class II Division I malocclusion I (I)**

a. List and describe the following in relation to Class II div I incisor relationship
   - Definition
   - Incidence
   - Etiology
   - Features

b. Explain the rationale behind using each treatment approach
   - Functional
   - Fixed

c. Orthodontic decompensation and surgery

9 **Class II Division I malocclusion I (II)**

a. List and describe the following in relation to Class II div I incisor relationship
   - Definition
   - Incidence
   - Etiology
   - Features

b. Explain the rationale behind using each treatment approach
   - Functional
   - Fixed

c. Orthodontic decompensation and surgery

10 **Class II Division II malocclusion**

a. List and describe the following in relation to Class II div II incisor relationship
   - Definition
   - Incidence
   - Etiology
   - Features

b. Explain the rationale behind using each treatment approach
   - Functional
   - Fixed

c. Orthodontic decompensation and surgery

Class III malocclusion

11

a. List and describe the following in relation to Class II incisor relationship
   - Definition
   - Incidence
   - Etiology
   - Features
   - Explain the rationale behind using each treatment approach
   - Functional
   - Fixed

b. Orthodontic decompensation and surgery

12 **Bimaxillary Proclination**

a. List and describe the following in relation to Bimaxillary Proclination
   - Definition
   - Incidence
   - Etiology
   - Features

b. Explain the various treatment options and considerations

13 **Vertical Discrepancies I**

a. List and describe the different features related to vertical discrepancies
b. Anterior Open Bite
c. High Angle Cases
d. Identify the etiology of vertical discrepancies
e. Explain the rationale behind using each treatment approach
f. Recognize the etiology and different treatment approaches for anterior and posterior open bites

14 **Vertical Discrepancies II**

a. List and describe the different features related to vertical discrepancies
b. Low Angle Cases
c. Deep Bites
d. Identify the etiology of deep bites and low angle cases
e. Explain the rationale behind using each treatment approach and method for overbite reduction

15 **Asymmetries**

a. List and describe the following in relation to asymmetries
- Definition
- Incidence
- Etiology
- Classification
- Methods of clinical examination
- Skeletal
- Soft Tissue
- Dental
- Supplemental records

b. Treatment options and management of
- Skeletal
- Soft Tissue
- Functional Dental

16 **Transverse Discrepancies**

a. List the following in relation to transverse discrepancies:
- Definition
- Incidence
- Etiology
- Features
- Arch width and changes with age
- Indications for expansion
- Options for expansion

b. Various appliances for expansion (see ORTH3)

17 **Hypodontia**

a. Prevalence, incidence, and general features
b. General treatment principles
c. Complications of treatment of hypodontia patients
d. Advantages and Disadvantages of various forms of treatment
e. Treatment Mechanics

18 **Make Up Session**

19 **Make Up session**

20 **End of rotation exam**

	Date	Lecture and Learning Objectives	Lecturer
1		**Impacted Canines I** a. Identify the following in relation to impacted canines: - Definition - Incidence - Eruption - Etiology b. Indicate the diagnostic tools used to investigate impacted canines c. Various techniques in identifying the position of impacted canines	
2		**Impacted Canines II** a. Outline the treatment options: - Exposure and orthodontic alignment including mechanics - Open vs closed exposure b. Surgical removal c. Trans-alveolar transplantation d. Surgical repositioning e. Factors affecting the general outcome	
3		**Impacted Teeth** a. Outline the treatment options for impactions of lateral incisors, premolars and molars: b. Exposure and orthodontic alignment including mechanics c. Surgical removal d. Other methods of alignment e. Factors affecting the general outcome	
4		**Unerupted Permanent Incisors and Supernumeraries** a. Identify the causes for unerupted permanent incisors and - Normal eruption - Delayed eruption - Etiology - Management - Guidelines in relation to management b. Describe the various supernumeraries and their effects on the malocclusion - Definition - General features - Etiology - Clinical signs - Types - Investigations c. Treatment	
5		**Interceptive Orthodontics I** a. Introduction to Interceptive Orthodontics b. Advantages and disadvantages of early treatment in general c. List the various cases in need of interceptive intervention d. Types of interceptive treatment e. Correction of Class II skeletal discrepancies f. Correction of Class III skeletal discrepancies g. Digit Sucking (Habits)	
6		**Interceptive Orthodontics II** a. First Molars of poor prognosis - Incidence - Clinical Indications - Potential problems - Timing of extractions - Advantages and disadvantages of balancing and compensating extractions	

- Treatment planning for the loss of first molars

b. Early loss of primary teeth
- Limiting the effects with balancing and compensating extractions
- Premature tooth loss
- Space Maintainers
- Potential problems (Ectopic eruptions)

c. Serial Extractions (historical interest)

7 Interceptive Orthodontics III

a. Early treatment of crossbites
- Definition and general features of anterior and posterior crossbites
- Treatment options

b. Loss of permanent incisors
- Treatment options
- Opening and closing space

8 Iatrogenic Effects

a. Describe the various iatrogenic effects of orthodontic treatment which include:
- Intraoral iatrogenic damage
  - Teeth (Crown damage/ Root damage/ Pulp damage)
  - Periodontium
  - Soft Tissue
- Extraoral iatrogenic damage

b. TMJ

9 Iatrogenic Effects II

a. Describe the various iatrogenic effects of orthodontic treatment which include:
- Systemic effects of treatment (Allergies, Bacterial Endocarditis and Cross infection)
- Periodontal complications related to appliances
- Trauma in orthodontics

b. Risks and Benefits of orthodontic treatment

10 Dental Anomalies I

a. In relation to transpositions, describe the following
- Definition
- Etiology
- Classification
- Prevalence
- Various forms of treatment (Advantages and Disadvantages)

b. In relation to Double teeth
- Definition
- Types
- Etiology
- Incidence
- Clinical presentations
- Various forms of treatment (Advantages and Disadvantages)

c. In relation to Primary Failure of Eruption (PFE)
- Definition
- Classification
- Etiology
- Incidence
- Various forms of treatment (Advantages and Disadvantages)

d. Ectopic Eruption of Permanent First Molars
- Definition
- Incidence
- Etiology

- Effects

e. Diagnosis and Treatment planning

11 **Obstructive Sleep Apnea**

a. Describe the following with regards to OSA
- Definition
- Measurement
- Risk Factors
- Clinical Features
- Etiology
- Diagnosis
- Management

b. Various Appliances for Treatment

12 **Dental Anomalies II**

a. Describe the treatment options and considerations for Molar Incisor Hypomineralisation (MIH)
- Definition
- Etiology
- Prevalence, types
- Clinical presentation
- Possible problems
- Differential diagnosis
- Treatment options

b. Describe the treatment options and considerations for Infraoccluded primary teeth
- Definition
- Etiology
- Incidence
- Clinical presentation
- Classification
- Investigations

c. Management

13 **Make Up Session**

14 **Make Up Session**

17 **End of rotation exam**

KUWAIT BOARD OF ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS
البـــورد الكـويتـي لتقـويـم الأسنـــان و عظـــام الوجـــه و الفكيـــن

Course title	**Biomechanics, Biomaterials and Appliances in Orthodontics**
Course Code	**ORTH3** ORTH3.11, ORTH3.12 (1st year: R3)
Course director	**Dr. Saitah Alajmi, BDM, DMSc, CAGE, FRCD(C)**
Teaching Staff	Kuwait Board of Orthodontics Permanent staff External lecturers and guest speakers
Venue	1088-KBO Auditorium room, Kuwait Board of Orthodontics and Dentofacial Orthopedics department, 1st Floor, Farwaniya Specialized Dental Centre, Ministry of Health, Kuwait
Time	11:00-12:30 am on Thursdays of first year (R3)
Course/rotation	ORTH3.11 Rotation II: Jan-May 2024 ORTH3.12 Rotation III: Jun-Sept 2024
Course Description	This is a course offered to the Residents of the Kuwait Board of Orthodontics and Dentofacial Orthopedics (KBO) during their 1st year in the program. It is divided into 2 rotations with an ascending pattern of progression, development, and complexity covering a variety of topics including the biomechanical principles of orthodontic techniques, biological basis of orthodontic tooth movement, biomaterials of Orthodontics, as well as appliances.
Course Goal	The goal of this course is to equip the residents with the tools necessary to understand the basis of biological tooth movement and its envelope, discuss the physical laws and principles that govern Orthodontics, review the materials used, and analyze the biomechanical components of appliances. Additionally, it aims to provide skills necessary to choose proper material, appliances, understand biological limits and mechanical processes.
Course Evaluation	The evaluation process of the course involves

Grades weight and distribution/Rotation

The first and second rotations (3.11 and 3.12) where each is worth 50% of the total course grade.

Below is the grades breakdown and weight of each rotation.

3 Total number of hours
- ORTH3.11 ○ 33 sessions
- ORTH3.12 ○ 18

→ 14

4 2 Assignments → 40% (20 each)

5 End of rotation exam (Written) → 60%

Recommended readings/resources

4. Proffit W, Fields H, Larson B, Sarver D. Contemporary Orthodontics 6th edition. Mosby. 2018 (eBook ISBN: 9780323543880)
5. Graber L, Vig K, Huang G, Fleming P, Orthodontics Current Principles and Techniques 7th edition. Elsevier. 2022 (eBook ISBN: 9780323778602)
6. Eliades T, Brantley W. Orthodontic Applications of Biomaterials: A Clinical Guide. 1st edition. Elsevier. 2016 (eBook ISBN: 9780081003992)
7. Nanda R, Uribe F, Yadav S. Temporary Anchorage Devices in Orthodontics 2nd edition. Elsevier. 2019
8. Nanda R. Esthetics and Biomechanics in Orthodontics 2nd edition. Elsevier.2015

ORTH 3.11 *Rotation II: Jan-May 2024* *18 sessions*

Date	**Lecture and Learning Objectives**	**Lecturer**
1	**History and evolution of Orthodontics** **a.** Review the history of Orthodontics evolution b. Overview of the history of development of orthodontic appliances c. Overview of the first attempts to achieve dental movement d. Review Andrew's six keys of occlusion	
2	**Biological basis of Orthodontic tooth movement I (Dental)** a. Understand the biology of periodontal apparatus b. Review bone responses to normal function c. Understand bone and PDL response to sustained forces d. Overview of the effects of local injury on tooth movement	
3	**Biological basis of Orthodontic tooth movement II (Deleterious effects)** a. Understand the deleterious effects of forces on the root and pulp b. Understand the deleterious effect of forces on the PDL and Bone c. Overview of drug effects on Orthodontic forces and movement	
4	**Biological basis of skeletal remodeling during Orthodontics** **a.** Understand the principles of growth modification b. Explain and analyze the effects of orthodontic forces on the Maxilla and the midface c. Explain and analyze the effects of orthodontic forces on the mandible and the TMJ	
5	**Basic principles of Forces and Anchorage in Orthodontics** a. Define an orthodontic force, force duration, and decay b. Understand the different types of forces, their magnitude, and application c. Explain and analyze anchorage its types and applications in Orthodontics d. Review anchorage design e. Forces, reciprocal forces, and moments in Biomechanics f. Understand the Center of resistance and center of rotation g. Understand reciprocal forces and their formation within the orthodontic system h. Define and analyze moments i. Define and analyze couple j. Analyze the relation between moment force and moment of couple k. f. Review relation of bracket design to a couple	
6	**One couple system; definition and applications** **a.** Review the law of equilibrium b. Differentiae statistically determinate vs indeterminate system c. Understand one couple system d. Understand the biomechanics of different auxiliary arches **Practical Lab session I: Typodont one couple system** a. Application of one couple system on a typodont b. Understand the different parts of auxiliary arches c. Design and Adjustments of intrusion/extrusion arches Application of two couple system on a typodont	
7	**Two couple system; definition and applications** **a.** Define a two-couple system b. Understand the moments and forces created in a two-couple system c. Understand the application of the two-couple system in Orthodontics d. Differentiate symmetrical and asymmetrical bends	

Practical Lab session II: Typodont two couple system

d. Understand the components and effects of a two-couple system practically
e. Design, fabrication, and Adjustments a two-couple system using symmetrical and asymmetrical bends

8 **Friction in Orthodontics**

a. Define Friction in Orthodontics
b. How friction is created and at what levels
c. Types of Orthodontic friction
d. Clinical implications of friction

Management of friction and binding in Orthodontics

9 **Orthodontic materials: Brackets and Bands**

a. Review the history and evolution of attachments (bands & brackets)
b. Understand the science behind bracket design
c. Differentiate between the available types of brackets
d. Comprehensive understanding of bracket prescription and slot design/size
f. Understand the available types of bands and their applications

10 **Orthodontic materials: Removable Orthodontic Appliances**

a. Overview of the evolution of removable orthodontic appliances
b. Describe the types of intra-oral appliances
c. Discuss the biomechanical concepts implied in removable appliances
a. Discuss the selection, design, and application of removable appliances

11 **Orthodontic materials: surface preparation and bonding**

a. Overview of surface preparation and bonding agents
b. Discuss the physical properties of bonding agents
c. Describe the process of surface preparation and bonding for natural teeth

Discuss the steps required for a successful bond on non-natural tooth structure

Eid Al-Fitr vacation

12 **Basic principles of Orthodontic materials(elastics and metal)**

b. Define elastic materials in Orthodontics
c. Examine the different physical properties of elastic materials
d. Understand the effects of elastic properties on Beam size, shape and length
e. Review the history and evolution of wires in Orthodontics
f. Describe the optimal Orthodontic wire properties
g. Discuss different types of wires available

Analyze the properties of different wire materials and their uses

13 **Basic principles of Orthodontic materials(elastics and metal)**

h. Define elastic materials in Orthodontics
i. Examine the different physical properties of elastic materials
j. Understand the effects of elastic properties on Beam size, shape and length
k. Review the history and evolution of wires in Orthodontics
l. Describe the optimal Orthodontic wire properties
m. Discuss different types of wires available

Analyze the properties of different wire materials and their uses

14 **Extra-oral appliances in Orthodontics**

a. Discuss the development of extra-oral appliances in Orthodontics
b. Describe the different types of extra-oral appliances
c. Analyze the biomechanical forces of a headgear
d. Analyze the biomechanical forces of a reverse pull head gear

Describe the application of extra-oral appliances in Orthodontics

15 Makeup session

16	Makeup session
17	**Review session**
18	**End of rotation exam**

ORTH 3.12 Rotation III: Jun-Sept 2024 14 sessions

Lecture and Learning Objectives

1 Introduction and History of Functional appliances

a. Overview of the history of development of functional appliances
b. Types of functional appliances
c. Explain the theory behind functional appliance
d. Discuss the biological basis of growth modification

2 Selection and Criteria of application of Functional appliances

a. Understand the selection criteria of functional appliances
b. Analyze the components of functional appliances
c. Interpret the forces involved in Functional appliances
d. Review the applications of functional appliances in growing patients

Islamic year holiday

3 Class II growth modification (Removable appliances)

a. Overview of the craniofacial complex growth in Class II patients
b. Types and components of Class II functional appliances
    a. Removable Class II functional appliances
        i. Intra-oral appliances
        ii. Extra-oral appliances
c. Selection criteria of Class II functional appliances
d. Interpret the biomechanical forces created by functional appliances
e. Discuss the deleterious effects and how to control it

Practical application of Class II functional appliances; Simulation lab

a. Recognize the design and components of a twin block
b. Learn how to adjust a twin block
c. Recognize the components of a headgear
d. Learn how to install and adjust a headgear

4 Biomechanics of appliances; Class II malocclusion (Dental)

a. Overview the Class II dental malocclusion
b. Review the available methods of treatment
c. Discuss the rationale and mode of action of Class II dental correction appliances
d. Analyze the biomechanical forces of
    a. Class II elastics, their selection and manipulation
    b. Maxillary Distalizers (e.g., Carrier ®, Distal jet)
    c. Interarch appliances (e.g., Forsus)
    d. The application of TADs

Examine the side effects of Class II dental correction

5 Class II growth modification (Fixed appliances)

a. Overview of the development of fixed functional appliances
b. Understand the rationale behind fixed functional appliances
c. Discuss the types and components of fixed functional appliances
d. Review the advantage and disadvantages of fixed functional appliance
e. Analyze the forces involved in fixed functional appliances and how to optimize it
f. Identify best candidate of functional appliances and recognize its application

Practical application of Class II functional appliances; Simulation lab

a. Be familiar with the design and components of Forsus ®and Power scope® Carrier Twin force

Learn how to insert, adjust, and remove

6 Class III growth modification

a. Overview of the craniofacial complex growth in Class III patients
b. Types and components of Class III functional appliances
    a. Removable and Fixed Class III functional appliances

i. Intra-oral appliances
ii. Extra-oral appliances

c. Selection criteria of Class III functional appliances
d. Interpret the biomechanical forces created by functional appliances
e. Discuss the deleterious effects and how to control it

Practical application of Class III functional appliances; Simulation lab

a. Be familiar with the design and components of a face mask and chin cup
Learn how to insert, adjust, and remove the face mask and chin cup

7 **Biomechanical principles; Stages of Orthodontic treatment**

a. Review the stages of Orthodontic treatment
    a. Level and align
    b. Space Closure and Sagittal correction
    c. Finishing and detailing
b. Discuss the biomechanical considerations (net forces) during leveling and aligning
c. Analyze the different mechanics available for space closure
d. Overview of the sagittal correction available methods
e. Address the importance of finishing and detailing
f. Discuss the different ways and biomechanical considerations of finishing and detailing including substitution cases

8 **Biomechanics of appliances; Transverse problems**

a. Review the etiology of transverse problems in Orthodontics
b. Review the presentation pattern of transverse problems in Orthodontics
c. Review the deleterious effects of transverse problems and mandibular shifts
d. Discuss the treatment options available based on age and development
    a. Removable appliances
    b. Fixed appliances
e. Analyze the forces created and involved in managing transverse problems

Explain how to control the side effects of expansion

9 **Biomechanics of appliances; Class III malocclusion**

a. Overview the Class III dental malocclusion
b. Review the available methods of treatment
c. Discuss the rationale and mode of action of Class III dental correction appliances
d. Analyze the biomechanical forces of
    a. Class III elastics, their selection and manipulation
    b. Stopped advanced arch wire
    c. Interarch appliances (e.g., Carrier ®)
    d. The application of TADs
f. Examine the side effects of Class III dental correction

10 **Biomechanics of appliances; vertical problems**

a. Overview of the vertical problems in Orthodontics
b. Differentiate between skeletal and dental vertical problems
c. Discuss the available treatment options
d. Analyze the biomechanical system of forces in:
    a. TAD supported intrusion
    b. Intrusion arches
    c. Intrusion with TPA
    d. High pull headgear
    e. Posterior bite blocks

Review the side effects and stability of vertical correction

11 **Biomechanical management of impacted teeth**

a. Overview of etiology, presentation, and prevalence of impaction
b. Classify types of impactions (Diagnostic approach)
c. Address the treatment approaches of impacted teeth
d. Analyze the biomechanical Forsus generated during traction of impacted teeth

Discuss the side effects and limitations in the management of impacted teeth

Prophet's PBUH holiday

12 **Bidimensional technique**

a. Define the Bidimensional technique
b. Discuss the rationale behind bidimensional technique
c. Analyze space requirements using the Gianelly table
d. How to set up for utilizing the bidimensional technique in Extraction cases
e. Advantages and Disadvantages of the bidimensional technique

13 **The versatility of Wilson arches in Orthodontics**

a. Overview of the history and development of Wilson arches
b. Be familiar with the available types of Wilson arches
    a. Wilson Bimetric distalizer
    b. Wilson 3D lower lingual holding arch
c. Discuss the design and components of Wilson arches
d. Inspect the uses of Wilson arches in Orthodontics
e. Be familiar with methods of adjustments of Wilson arches

14 **End of rotation exam**

Course title **Clinical Orthodontic Seminars**

Course Code	ORTH4
Course director	**Hussain AlShatti, BChD(Hons), MDentSc, CAGS, FRCDC**
Teaching Staff	Kuwait Board of Orthodontics and Dentofacial Orthopedics staff and guest speakers
Venue	1088-KBO Auditorium room , KBO, 1st Floor 0180-KBO Meeting room, KBO, Ground floor Farwaniya Specialized Dental Centre, Ministry of Health, Kuwait
Course timing	1:00-2:30 pm Sunday, and Tuesday, and Thursday afternoons
Course Description	This is a course offered to the residents of the Kuwait Board of Orthodontics and Dentofacial Orthopedics (KBO) during their 3 years in the program. It allows the residents to present their clinical cases in a case presentation format covering initial, progress, and final stages of treatment.
Course Goal	The goal of this course is to allow the residents to practice their evidence based critical appraisal techniques and presentation skills. It also encourages them to practice their diagnosis and treatment planning skills efficiently and objectively by engaging in discussions and receiving direct feedback.
Objectives	This course aims to achieve the following objectives: 1. Develop the ability of obtaining complete records relevant to a case. 2. Develop skills of analyzing and presenting records following a systematic approach. 3. Develop the ability to engage, analyze, and discuss cases with faculty members and residents. 4. Be able to develop treatment options on the spot and discuss with coresidents and faculty members present. 5. The ability to scientifically and professionally critique providing alternatives in an evidence-based manner.

Course Evaluation

This course is evaluated and graded according to the following criteria:

- **R3: 1st year**
  - **Case presentation quality and skills** **40%**
    - Rotation 2 — 20%
    - Rotation 3 — 20%
  - **End of year mock board examination** **60%**
    - 2 Unseen cases → 20%
    - Six (6) initial cases → 40%

- **R4: 2nd year**
  - **Case presentation quality and skills** **30%**
    - Rotation 1 — 10%
    - Rotation 2 — 10%
    - Rotation 3 — 10%
  - **End of year mock board examination** **70%**
    - 3 Unseen cases → 30%
    - Six (6) progress cases → 40%

- **R5: 3rd year**
  - **Case presentation quality and skills** **30%**
    - Rotation 1 — 10%
    - Rotation 2 — 10%
    - Rotation 3 — 10%
  - **End of year mock board examination** **70%**
    - 3 Unseen cases → 30%
    - Six (6) final cases → 40%

Communication

All Class announcements will be sent through emails.
Individual communications **need to be through your email account.**
Course directors' emails**:** hu.alshatti@moh.gov.kw

Recommended readings/resources

1. Kuwait Board of Orthodontics and Dentofacial Orthopedics Resident's handbook.
2. Proffit W, Fields H, Larson B, Sarver D. Contemporary Orthodontics 6th edition. Mosby. 2018 (eBook ISBN: 9780323543880).
3. Graber L, Vig K, Huang G, Fleming P, Orthodontics Current Principles and Techniques 7th edition. Elsevier. 2022 (eBook ISBN: 9780323778602).
4. Eliades T, Brantley W. Orthodontic Applications of Biomaterials: A Clinical Guide. 1st edition. Elsevier. 2016 (eBook ISBN: 9780081003992).
5. Nanda R, Uribe F, Yadav S. Temporary Anchorage Devices in Orthodontics 2nd edition. Elsevier. 2019 (eBook ISBN: 9780323609326).

Course title	**Literature Review**
Course Code	ORTH5 ORTH5.11, ORTH5.12 (1st year: R3) ORTH 5.23, ORTH 5.24, ORTH 5.25 (2nd year: R4) ORTH 5.36, ORTH5.37, ORTH 5.38 (3rd year: R5)
Course director **Co-directors**	**Salman Sarkhouh,** BDS, BSc, MFDS RCSEd, DDSc, Morth, RCSEd **Saitah Alajmi,** BDM, DMSc, CAGE, FRCDI **Fawzi M. AlQatami,** DMD, MSc, MscLO, FRCDI
Teaching Staff	Kuwait Board of Orthodontics and Dentofacial Orthopedics staff and guest speakers
Venue	1088-KBO Auditorium room, Kuwait Board of Orthodontics and Dentofacial Orthopedics department, 1st Floor, Farwaniya Specialized Dental Centre, Ministry of Health, Kuwait
Time	1st year: 12:30-2:00 pm Monday and Wednesday afternoon 2nd and 3rd year: 12:00-2:00pm Wednesday afternoon
Course/rotation sessions table	**ORTH5.11** Rotation II: Jan-May 2025 (Classical literature) **ORTH5.12** Rotation III: Jun-Oct 2025 (Classical literature) **ORTH5.2** Rotation IV: Oct 2024 – Sept 2025 (Seminars in Orth/JC) **ORTH5.3** Rotation V: Oct 2025 – Sept 2026 (Seminar in Orth/JC)
Course Description	This course is intended to provide knowledge and experience in methods of critically analyzing as well as summarizing the literature. It aims to follow the didactic elements of the syllabus in ORTH0,1,2,3,4 and 7. This course will be implemented from the start of the program until the end in an aim to cover all the relevant literature.
Course Goal	The course focuses on the general principles of evidence-based dentistry. It will cover the basic principles of formulating a clinical question and finding the relevant evidence. It will also focus on critical appraisal and application of the evidence in a clinical setting. One of the main goals is to also expose residents

	to various forms of research and statistical tools in an aim to analyze the data presented in the research.
Course Evaluation	Oral Presentations → 50% Participation and Attendance → 50%
Grades weight and distribution/Rotation	Total number of hours ○ ORTH5.11 ○ 40 hours ○ ORTH5.12 ○ 34 hours ○ ORTH 5.2 ○ 100 hours ○ ORTH 5.3 ○ 100 hours
Communication	All Class announcements will be sent through emails. Individual communications **need to be through your email account.** Course directors' emails**:** ssarkhouh@moh.gov.kw sa.alajmi@moh.gov.kw falaqatami@moh.gov.kw
Recommended readings/resources	Textbooks – 1. Postgraduate Notes in Orthodontics – Nikki Atack 2. Evidence Based Dentistry: An Introduction – Allan Hickshaw 3. Dental Statistics Made Easy – Nigel Smeeton 4. Research papers (open access) 5. Journal papers to be critiqued in a structured format 6. Seminars in Orthodontics

ORTH 5.1 Rotation II (R3) -January 2025 to May 2025

Week	Topics
1	Introduction to Literature Review + Cephalometric Analysis (Dr. Salman Sarkhouh)
2	Malocclusion and Class I malocclusions. (Dr. Salman Sarkhouh)
3	Embryology (Dr. Fawzi Alqatami)
4	Biomaterials (Brackets). (Dr. Hussain + Dr. Sharifah)
5	Radiological Imaging Techniques. (Dr. Salman Sarkhouh)
6	Growth Control and Growth Centers. (Dr. Fawzi Alqatami)
7	Biomaterials (Arch wires). (Dr. Saitah Alajmi)
8	Class II div I malocclusion and Functional Appliances. (Dr. Salman Sarkhouh)
9	Growth Rotations (Dr. Fawzi Alqatami)
10	Biomaterials (Archwires). (Dr. Saitah Alajmi)
11	Class III malocclusion. (Dr. Salman Sarkhouh)
12	Growth Relevance in Orthodontics (Dr. Fawzi Alqatami)
13	Biomaterials (Adhesive Cement and Force Delivery Systems) (Dr. Saitah Alajmi)
14	Class III malocclusion. (Dr. Salman Sarkhouh)
15	Fixed Appliances (Including Friction) (Dr. Saitah Alajmi)
16	Iatrogenic Effects of Orthodontic Treatment (Intraoral + Extraoral). (Dr. Salman Sarkhouh)
17	ORAL PRESENTATION EXAMINATION WEEK

ORTH 5.12 Rotation III (R3): June 2025 to September 2025

Topics

1	**Iatrogenic Effects of Orthodontic Treatment (Systemic Effects and Pain). (Dr. Salman Sarkhouh)**
2	**Anchorage (Dr. Saitah Alajmi)**
3	**Impacted Canines. (Dr. Salman Sarkhouh)**
4	**Tooth movement. (Dr. Fawzi Alqatami)**
5	**Anterior Open Bites. (Dr. Salman Sarkhouh)**
6	**Bone Metabolism. (Dr. Saitah Alajmi)**
7	**Deep Bites. (Dr. Salman Sarkhouh)**
8	**Extraction vs Non extraction + Extraction and facial profile, extraction of specific teeth. (Dr. Hussain Alshatti)**
9	**Obstructive Sleep Apnea. (Dr. Mona Alawadhi)**
10	**Temporary Anchorage Devices. (Dr. Saitah Alajmi)**
11	**Make up session**
12	**Make up session**
13	**Make up session**
	ORAL PRESENTATION EXAMINATION WEEK

ORTH 5.2	**Rotation I/II/III (R4): October 2024 to September 2025**	**100 hours**
	Topics	
1	**Seminars in Orthodontics**	
2	**Journal Club**	
3	**ORAL PRESENTATION EXAMINATION – MAY 2024 & SEPTEMBER 2025**	
note: to alternate seminars in orthodontics and journal club for the entire rotation		

ORTH 5.3	**Rotation I/II/III (R5): October 2025 to September 2026**	**100 hours**
	Topics	
1	**Seminars in Orthodontics**	
2	**Journal Club**	
3	**ORAL PRESENTATION EXAMINATION – MAY 2025 & SEPTMBER 2026**	
note: to alternate seminars in orthodontics and journal club for the entire rotation		

Course title	**Advanced Orthodontics**
Course Code	ORTH6 ORTH6.21, ORTH6.22 (2nd year: R4)
Course director	**Hussain Alshatti, BChD, MdentSc, CAGS, FRCDC**
Teaching Staff	Kuwait Board of Orthodontics and Dentofacial Orthopedics staff and guest speakers
Venue	1088-KBO Auditorium room, Kuwait Board of Orthodontics and Dentofacial Orthopedics department, 1st Floor, Farwaniya Specialized Dental Centre, Ministry of Health, Kuwait
Time	1:00- 2:30 pm on Wedensday of 2nd year (R4)

Course/rotation	**ORTH6.21**	Rotation IV: Oct – Dec 2024
	ORTH6.22	Rotation V: Jan -May 2025
	ORTH6.23	Rotation VI: Jun-Sept 2025

Course Description	This is a course offered to the residents of the Kuwait Board of Orthodontics and Dentofacial Orthopedics (KBO) during their 2nd year in the program (R4). The course is divided into 3 rotations covering a variety of topics including Orthognathic surgery, Sleep Disorders, Multidisciplinary management of the Orthodontic patient, Temporomandibular disorders, lingual Orthodontics, Technological breakthroughs including indirect bonding, aligners and 3D printing.
Course Goal	The goal of this course is to equip the residents with the knowledge and tools to understand and apply advanced techniques in Orthodontics in a team-based approach to manage complex and multidisciplinary cases in children and adults.

Course Evaluation

Each rotation is evaluated and graded independently and separately. In case of an unsuccessful attempt to pass the rotation, the format of the remediation is determined by the course director.

Total number of hours	**62 hours**
○ **ORTH6.21**	○ 19 hours
▪ Quiz	20%
▪ End of rotation written exam	80%
○ **ORTH6.22**	○ 27 hours
▪ Quiz	20%
▪ End of rotation written exam	80%
○ **ORTH6.23**	○ 19 hours
▪ Quiz	20%
▪ End of rotation written exam	80%

Communication

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Course director email**:** sa.alajmi@moh.gov.kw

Recommended readings/resources

1. Proffit W, Fields H, Larson B, Sarver D. Contemporary Orthodontics 6th edition. Mosby. 2018 (eBook ISBN: 9780323543880).
2. Graber L, Vig K, Huang G, Fleming P, Orthodontics Current Principles and Techniques 7th edition. Elsevier. 2022 (eBook ISBN: 9780323778602).
3. Eliades T, Brantley W. Orthodontic Applications of Biomaterials: A Clinical Guide. 1st edition. Elsevier. 2016 (eBook ISBN: 9780081003992).
4. Nanda R, Uribe F, Yadav S. Temporary Anchorage Devices in Orthodontics 2nd edition. Elsevier. 2019 (eBook ISBN: 9780323609326).
5. Various articles from the literature.
6. Weichmann, D. WIN lingual handbook.

ORTH 6.21 Rotation IV: Oct-Dec 2024 19 hours

"Orthognathic surgery: Combined Surgical and Orthodontic treatment"

Lecture and Learning Objectives

1 Orthognathic surgery in Orthodontics

a. Overview of the history of orthognathic surgery.
b. Discuss the envelope of discrepancy.
c. Indications of orthognathic surgery.
d. Discuss facial harmony and esthetics.
e. Differentiate the borderline orthognathic cases.
f. Compare and contrast camouflage vs. surgery cases.
g. Address extraction technique in camouflage cases.

2 Contemporary surgical techniques

a. Discuss types of mandibular surgery including TMJ.
b. Discuss types of maxillary surgery.
c. Explain dentialveolar surgery.
d. Overview of distraction osteogenesis.
e. Overview of adjunctive facial surgeries:
    a. Genioplasty.
    b. Rhinoplasty.
    c. Lip procedures.

3 Special considerations and hierarchy of stability in Orthognathic surgery

a. Learn how to decide on the timing of surgery.
b. Understand the role of growth in orthognathic surgical correction.
c. How to address TMD's in orthognathic cases.
d. Recognize and analyze the interplay between vertical and sagittal correction.
e. Discuss the hierarchy of stability of different types of orthognathic surgeries.

4 The interplay of Orthodontics and Surgery in managing Orthognathic cases

a. Overview of the diagnostic tools required for orthognathic cases.
b. Discuss the work up process of orthognathic cases.
c. Explain the importance of surgical prediction (VTO) and how to carry it.
d. Analyze the following stages:
    a. Pre-surgical orthodontics.
    b. Surgical considerations the orthodontists should be aware of.
    c. Post-surgical orthodontics.

5 Orthognathic management of Sagittal skeletal deformity

a. Overview of the clinical and radiographic presentation.
b. Recognize the indications of orthognathic intervention.
c. Discuss the pre-surgical orthodontic decompensation.
d. Be familiar with model surgical planning.
e. Overview of the surgical procedure to address Class II and Class III.
f. Post-surgical orthodontics.

6 Orthognathic management of asymmetry and transverse skeletal deformity

a. Overview of the clinical and radiographic presentation.
b. Recognize the indications of orthognathic intervention.
c. Discuss the pre-surgical orthodontic decompensation.
d. Be familiar with model surgical planning.
e. Overview of the surgical procedures involved.
f. Post-surgical orthodontics.

7 **Orthognathic management of Vertical skeletal deformity**

a. Overview of the clinical and radiographic presentation.
b. Recognize the indications of orthognathic intervention.
c. Discuss the pre-surgical orthodontic decompensation.
d. Be familiar with model surgical planning.
e. Overview of the surgical procedures involved.
f. Post-surgical orthodontics.

8 **Orthognathic management of Temporomandibular Disorders**

a. Overview of the anatomy of the Temporomandibular joint.
b. Be familiar with the disorders of the TMJ requiring surgical correction.
c. Be familiar with the presentation and clinical symptoms of TMD's.
d. Learn how to write a proper referral to the TMJ surgeon.
e. Understand the orthodontist role in the management of TMD's.

9 **3D Surgical planning I**

a. Understand the process of Cephalometric radiograph to profile superimposition.
b. Understand how to insert virtual treatment objectives.
c. Carry out a surgical multiple simulation for a Class II skeletal malocclusion.
f. Be able to perform orthodontic decompensation using Dolphin.

10 **3D Surgical planning II**

a. Carry out multiple surgical simulations for a Class III skeletal malocclusion.
b. Be able to perform and simulate soft tissue changes.
c. Be able to fine tune profile changes.
d. Perform different types of genioplasty.

11 **Make up session.**

12 **Make up session.**

13 **End of rotation exam.**

ORTH 6.22 Rotation V: Jan-May 2025 27 hours

"Multidisciplinary management of the Orthodontic patient"

Lecture and Learning Objectives

1 Periodontal management of the Orthodontic patient I

a. Overview of periodontal anatomy.
b. Overview of periodontal disease and classification.
c. Learn how to screen for periodontal disease in orthodontic patients.
d. The impact of periodontal disease on orthodontic treatment.
e. Understand the implications of malocclusion on the periodontal condition.
f. Discuss the adjunctive orthodontic treatment of periodontal patients.

2 Periodontal management of the Orthodontic patient II

a. Be familiar with the periodontal intervention prior to orthodontic treatment:
    a. Mucogingival problems.
    b. Osseus surgery.
    c. Gingivectomy.
    d. Black triangles (insufficient interdental papilla).
b. Periodontal considerations in the management of impacted teeth:
    a. Open vs Closed exposure.
c. Understand the concepts of:
    a. Forced eruption.
    b. Corticotomy.
    c. Frenectomy.
    d. Circumferential Supra-crestal Fiberotomy (CSF).

3 Temporary anchorage devices (TAD's) in Orthodontics I

a. Overview of the development of TAD's.
b. Discuss the types of TAD's available.
c. Address the different uses of TAD's in Orthodontics.
d. Learn about the workflow of placing TAD's.
e. Understand the advantages and disadvantages.
f. Learn how to address side effects.

4 Temporary anchorage devices (TAD's) in Orthodontics II

a. Overview of the development of TAD's.
b. Discuss the types of TAD's available.
c. Address the different uses of TAD's in Orthodontics.
d. Learn about the workflow of placing TAD's.
e. Understand the advantages and disadvantages.
f. Learn how to address side effects.

5 Maxillary Assisted Rapid Palatal Expansion (MARPE) in Orthodontics

a. Overview of the development of MARPE.
b. Rationale and theory of MARPE development.
c. Indications, advantages and disadvantages of MARPE.
d. How to design and insert MARPE.
e. Understand MARPE protocol.
f. Be familiar with side effects and how to manage it.

6 Typodont Lab session; TAD application

a. How to properly select a TAD's.
b. How to write a request for TAD purchase.
c. How to insert and remove TAD.
d. Learn about the different types of drivers and their manipulation.

7 **Prosthodontic considerations in Orthodontics**

a. Discuss the importance of treatment planning of Multidisciplinary cases.
b. Understand the following concepts:
    a. Sequence of treatment.
    b. Space requirement.
    c. Vertical dimension of occlusion.
    d. Occlusal guidance schemes.
c. Learn the different options to address missing teeth.
d. Learn the different options to address malformed teeth.

8 **Endodontic considerations in Orthodontics**

a. Overview of endodontic treatment indications.
b. Discuss dental trauma types and implications.
c. Understand the orthodontist's role in managing dental trauma.
d. Address the prognosis of endodontically treated and traumatized teeth during Orthodontic treatment.

9 **Lingual Orthodontics I**

a. Overview of the history and development of Lingual braces.
b. Address the types of Lingual appliances.
c. Discuss the advantages and disadvantages of Lingual braces.
d. Analyze the treatment approach using lingual appliances.
e. How to finish with lingual braces.

10 **Lingual Orthodontics II**

a. Overview of the history and development of Lingual braces.
b. Address the types of Lingual appliances.
c. Discuss the advantages and disadvantages of Lingual braces.
d. Analyze the treatment approach using lingual appliances.
e. How to finish with lingual braces.

11 **Temporomandibular Disorders (TMD's)**

a. Overview of the anatomy of the temporomandibular joint.
b. Discuss the different types of diseases that affect the TMJ.
    a. Neuromuscular Disorders.
    b. Internal derangements.
c. Learn how to diagnose TMD's:
    a. Clinical diagnosis.
    b. Radiographic diagnosis.
d. Discuss and understand the management of TMD's:
    a. Neuromuscular disorders.
    b. Internal derangements.

12 **Temporomandibular Disorders (TMD's)**

e. Overview of the anatomy of the temporomandibular joint.
f. Discuss the different types of diseases that affect the TMJ.
    a. Neuromuscular Disorders.
    b. Internal derangements.
g. Learn how to diagnose TMD's:
    a. Clinical diagnosis.
    b. Radiographic diagnosis.
h. Discuss and understand the management of TMD's:
    a. Neuromuscular disorders.
    b. Internal derangements.

13 **Sleep disordered breathing (SDB) in Children**

a. Define sleep disordered breathing.
b. Be familiar with the prevalence of SDB.
c. Discuss the causes and risk factors of SDB in Children.
d. Overview on how to screen and diagnose SDB's in children.

e. Treatment approach of SDB's Children.

Learn how to properly refer children to a sleep specialist.

14 **Orthodontic management of Obstructive Sleep apnea (OSA) I**

a. Overview of prevalence of OSA among orthodontic patients
b. How to screen for OSA.
c. Understand the relationship between OSA and orthodontic skeletal and dental malocclusion.
d. Be familiar with the clinical presentation of OSA.
e. Learn how to orthodontically manage OSA in:
    a. Growing patients.
    b. Non-growing patients.
f. Learn how to design and manipulate mandibular advancement appliances.
f. Be well versed in how to manage the side effects of sleep appliances.

15 **Orthodontic management of Obstructive Sleep apnea (OSA) II**

a. Overview of prevalence of OSA among orthodontic patients.
b. How to screen for OSA.
c. Understand the relationship between OSA and orthodontic skeletal and dental malocclusion.
d. Be familiar with the clinical presentation of OSA.
e. Learn how to orthodontically manage OSA in:
    a. Growing patients.
    b. Non-growing patients.
f. Learn how to design and manipulate mandibular advancement appliances.
g. Be well versed in how to manage the side effects of sleep appliances.

16 **Retainers from design to application**

a. Overview of the history of orthodontic retainers.
b. Discuss the types of orthodontic retainers:
    a. Fixed orthodontic retainers.
    b. Removable orthodontic retainers.
    c. Splints.
    d. Positioners.
c. Compare and contrast the different types of retainers (Advantages and Disadvantages).
d. Learn how to select and prescribe a retainer.
g. Be able to modify and adjust retainers.

17 **Practical simulation lab session: Retainer fabrication**

a. Overview of the materials used to fabricate fixed retainers.
b. How to design and fabricate fixed retainers.
c. Identify methods of bonding of retainers (Direct vs Indirect).
d. How to fabricate and adjust a Hawley retainer.
e. How to fabricate and adjust an Essix® retainer.

18 **End of rotation exam.**

ORTH 6.23 Rotation VI: Jun-Sept 2025 19 hours

"Aligners and 3D technological advances"

Lecture and Learning Objectives

1 Introduction to Clear aligner therapy (CAT)

a. Overview of the history of clear aligner therapy.
b. The technology behind CAT.
c. Understand the advantages and disadvantages of CAT.
d. Be familiar with the different types of clear aligner therapy in the market.
e. Discuss the advantages and disadvantages of different types of aligners.

2 Clear aligners treatment protocols

a. Overview of the available built-in protocols of aligner therapy.
b. How to design a customized case-based protocol of management.
c. Learn tips and tricks in designing the digital set up and treatment.
d. Discuss methods to overcome challenges and avoid round tripping.

3 Designing Forces and Anchorage in a thermoplastic world

a. Learn how to apply forces in a plastic system.
b. Understand the level and rate of forces delivered by aligners.
c. Analyze different types of orthodontic tooth movements in aligners.
d. Learn how to design and apply anchorage in CAT.
e. How to avoid failure and plan for alternatives.

4 Aligner Biomechanics; Vertical challenges

a. Discuss management of deep bites.
b. Discuss management of open bites.
c. Discuss management asymmetry.
d. Analyze biomechanical force vectors and anchorage design in each scenario.
e. The use of auxiliaries in CAT.

5 Aligner Biomechanics; Sagittal challenges

a. Discuss management of Class II malocclusion (non-growing patients).
b. Discuss management of Class III malocclusion (non-growing patients).
c. Analyze biomechanical force vectors and anchorage design in each scenario.
d. The use of auxiliaries in CAT.

6 Aligner Biomechanics; The growing patient

a. Discuss management of sagittal challenges in growing patients using aligners.
b. Understand the concept of eruption compensation.
c. Understand the limitations of CAT use in growing patients.

7 Aligner Biomechanics; Transverse challenges

a. Discuss management of transverse I.
b. Understand the concept of eruption compensation.

Understand the limitations of CAT use in growing patients.

8 Aligners and Orthognathic surgery

a. Discuss management of sagittal challenges in growing patients using aligners.
b. Understand the concept of eruption compensation.

Understand the limitations of CAT use in growing patients.

9 Current trends and practices in Orthodontics

a. Overview of the trending biomechanical concepts:
    a. MEAW technique.
    b. 3D printing of metal appliances.
    c. Infrazygomatic TAD's.
    d. Self-ligating brackets and systems.

10 3D digital technology and Orthodontics

a. Overview of the technological breakthroughs in Orthodontics.

b. Be familiar with 3D diagnosis and treatment planning.
c. Discuss indirect bonding and digital set up in Orthodontics.
d. Discuss 3D printing of brackets.
e. Review the workflow of printed brackets and customized treatment.

11 **3D digital platform for Orthodontic Diagnosis and treatment "Titan"**

a. Overview of 3D scanners and printers.
b. Be familiar with 3D diagnosis and treatment planning.
c. Discuss digital set up in Orthodontics "Titan".
d. Discuss 3D printing of models.
e. Review the workflow of in-house aligners.
f. The concept of tunnel attachments and their applications.

12 **Make up session.**

13 **End of rotation review session.**

3 Research projects and opportunities

It is one of our mission goals to foster an inquisitive environment that will encourage residents to practice orthodontics based on evidence and seek answers through research. We highly encourage residents to pursue research opportunities and formulate ideas and questions that can be investigated in different forms. We also support this pursuit by creating an environment that provides access to the tools necessary to facilitate this process. Different paths to pursue research opportunities are available including but not limited to:

a. Formulating a research question/idea specific to the resident's interest and carrying out the investigation under the supervision of a KBO approved principal investigator, PI. The resident is encouraged to finish the project and create a publishable manuscript.
b. Joining an on-going research project within the KBO program under the guidance of a faculty member. The resident is encouraged to finish the project and create a publishable manuscript.
c. Collaborating on on-going projects with other institutions such as, Kuwait University, other residency programs within KIMS, and international institutions, to serve a specific task within the research that can be translated in a publishable form.

All projects must obtain an ethical approval from the institution review board, IRB, of the Ministry of Health, MOH. Research related documentations should be complete and archived electronically within the KBO database. Residents are encouraged to discuss grants/funding opportunities with their PIs; KFAS, Kuwait Foundation of Advancement of Sciences, is a good example of local funding institutions. The KBO adopts the AJODO-American Journal of Orthodontics and Dentofacial Orthopedics, format of manuscript submission. Residents are responsible for following guidelines apparent on: AJODO Author information

4 KBO clinical curriculum

As a KIMS accredited and MOH affiliated residency program, we place heavy emphasis on creating an environment that supports the highest standards of clinical training and professional health care practice. A substantial amount of the training will be spent in a clinical based setting which resides on the 1st floor of Farwaniya Specialty Dental Center, MOH. This multidisciplinary center provides a unique environment hosting all dental specialties including the Cleft, Craniofacial & Special Care unit, the Kuwait Board of Pediatric Dentistry program, and the School Oral Health Program (SOHP). Additionally, it is within a walking distance from Farwaniya Hospital; this facilitates our pathway of interaction and collaboration with other medical professionals including the faculty staff and residents of the Kuwait Board of Pediatrics as well as ENT specialists. Each resident will be assigned a KBO clinic during their 3 years of training. Whilst individual residents will vary in their abilities and progress to develop and achieve the appropriate clinical knowledge, skills, and attitudes, each is responsible for being well versed with our clinical guidelines to stay on track with their clinical requirements and assessments. For clinical enquiries, residents should report to their clinical faculty supervisor and the KBO clinic director. All communications regarding patients should be completed via email. Residents will be assigned to clinical teams/partners; each team should include one resident from each residency year/level (R3, R4, R5). Team members are expected to support, guide, and help each other.

a. KBO Clinics

As mentioned previously, KBO clinics are located on the 1st floor of Farwaniya specialty Dental Center. The administrative employment status of the practicing orthodontists and residents follows the rules and guidelines of the dental center as per MOH rules and regulations, and all related paperwork should be filled accordingly. Each resident will be assigned to a specific clinic during their 3 years of training and will be paired with a dental assistant if available. Our clinics are very well equipped with high quality dental and technological equipment, tools, and instruments. We offer an in-house intra-oral scanner,

intra-oral radiographs machines, Cephalometric and panoramic digital X-rays machine, and a CBCT unit. Additionally, we collaborate and work with an in-house lab that offers a 3D model scanner and a 3D printer. In addition, we will have opportunities to work with outside labs locally, regionally, and internationally. We support and encourage students to explore the latest advances in 3D orthodontics and Dentistry in general; in case of out-sourcing orthodontic work to an external lab, the clinical supervisors and KBO clinic director should be informed to obtain approval and all the necessary documentation filled and signed after consenting the patient and their legal guardian. The residents and all faculty involved in KBO clinic teaching and supervision should be familiar with KBO clinic manual.

Case load:

Each resident is encouraged to have a total of 65-70 cases to be able to cover the different types of clinical cases mentioned below. The minimum number of initial cases should range between 55-60 while the number of transfer cases (within KBO) should not exceed 15-20%.

Types of clinical cases:

Each resident is highly encouraged to have a variety of cases to ensure a broad experience in managing various orthodontics problems including but not limited to:

- Interceptive orthodontic treatment.
- Space maintenance and regaining.
- Growth modification (Fixed and removable).
- Various dental impactions.
- Class I malocclusion treated with extraction or/and non-extraction.
- Class II malocclusion treated with extraction or/and non-extraction.
- Class III malocclusion treated with extraction or/and non-extraction.
- Transverse and vertical discrepancy.
- Multidisciplinary treatment approach.
- Combined orthodontic and orthognathic surgery treatment.
- Orthodontic malocclusion of Craniofacial syndromes (Clef lip/palate).
- Cases involving the use of Temporary anchorage devices
- Clear aligner cases and inhouse aligners

Cleft, Craniofacial & Special Care Unit:

The Kuwait Board of Orthodontics clinics are located on the same floor and next door to the Cleft, Craniofacial & Special Care unit. The residents will have the unique experience of being exposed to these patients. Furthermore, each resident will be attending craniofacial meetings and observing patients with cleft lip & palate undergoing presurgical infants orthopedics by craniofacial orthodontist during their residency in R4 and R5 depending on case availability. In addition, each resident will be assigned a certain number of cases (3-5) from the Cleft, Craniofacial & Special Care unit. These cases will be selected by the supervising craniofacial orthodontist faculty and may include:

- Phase I treatment of expansion, dentofacial orthopedics, guidance of eruption and interceptive orthodontics prior to alveolar bone grafts.
- Phase II treatment of comprehensive orthodontics or relapse cases.
- Pre-surgical orthodontics prior to orthognathic surgery.
- Other Craniofacial anomalies cases.

KBO residents will also be exposed to the routine examination and treatment planning protocols of the Cleft, Craniofacial & Special Care units. All treatments will be carried out under the direct supervision of the assigned craniofacial orthodontic faculty.

Clinical training faculty and staff

Our clinical training program includes highly competent, well experienced, and ethically professional full time and part time clinical faculty members. Our clinical faculty members are board-certified, fully licensed to practice in the state of Kuwait, and hold multiple international and national affiliations including KIMS, MOH, and Kuwait University. Both full time and part time clinical members can supervise clinical cases and the residents are highly encouraged to work with all available staff to gain exposure and build their own orthodontic skills and techniques in a various treatment modalities and approaches. In addition, we work in same vicinity as the Cleft, Craniofacial & Special Care unit and have board certified craniofacial orthodontists as full-time clinical faculty

members to supervise the multidisciplinary care of syndromic patients focusing on cleft lip and palate management in the growing child. A dual trained periodontist/orthodontist will also be a part-time faculty member to supervise and guide residents in the management of perio-ortho cases. Residents have access to an Oral and Maxillofacial Radiologist to aid in diagnosis and treatment planning, especially in cases involving cone-beam computed tomography. Each resident is required to keep a log of their clinical cases according to the patients list template. It is important to emphasize that each clinic should have their KBO clinical statistical form (appendix KBO3.3) completed properly in a timely manner, reviewed and signed by the resident, clinic director and program director on a monthly basis.

KBO clinic director

Each year there will be a specific clinic director that oversees the general structure and flow of the KBO clinics. New cases will be assigned to the residents by the clinic director according to a needs assessment analysis. Residents are encouraged to voice out and communicate concerns or needs to the clinic director as soon as possible so it can be addressed appropriately.

KBO timetable (Class of 2027)

The KBO timetable/schedule of the program is reviewed and released on an annual basis by the academic committee. Due to the Unpredictable nature of some national holidays, the residents are expected to be familiar with the daily calendar that is released and shared digitally. Each academic year is divided into 3 rotations (Appendix 3).

1st year (R3)

Rotation 1:

In the 1st rotation, our KBO residents will be attending their basic sciences courses (appendix 1) along with the residents of the Kuwait Board of Endodontics and Kuwait Board of Pediatric Dentistry programs. All related enquiries should be communicated to the course directors via email. In addition, the residents will also be starting their first orthodontic course, ORTH0, and their clinical duties. An end of rotation review will be completed for each resident as part of their progress assessment at the end of this rotation.

Rotation 2:

After the successful completion of rotation 1, the residents can proceed to rotation 2 of R3. In this rotation, the residents will start covering orthodontic core courses as well as their clinical duties. An end of rotation review will be completed for each resident as part of their progress assessment at the end of this rotation.

Rotation 3:

After the successful completion of rotation 2, the residents can proceed to rotation 3 of R3. In this rotation, the residents will continue their orthodontic core courses as well as their clinical duties. An Interim training evaluation review will be completed for each resident as part of their assessment (ITER).

2nd year (R4)

Rotation 1:

After the successful completion of all rotations of R3, the residents can proceed to rotation 1 of R4. In this rotation, the residents will continue covering orthodontic core courses as well as their clinical duties. An end of rotation review will be completed for each resident as part of their progress assessment at the end of this rotation.

Rotation 2:

After the successful completion of rotation 1, the residents can proceed to rotation 2 of R4. In this rotation, the residents will continue covering orthodontic core courses as well as their clinical duties. An end of rotation review will be completed for each resident as part of their progress assessment at the end of this rotation.

Rotation 3:

After the successful completion of rotation 2, the residents can proceed to last rotation of R4. In this rotation, the residents will continue their orthodontic core courses as mentioned on page 24 as well as their clinical duties. An Interim training evaluation review will be completed for each resident as part of their assessment (ITER).

3rd year (R5)

Rotation 1:

After the successful completion of R4, the residents can proceed to the first rotation of their final year. In this rotation, the residents will continue their orthodontic core courses as well as their clinical duties. An end of rotation review will be completed for each resident as part of their progress assessment at the end of this rotation.

Rotation 2:

After the successful completion of rotation 1, the residents can proceed to rotation 2 of R5. In this rotation, the residents will continue their orthodontic core courses as well as their clinical duties. An end of rotation review will be completed for each resident as part of their progress assessment at the end of this rotation.

Rotation 3:

After the successful completion of rotation 2, the residents can proceed to the final rotation of their final year. After the successful completion of rotation 2, the residents can proceed to last rotation of R5. In this rotation, the residents will finalize their orthodontic core courses and their clinical duties. A Final in training evaluation review will be completed for each resident as part of their final year assessment (FITER).

The KBO process of assessment, evaluation, and examination

a. Overview

The Kuwait Board of Orthodontics and Dentofacial Orthopedics (KBO) program has incorporated an assessment system that utilizes competencies including written examinations, context-based multiple-choice questions (MCQ's), structured oral examinations (SOE), Literature Review Assessment (LSA), Clinical Case Presentation and Critique, Work Based Assessments (WBA), ITER and FITER's. These tools are to encourage resident's self-reflection, as well as assessment of the resident's clinical reasoning, judgment, and decision-making skills. It is considered a crucial part of developing competent professionals. The concept of competence recognizes that the resident will go through several defined stages named Novice, Beginner, Competent, Proficient and Expert as explained by Dreyfus and Dreyfus (1980). The following table summarizes the definition of each stage. Please note that the CAN-MED system (Appendix 2) will be incorporated in conjunction with these stages:

Novice	The novice is the most primitive of learners, heavily dependent on faculty and they are rule followers.
Beginner	Beginners are slightly more accurate and faster than novices, still depend heavily on faculty and this makes them at least inconsistent rule followers.
Competent	Competence is the third stage of professional growth and is marked by independence. They are able to make choices, understand application, respond appropriately to a reasonable range of variation, and recognize limitations.
Proficient	The next level of growth is called proficiency, and this includes a further reorganization of what is known and what can be accomplished and an active experimentation with matching one's interests and skill set to alternative environments.
Expert	The final reintegration is called mastery or expertise. It is reached after years of dental practice, where the dentist uses the technical aspects of the profession and integrate his/her efforts around patient care.

b. Tools and Methods of Assessment

In the following table, a detailed plan of the KBO assessment tools is provided.

Assessment tool	Purpose, method of application, remediation
Clinical Skills Evaluation	1) **<u>Work Based Assessment (WBA)</u>** ○ **Purpose:** to assess and measure the trainee's clinical knowledge, practical skills, and professional management in a range of orthodontic procedures in accordance with the CAN-MED key competencies (Appendix 2). ○ **Method of application:** Work based assessment will be completed following the guidelines and templates provided (Appendix 4). Two types of WBA are required to completed by the residents in the following order, a minimum of 2 formative assessments followed by a minimum of 1 summative assessment. Areas of assessment include data gathering and diagnosis, treatment objectives and planning, treatment implementation and management, critical analysis, and outcome assessment. Completion of the WBA's in a timely manner is mandatory for residents to progress to the next rotation/year of their residency training. These assessments can only be supervised by full time faculty members. In case the resident is interested in performing a summative, the faculty on clinic floor should be emailed ahead of time to manage their clinic schedule. Necessary documentation should be performed and signed on the same day of completion of the procedure.

The definition of each WBA and the forms are provided in appendix 4.

- **Success, failure, and remediation:** In order to pass the WBA successfully, the minimum score needed is 3a for formative assessments, and 3a for summative assessments. In case of 2 failed summative attempts, the resident is allowed 2 more summative and the average score will be counted as a remediation score. If the resident fails remediation opportunity, they will not be able to proceed to the next rotation (KIMS rules and regulations apply) until further requirements decided and set by the academic committee are met.

2) **<u>Case based discussion (CBD) / Mock Board exam:</u>**

a. R3 (1st year of residency):

- Residents are expected to maintain a thorough documentation of all their cases in accordance with the KBO clinical forms and templates (Appendix 5).
- At the end of R3, comprehensive KBO case write up forms of **<u>6 initial cases</u>** should be submitted via email.
- Evaluation criteria for case writeup:
  - Compliance with template and guidelines.
  - Appropriateness of findings and diagnosis.
  - Quality of the records.

b. R4 (2nd year of residency):

- Residents are expected to maintain a thorough documentation of all their cases in accordance with the KBO clinical forms and templates (Appendix 5).

	- At the end of R4, comprehensive KBO case write up forms of **6 progress cases** should be submitted via email to the program director and assistant program director. - Evaluation criteria for case writeup: ▪ Compliance with template and guidelines. ▪ Appropriateness of findings and diagnosis. ▪ Quality of the records. **c. R5 (3rd year of residency):** - Residents are expected to maintain a thorough documentation of all their cases in accordance with the KBO clinical forms and templates (Appendix 5). - At the end of R5, comprehensive KBO case write up forms of **6 final cases** should be submitted via email to the program director and assistant program director. - Evaluation criteria for case writeup: ▪ Compliance with template and guidelines. ▪ Appropriateness of findings and diagnosis. ▪ Quality of the records. ○ **General criteria for case selection:** ▪ Class I malocclusion with extraction. ▪ Class II malocclusion with extraction. ▪ Class II malocclusion without extraction. ▪ Class III malocclusion. ▪ Malocclusion with transverse discrepancy. ▪ Malocclusion with vertical discrepancy. ▪ Combined Orthodontic/Orthognathic surgery. ○ **Criteria of Finished Cases:** Finished cases that satisfy the criteria below should be submitted via email to the program director and assistant program director in a

	timely manner following the provided templates (Appendix 6). ▪ A finished case is defined as a case, supervised by a faculty member, but treated from start to finish (debond) by the resident in the clinical teaching practice facility during their training period. ▪ Transferred cases can be considered as finished cases if the applicant/resident has completed more than 70% of the clinical work performed, given that initial records are available. An official transform form is required to be submitted in addition to the KBO long case write up (Appendix 6). ▪ A total of 6 finished cases with their initial, progress, and final records are required. Each case should be submitted using a standardized method via completing the forms provided. Final records include extra-oral and intra-oral photos, a panoramic radiograph, lateral cephalometric radiograph, CBCT if indicated, study models (digitally printed models accepted), and intra-oral radiographs if needed. 3) **Structured Oral Exam (SOE): 2** Unseen cases will be presented to the residents as part to measure and evaluate their ability to perform diagnosis, establishing treatment objectives and planning, treatment implementation and management, critical analysis, and outcome assessment. 4) **Clinical case seminars assessments:** In this exercise, residents are expected to present cases during different time

	points of their treatment in a group setting to the faculty and residents of the program. Each case is to be presented at least for initial, progress (1year), and final (debond) using the KBO case presentation template.
Theoretical knowledge Assessment	1) **In course assessment:** multiple based questions, written assignments, and examinations; details of each follows the course syllabi/curriculum provided. For in course assessment enquiries and details, course director should be contacted. 2) **Literature review assessment:** residents are to present a literature review of a research paper in an aim to assess the ability to breakdown and critique the literature. This will be done using a detailed and structured template and residents will then be assessed and examined by supervisors using a structured evaluation form.
Interim (ITER) and Final (FITER) In-Training Evaluation Reports	**ITERs:** In training evaluation reports aim to highlight the strengths, identify the weaknesses, and aid in developing a plan of action for improvement. Program director and full time faculty members should give feedback to the residents at the end of each quarter. **FITERs:** Final in training evaluation report. In addition to approval of completion of all clinical cases and clinical requirements by the local committee, the resident's performance will be evaluated by the program director and joint staff (at least two supervisors) and approved by the chairman of the external committee accordingly. Moreover, R5 residents must get more than 70% during the final year (in a minimum of three quarterly evaluations), in addition to the approval of completion of the clinical requirements by the clinic director. FITER is also prepared by the program's directors for each resident at the end of his/her

	final year in residency (R5). The FITER should be completed by the program director of which the trainee is based for their final 6 months and then submitted to the chair of the external committee.
Quality improvement project (Audit)	In this exercise, residents are expected to participate in a quality improvement developmental activity related to the work environment. Senior residents are expected to apply the knowledge gained from their courses, to identify an "issue or a problem" in their clinical environment, select a model to follow, design a solution, implement it, and evaluate the outcome of their intervention.
KBO Exit Exam	Upon successful completion of all requirements of the program and passing the Final Exit Examination, the candidate shall receive a Certificate of Completion of the Kuwait Board of Orthodontics and Dentofacial Orthopedics issued by the Kuwait Institute for Medical Specialization.

c. Examinations conducted during KBO residency:

	Didactic	Clinical
R3: 1st year	**Rotation1:** • Basic Sciences Examination • ORTH0: Introduction to Orthodontics **Rotation2:** • ORTH1: Craniofacial growth and development • ORTH2: Orthodontic Diagnosis and Treatment Planning • ORTH3: Biomechanics, Biomaterials and Appliances of Orthodontics **Rotation3:** • ORTH2: Orthodontic Diagnosis and Treatment Planning • ORTH3: Biomechanics, Biomaterials and Appliances of Orthodontics **End of year examination:** • Structured Oral Examination – 6 seen cases as part of the mock board exam and 2 unseen cases.	**Work based assessment:** (2 formative+1 summative) **Diagnosis and Data Collection** 1) History taking, examination and diagnosis. 2) Impression taking 3) Clinical Photography 4) Cephalometric analysis
R4: 2nd year	**Rotation1:** • ORTH6: Advanced Orthodontics **Rotation2:** • ORTH6: Advanced Orthodontics **Rotation3:** • ORTH6: Advanced Orthodontics **End of year examination:** • Structured Oral Examination – 6 seen progress cases as part of the mock board exam and 3 unseen cases.	**Work based assessment:** (2 formative+1 summative) **Treatment Planning** 1) Treatment plan and alternatives formulation **Management of Orthodontic Appliance** 1) Obtaining Consent prior to Fixed Appliance Therapy 2) Placement of fixed appliance

		3) Separator Placement 4) Fitting a functional appliance 5) Adjustment of Orthodontic Appliance
R5: 3rd year	**End of year examination:** • Structured Oral Examination – 6 seen progress cases as part of the mock board exam and 3 unseen cases.	**Work based assessment:** (2 formative+1 summative) **Management of Orthodontic appliance** 1) Adjustment of fixed orthodontic 2) Finishing and detailing **Treatment completion and retention** 1) Debond 2) Delivery of removable retainer 3) Delivery of fixed retainer

d. KBO certification exam (Exit exam):

The final year examinations (R3-R5) are organized by the faculty, and postgraduate students may sit this examination following completion of all the clinical and academic requirements of the year and up to that date. The postgraduate student may not progress to the upcoming year unless they pass the final year examination. Students who fail the final year examination would be presented with one chance to re-sit, and if they fail the re-sit a committee will decide on the students' eligibility to repeat the year or be dismissed from the program. The final exit examination shall consist of the following components:

1) Written Examination – MCQ's
2) Structured Oral Examination - SOE

To be eligible to sit the exit examination (KBO certification examination) one must achieve a successful FITER. For further information with regards to examination registration, attempts and appeals please refer to the Manual for Policies for Postgraduate Medical Education (policy and procedure on examination for residency and fellowship programs).

Evaluation, Progress, and Feedback

Evaluating the progress and effectiveness of a residency program requires a comprehensive and multifaceted approach that incorporates multiple methods of evaluation and feedback from multiple stakeholders. To achieve optimal outcomes and ensure sustainable progress at KBO, we aim to put continuous evaluation and feedback tools into effect through multiple channels. This process will be supervised and carried out by the program the academic and the post-graduate committees; results will be reported to KIMS per needed. Our key measurable outcomes include:

1. Evaluating resident performance: This can be done through regular evaluations and assessments of their clinical knowledge, skills, and professionalism. Objective evaluations may include standardized exams, clinical evaluations, and 360-degree evaluations that solicit feedback from faculty, peers, and patients.
2. Monitoring program outcomes: including patient outcomes, resident performance, board exam pass rates, and research productivity. Monitoring these outcomes can help identify areas for improvement and measure the success of the program in achieving its goals.
3. Assessing resident satisfaction through surveys and other feedback mechanisms to determine how well the program is meeting the needs and expectations of its residents. This feedback can be used to identify areas for improvement and make changes to improve the program. Examples of this include residents' meetings and exit interview.
4. Conducting program evaluations to assess the overall effectiveness of the residency program. This may involve reviewing program goals, policies and procedures, and curriculum, and gathering feedback from faculty, residents, and other stakeholders. The post-graduate committee meetings will ensure this goal is met.
5. Pursuing accreditation: establishing processes and structure for our residency program to ensure that they meet established universal standards. Establishing and maintaining an accreditation status is a goal within our 5-year plan as testimony of program quality and effectiveness.

Evaluation forms:

a. Tutor evaluation

At the end of each rotation, all faculty members (clinical tutors, lecturers, and guest speakers) should be evaluated using the tutor evaluation online form. All residents are required to complete it in a timely manner.

b. Course evaluations

At the end of each rotation, all courses should be evaluated using the course evaluation online form. All residents are required to complete it in a timely manner.

Audit:

Clinical audits are a quality improvement tool which aids in identifying areas of practice which require improvement when compared to accepted standards. This aims to highlight any areas needed to improve the quality of care for patients. It also ensures to reinforce the areas of adequate practice in a clinical and non-clinical setting. Therefore, residents will be required to complete an audit in an aim to assess current practice in relation to the set standards supported by policies and guidelines. A list of topics is to be presented by audit supervisors and members of staff. Should a resident decide to choose their own topic it must receive prior approval by the supervisor in charge of taking over the audit (Appendix 7).

Process of audits:

- A lecture will be presented to the residents in the Basic Sciences Course which aims to outline the process, use and application of audits. This lecture will also provide residents with the information needed to conduct their own audits following a set proposal and protocol framework.
- Residents are to have supervision throughout to ensure adequate mentoring in all stages of the process.

- Audit meetings with supervisors are to be recorded and documented using the 'record of research meeting' form (appendix .
- Presentations are to be completed at the proposal for audit stage and at the completion of each cycle.
- Presentation sessions are to be documented and evaluated by the supervisors and staff attending the sessions.
- Following completion of the audit a complete report must be submitted.
- Publishing the audits in local/ international journals is encouraged in addition to poster presentations in national and international conferences.

General timeline for audits:

Time point	Goal
Basic Sciences Course	Introduction to audits – lecture and assign audit topics to residents in same session.
R3 (Rotation 2)	Present proposal for audit.
R3 (Rotation 3)	Complete first audit cycle and Presentation of results and action plan.
R4 (Rotation 1)	Implementation of the action plan and completion of 1st cycle.
R4 (Rotation 2)	Presentation of the 1st cycle results and starting a second cycle.
R4 (Rotation 3)	Starting the 2nd cycle, implementing the action plan and completion of the 2nd cycle.
R5 (Rotation 1)	Submit the audit report and final presentation.

Resident's expectations, rules, and regulations

It's important for residents to be proactive in understanding and meeting the expectations of their program and specialty.

General resident's expectations

- Residents are obligated to attend KIMS orientation meetings and any resident specific meeting to be familiar with the rules and regulations of the institution.
- Each resident is expected to be familiar with the rules and regulations of the KIMS guidelines handbooks on their website.
- Residents are considered health care dental provider under the jurisdiction of Farwaniya Specialty Dental Center, Farwaniya Health Care Area Administration. All official documents concerning the resident should be kept in their files at Farwaniya Specialty Dental Center administration.
- A resident portfolio will be generated for each resident within the KBO to record their academic and contact information and monitor their progress.
- Each class should have a class representative that is responsible for the direct communication between the class members and the faculty/course director.
- Each senior class should elect a chief resident whose characters of conduct, duties and position description are outlined below:
    - Chief resident position is granted through election at the beginning of each rotation.
    - A new chief should be elected at the beginning of each rotation.
    - The chief resident and the chief resident elect should ensure a smooth transition between rotations.
    - Act as a liaison between residents and attending faculty members.
    - Facilitate communication and collaboration among residents.
    - Plan and coordinate educational conferences and training sessions.
    - Serve as a mentor and advisor to junior residents.
    - Ensure compliance with program requirements and accreditation standards.
    - Communicate resident schedules and rotations to the faculty.

- Manage administrative tasks, such as scheduling meetings and organizing case presentation schedule and sessions.
- Attend meetings with post-graduate committee.
- Collaborate with other chief residents and program coordinators to improve the residency program.

In course expectations

- The students are expected to attend, engage, and interact with the teaching staff during their class sessions.
- Mobile phones, and other electronic devices should be silenced during the sessions.
- The use of laptops and tablets for educational purposes are permitted.
- Students are expected to demonstrate punctuality, and professionalism in their interaction and communication with their teaching staff, faculty members, and colleagues.
- Residents are expected to prepare for the sessions in advance by completing the required readings, perform the assignments to their best knowledge, and prepare case presentations as required.
- Any form of plagiarism or cheating is NOT ACCEPTED, and the teaching faculty holds the write of refuting the assignment and failing the student in the assignment/rotation.

Communication

- All Class announcements will be sent through emails.
- Individual communications /enquiries **need to be through your email account.**

Policy of attendance

- Attendance to classes is mandatory.
- In case of an emergency, residents are expected to inform the course director via email, provide a written excuse of absence or leave to the program the administration personnel in the center, and report to KIMS. If the student is more than 15 minutes

late, the teaching staff is permitted to not allow them in. An excuse of absence/delay needs to be submitted to the course director.

Vacations

- National holidays are considered off according to the CSC, Civil Service Commission.
- Residents are obligated to follow KIMS rules and regulations when it comes to vacations and leaves.
- Each resident is allowed a total of 30 days per year of paid leave per KIMS guidelines.
- Residents should apply for a leave to the program director using the necessary form, KIMS leave application form. Leaves will be granted on a case-by-case basis.
- Vacation should not intersect with examinations, mandatory sessions, classes.
- Vacation duration should not exceed 15% of the rotation length.

Grade dispute and remediation policy

- In case of a grade disagreement and if the student decides to file for an appeal, it should be submitted within 24-36 hours from receiving the results.
- The grade dispute and appeal form should be filled by the residents and the reason of appeal should be clearly stated for why a question or a grade should be reviewed.
- The examination and appeal committee will decide on a case-by-case basis on the application and inform the student and the course director of the results within 2 weeks.
- For remediation, residents are given a single chance of remediation in case they achieve less than 60% of the total grade.
- KIMS rules and regulations apply to the remediation process: KIMS remediation policy
- The remediation exam format might be slightly different including short answers questions and/or essay questions; the format of the remediation attempt is the decision of the course director and program academic/examination committees.

Professional Development and Community-Based Health Advocacy

a. Professional development

At KBO, we highly encourage the residents to pursue professional development opportunities locally, regionally, and internationally. Each resident is responsible for maintaining a log of their continued education credit points (CE points) to be added to their resident's portfolios. We endorse the scientific content of several Orthodontic conferences including but not limited to:

- Saudi Orthodontic Society conferences and courses
  - Website: Saudi Orthodontic Society
- Saudi Commission for Health Specialty
  - Website: Saudi Commission for Health Specialty
- British Orthodontic Society conferences and courses:
  - Website: British Orthodontic Society
- American Association of Orthodontists conference and online courses:
  - Website: American Association of Orthodontists
- Charles Tweed international foundation for Orthodontic research and education:
  - Website: Tweed courses dates and application

In addition to Orthodontic specific courses, residents are required to maintain a valid certification of the following courses throughout their residency program:

- BLS: Basic Life Support course and accreditation
- ACLS: Advanced Cardiovascular Life Support course and accreditation

A copy of the certificates should be submitted to be added to the resident portfolio. It is the resident's duty to arrange for such training through an official accredited body such as Kuwait Dental Administration and Dasman Clinical Skills center, website: Dasman CSC.

b. Community-based Health Advocacy

As a healthcare provider, you will be a strong advocate for the health and wellbeing of your patients and communities. You will learn to identify and address social determinants of health, to promote health equity, and to advocate for policies and programs that improve the overall health of populations. Our program emphasizes the importance of social responsibility and community engagement in achieving health equity. We encourage our residents to seek, participate, organize, and host community-based outreach/awareness projects within and outside the training facility. In addition, we encourage our residents to work with other residency programs to expand our outreach and collaborate with other professionals to achieve an integrated approach of health care delivery and advocacy.

Resident wellness

Residency programs can be very demanding, with long hours, high stress, and a heavy workload. We plan to support our residents in managing the demands of their training while promoting their health and well-being. Our support can include a range of activities and initiatives, such as access to mentors, KIMS wellness office, mindfulness and stress-reduction activities, support groups, and education on topics related to healthy living. We recognize that taking care of the health and well-being of residents is essential for their success as well as the success of the program. By promoting resident wellness, we can reduce burnout, improve job satisfaction, and support residents in achieving their goals as they progress through their training and beyond. By the end of each month, a wellness report will be completed by the program director and the resident. This report is added to the resident portfolio and a copy should be retained with the resident. For further explanation, refer to KIMS policies and regulation book.

KUWAIT BOARD OF ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS

البـــورد الكـويتـــي لتقـويـم الأسنـــان و عظـــام الـوجـــه و الفكيـــن

In the following section, you will find all the forms and tables referred to in the program handbook. These are subject to continuous update and development. KBO handbook will be updated on an annual basis to be provided for each upcoming class during their orientation session. For enquiries contact:

kuwaitboardorthodontics@gmail.com

Appendices

Appendix1: Basic sciences courses timetable; for updates contact course directors.

Kuwait Board of Endodontics, Paediatric Dentistry, Orthodontics and Dentofacial Orthopedics and Prosthodontics First Training Year (R3)

First Rotation Timetable – (October – December 2024)

Week 1				
Tuesday 01/10/2024	08.00-14.00	Basic Sciences Course Orientation	Dr. Rawan Alkhwaiteem Dr. Ibrahim Seghayer	KIMS Building Sabah Medical Region
Wednesday 02/10/2024	08.00-10.00	Transition to Residency	Dr. Dalia Alhennawi	KIMS Building Sabah Medical Region
	10.30-14.00	Receiving feedback positively	Dr. Dalia Alhennawi	KIMS Building Sabah Medical Region
Thursday 03/10/2024	08.00-14.00	Introduction to Paediatric Dentistry Introduction to Orthodontics	KBPD Staff KBO Staff	Farwaniya Speciality Dental Centre
		Introduction to Advanced Endodontics	KBE Staff	Salmiya Speciality Dental Center
		Introduction to Prosthodontics	KBP Staff	Al-Jahra Speciality Dental Center

Week 2				
Sunday 06/10/2024	08.00-10.30	Head and Neck Anatomy	Dr. Thamer AlAnezi	KIMS Building Sabah Medical Region
	11.00-14.00	Embryology and Oral Histology	Dr. Mashael Al Nasser	KIMS Building Sabah Medical Region
Monday 07/10/2024	08.00-10.30	Oral Pathology and Oral Medicine	Dr. Dalal Al Omar	KIMS Building Sabah Medical Region
	11.00-14.00	Infection Control in Dental Health Care Setting	Dr. Hanouf Al-Buaijan	KIMS Building Sabah Medical Region
Tuesday 08/10/2024	08.00-14.00	Research Methodology in Clinical Dentistry	Dr. Saad Alqahtani Dr. Jagan Baskaradoss Dr Amritha Geevarghese	KIMS Building Sabah Medical Region
Wednesday 09/10/2024	08.00-10.30	Oral Pathology and Oral Medicine	Dr. Dalal Al Omar	KIMS Building Sabah Medical Region
	11.00-14.00	Oral microbiome and the oral ecosystem Microbiology of Periodontal disease	Dr Aeshah Alkandari Dr. Ruqaya Almutairi	
Thursday 10/10/2024	07.30-14.30	Introduction to Paediatric Dentistry Introduction to Orthodontics	KBPD Staff KBO Staff	Farwaniya Speciality Dental Centre
		Introduction to Advanced Endodontics	KBE Staff	Salmiya Speciality Dental Center
		Introduction to Prosthodontics	KBP Staff	Al-Jahra Speciality Dental Center

Week 3				
Sunday 13/10/2024	08.00-10.30	Head and Neck Anatomy	Dr. Thamer AlAnezi	KIMS Building Sabah Medical Region
	11.00-14.00	Oral Pathology and Oral Medicine	Dr. Dalal Al Omar	KIMS Building Sabah Medical Region
Monday 14/10/2024	08.00-10.30	Embryology and Oral Histology	Dr. Bader Albaqshi	KIMS Building Sabah Medical Region
	11.00-14.00	Microbiology in dental caries Microbiology in orthodontics	Dr. Hessa Albader Dr Dalal Alrashidi	KIMS Building Sabah Medical Region
Tuesday 15/10/2024	08.00-14.00	Research Methodology in Clinical Dentistry	Dr. Saad Alqahtani Dr. Jagan Baskaradoss Dr Amritha Geevarghese	KIMS Building Sabah Medical Region
Wednesday 16/10/2024	08.00-10.30	Oral Pathology and Oral Medicine	Dr. Fatma Alhendi	KIMS Building Sabah Medical Region
	11.00-14.00	Digital Dentistry and Dental Materials	Dr. Maria Alkhabbaz	
Thursday 17/10/2024	07.30-14.30	Introduction to Paediatric Dentistry Introduction to Orthodontics	KBPD Staff KBO Staff	Farwaniya Speciality Dental Centre
		Introduction to Advanced Endodontics	KBE Staff	Salmiya Speciality Dental Center
		Introduction to Prosthodontics	KBP Staff	Al-Jahra Speciality Dental Center

Week 4				
Sunday 20/10/2024	08.00-10.30	Head and Neck Anatomy	Dr. Thamer AlAnezi	KIMS Building Sabah Medical Region
	11.00-14.00	Oral Pathology and Oral Medicine	Dr. Dalal Al Omar	KIMS Building Sabah Medical Region
Monday 21/10/2024	08.00-10.30	Embryology and Oral Histology	Dr. Mashael Alnasser	KIMS Building Sabah Medical Region
	11.00-14.00	Oral Pathology and Oral Medicine	Dr. Fatma Alhendi	KIMS Building Sabah Medical Region
Tuesday 22/10/2024	08.00-14.00	Research Methodology in Clinical Dentistry	Dr. Saad Alqahtani Dr. Jagan Baskaradoss Dr Amritha Geevarghese	KIMS Building Sabah Medical Region
Wednesday 23/10/2024	08.00-10.30	Oral Pathology and Oral Medicine	Dr. Fatma Alhendi	KIMS Building Sabah Medical Region
	11.00-14.00	Digital Dentistry and Dental Materials	Dr. Basil Basha	
Thursday 24/10/2024	07.30-14.30	Introduction to Paediatric Dentistry Introduction to Orthodontics	KBPD Staff KBO Staff	Farwaniya Speciality Dental Centre
		Introduction to Advanced Endodontics	KBE Staff	Salmiya Speciality Dental Center
		Introduction to Prosthodontics	KBP Staff	Al-Jahra Speciality Dental Center

Week 5				
Sunday 27/10/2024	08.00-10.30	Head and Neck Anatomy	Dr. Thamer AlAnezi	KIMS Building Sabah Medical Region
	11.00-14.00	Pharmacology in Clinical Dentistry	Dr. Rawan Alkhwaiteem	KIMS Building Sabah Medical Region
Monday 28/10/2024	08.00-10.30	Oral Pathology and Oral Medicine	Dr. Anwar Almuzaini	KIMS Building Sabah Medical Region
	11.00-14.00	Digital Dentistry and Dental Materials	Dr. Basil Basha	KIMS Building Sabah Medical Region
Tuesday 29/10/2024	08.00-14.00	Research Methodology in Clinical Dentistry	Dr. Saad Alqahtani Dr. Jagan Baskaradoss Dr Amritha Geevarghese	KIMS Building Sabah Medical Region
Wednesday 30/10/2024	08.00-10.30 11.00-14.00	Oral Pathology and Oral Medicine Pharmacology in Clinical Dentistry	Dr. Anwar Almuzaini Dr. Rawan Alkhwaiteem	KIMS Building Sabah Medical Region
Thursday 31/10/2024	07.30-14.30	Introduction to Paediatric Dentistry Introduction to Orthodontics	KBPD Staff KBO Staff	Farwaniya Speciality Dental Centre
		Introduction to Advanced Endodontics	KBE Staff	Salmiya Speciality Dental Center
		Introduction to Prosthodontics	KBP Staff	Al-Jahra Speciality Dental Center

Week 6				
Sunday 03/11/2024	08.00-10.30	Local Anaesthesia in Dentistry	Dr. Mahmoud Anous	KIMS Building Sabah Medical Region
	11.00-14.00	Local Anaesthesia in Dentistry	Dr. Fatma Alherz	
Monday 04/11/2024	08.00-10.30	Pharmacology in Clinical Dentistry	Dr Rawan Alkhuwaiteem	KIMS Building Sabah Medical Region
	11:00-14:00	Microbiology in endodontics	Dr Sherifa Almokhaizeem	KIMS Building Sabah Medical Region
Tuesday 05/11/2024	08.00-14.00	Research Methodology in Clinical Dentistry	Dr. Saad Alqahtani Dr. Jagan Baskaradoss Dr Amritha Geevarghese	KIMS Building Sabah Medical Region
Wednesday 06/11/2024	08.00-14.00	Digital Dentistry and Dental Materials	Dr. Aseel Altamimi	KIMS Building Sabah Medical Region
Thursday 07/11/2024	07.30-14.30	Introduction to Paediatric Dentistry Introduction to Orthodontics	KBPD Staff KBO Staff	Farwaniya Speciality Dental Centre
		Introduction to Advanced Endodontics	KBE Staff	Salmiya Speciality Dental Center
		Introduction to Prosthodontics	KBP Staff	Al-Jahra Speciality Dental Center

Week 7				
Sunday 10/11/2024	08.00-10:30 11:00-14:00	Emergency in the Dental Setting Principles of Management of Odontogenic Infections	Dr. Mahmoud Anous Dr. Yahya AlYahya	KIMS Building Sabah Medical Region
Monday 11/11/2024	08.00-14.00	Digital Dentistry and Dental Materials	Dr. Aref AlAwadhi Dr Maryam Baghdadi	KIMS Building Sabah Medical Region
Tuesday 12/11/2024	08.00-14.00	Research Methodology in Clinical Dentistry	Dr. Saad Alqahtani Dr. Jagan Baskaradoss Dr Amritha Geevarghese	KIMS Building Sabah Medical Region
Wednesday 13/11/2024	08.00-11.30 12:00-14:00	Pharmacology in Clinical Dentistry Audit Introductory Lecture	Dr Rawan Alkhuwaiteem Dr. Salman Sarkhouh	KIMS Building Sabah Medical Region
Thursday 14/11/2024	07.30-14.30	Introduction to Paediatric Dentistry Introduction to Orthodontics	KBPD Staff KBO Staff	Farwaniya Speciality Dental Centre
		Introduction to Advanced Endodontics	KBE Staff	Salmiya Speciality Dental Center
		Introduction to Prosthodontics	KBP Staff	Al-Jahra Speciality Dental Center

Week 8				
Sunday 17/11/2024	08.00-14.00	Basic Sciences Residents' Presentations		KIMS Building Sabah Medical Region
Monday 18/11/2024	08.00-14.00	Basic Sciences Residents' Presentations		KIMS Building Sabah Medical Region
Tuesday 19/11/2024	08.00-14.00	Research Methodology in Clinical Dentistry	Dr. Saad Alqahtani Dr. Jagan Baskaradoss Dr Amritha Geevarghese	KIMS Building Sabah Medical Region
Wednesday 20/11/2024	08.00-14.00	Basic Sciences Residents' Presentations		KIMS Building Sabah Medical Region
Thursday 21/11/2024	07.30-14.30	Introduction to Paediatric Dentistry Introduction to Orthodontics	KBPD Staff KBO Staff	Farwaniya Speciality Dental Centre
		Introduction to Advanced Endodontics	KBE Staff	Salmiya Speciality Dental Center
		Introduction to Prosthodontics	KBP Staff	Al-Jahra Speciality Dental Center

Week 9				
Sunday 24/11/2024	08.00-14.00	Introduction to Applied Clinical Dentistry	Dr Anfal Fraidoon Dr Thamer Alanezi Dr Salman Sarkhouh	KIMS Building Sabah Medical Region
Monday 25/11/2024	08.00-14.00	Introduction to Applied Clinical Dentistry	Dr Meshal Alzoubi	KIMS Building Sabah Medical Region
Tuesday 26/11/2024	08.00-14.00	Introduction to Paediatric Dentistry Introduction to Orthodontics	KBPD Staff KBO Staff	Farwaniya Speciality Dental Centre
		Introduction to Advanced Endodontics	KBE Staff	Salmiya Speciality Dental Center
		Introduction to Prosthodontics	KBP Staff	Al-Jahra Speciality Dental Center
Wednesday 27/11/2024	08.00-14.00	Introduction to Paediatric Dentistry Introduction to Orthodontics	KBPD Staff KBO Staff	Farwaniya Speciality Dental Centre
		Introduction to Advanced Endodontics	KBE Staff	Salmiya Speciality Dental Center
		Introduction to Prosthodontics	KBP Staff	Al-Jahra Speciality Dental Center
Thursday 28/11/2024	07.30-14.30	Introduction to Paediatric Dentistry Introduction to Orthodontics	KBPD Staff KBO Staff	Farwaniya Speciality Dental Centre
		Introduction to Advanced Endodontics	KBE Staff	Salmiya Speciality Dental Center
		Introduction to Prosthodontics	KBP Staff	Al-Jahra Speciality Dental Center

Week 10				
Sunday 01/12/2024	08.00-14.00	Study Session		
Monday 02/12/2024	08.00-10.00	Study Session		
	10.00-12.00	Final Exam – Research Methods in Clinical Dentistry	Dr. Ibrahim Seghayer Dr. Rawan Alkhwaiteem	KIMS Building Sabah Medical Region
Tuesday 03/12/2024	08.00-14.00	Introduction to Paediatric Dentistry Introduction to Orthodontics	KBPD Staff KBO Staff	Farwaniya Speciality Dental Centre
		Introduction to Advanced Endodontics	KBE Staff	Salmiya Speciality Dental Center
		Introduction to Prosthodontics	KBP Staff	Al-Jahra Speciality Dental Center
Wednesday 04/12/2024	08.00-14.00	Introduction to Paediatric Dentistry Introduction to Orthodontics	KBPD Staff KBO Staff	Farwaniya Speciality Dental Centre
		Introduction to Advanced Endodontics	KBE Staff	Salmiya Speciality Dental Center
		Introduction to Prosthodontics	KBP Staff	Al-Jahra Speciality Dental Center
Thursday 05/12/2024	07.30-14.30	Introduction to Paediatric Dentistry Introduction to Orthodontics	KBPD Staff KBO Staff	Farwaniya Speciality Dental Centre
		Introduction to Advanced Endodontics	KBE Staff	Salmiya Speciality Dental Center
		Introduction to Prosthodontics	KBP Staff	Al-Jahra Speciality Dental Center

Week 11				
Sunday 08/12/2024	08.00-14.00	Study Session		
Monday 09/12/2024	08.00-14.00	Study Session		
Tuesday 10/12/2024	08.00-14.00	Final Exam – Basic Sciences Written I and II	KIMS Building Sabah Medical Region	
Wednesday 11/12/2024	08.00-14.00	Final Exam – Basic Sciences OSCE	KIMS Building Sabah Medical Region	
Thursday 12/12/2024	08.00-14.00	Introduction to Paediatric Dentistry Introduction to Orthodontics Introduction to Advanced Endodontics Introduction to Prosthodontics	KBPD Staff KBO Staff	Farwaniya Speciality Dental Centre
			KBE Staff	Salmiya Speciality Dental Center
			KBP Staff	Al-Jahra Speciality Dental Center

Week 12				
Sunday 15/12/2024	08.00-14.00	Introduction to Paediatric Dentistry Introduction to Orthodontics	KBPD Staff KBO Staff	Farwaniya Speciality Dental Centre
		Introduction to Advanced Endodontics	KBE Staff	Salmiya Speciality Dental Center
		Introduction to Prosthodontics	KBP Staff	Al-Jahra Speciality Dental Center
Monday 16/12/2024	08.00-14.00	Introduction to Paediatric Dentistry Introduction to Orthodontics	KBPD Staff KBO Staff	Farwaniya Speciality Dental Centre
		Introduction to Advanced Endodontics	KBE Staff	Salmiya Speciality Dental Center
		Introduction to Prosthodontics	KBP Staff	Al-Jahra Speciality Dental Center
Tuesday 17/12/2024	08.00-14.00	Introduction to Paediatric Dentistry Introduction to Orthodontics	KBPD Staff KBO Staff	Farwaniya Speciality Dental Centre
		Introduction to Advanced Endodontics	KBE Staff	Salmiya Speciality Dental Center
		Introduction to Prosthodontics	KBP Staff	Al-Jahra Speciality Dental Center
Wednesday 18/12/2024	08.00-14.00	Introduction to Paediatric Dentistry Introduction to Orthodontics	KBPD Staff KBO Staff	Farwaniya Speciality Dental Centre
		Introduction to Advanced Endodontics	KBE Staff	Salmiya Speciality Dental Center
		Introduction to Prosthodontics	KBP Staff	Al-Jahra Speciality Dental Center
Thursday 19/12/2024	07.30-14.30	Introduction to Paediatric Dentistry Introduction to Orthodontics	KBPD Staff KBO Staff	Farwaniya Speciality Dental Centre
		Introduction to Advanced Endodontics	KBE Staff	Salmiya Speciality Dental Center
		Introduction to Prosthodontics	KBP Staff	Al-Jahra Speciality Dental Center

Week 13				
Sunday 22/12/2024	11.00-14.00	Introduction to Paediatric Dentistry Introduction to Orthodontics	KBPD Staff KBO Staff	Farwaniya Speciality Dental Centre
		Introduction to Advanced Endodontics	KBE Staff	Salmiya Speciality Dental Center
		Introduction to Prosthodontics	KBP Staff	Al-Jahra Speciality Dental Center
Monday 23/12/2024	08.00-14.00	Introduction to Paediatric Dentistry Introduction to Orthodontics	KBPD Staff KBO Staff	Farwaniya Speciality Dental Centre
		Introduction to Advanced Endodontics	KBE Staff	Salmiya Speciality Dental Center
		Introduction to Prosthodontics	KBP Staff	Al-Jahra Speciality Dental Center
Tuesday 24/12/2024	08.00-14.00	Introduction to Paediatric Dentistry Introduction to Orthodontics	KBPD Staff KBO Staff	Farwaniya Speciality Dental Centre
		Pulp Biology	KBE Staff	Salmiya Speciality Dental Center
		Introduction to Prosthodontics	KBP Staff	Al-Jahra Speciality Dental Center
Wednesday 25/12/2024	08.00-14.00	Introduction to Paediatric Dentistry Introduction to Orthodontics	KBPD Staff KBO Staff	Farwaniya Speciality Dental Centre
		Pulp Biology	KBE Staff	Salmiya Speciality Dental Center
		Introduction to Prosthodontics	KBP Staff	Al-Jahra Speciality Dental Center
Thursday 26/12/2024	07.30-14.30	End Rotation Evaluation	KBPD Staff KBO Staff KBP Staff	Farwaniya Speciality Dental Centre Al-Jahra Speciality Dental Center
		Introduction to Advanced Endodontics	KBE Staff	Salmiya Speciality Dental Center

This timetable is subject to change, please contact course directors for latest updates.

Appendix2: CAN-MED framework

Dental Expert	
Key Competency	**Enabling Competency**
1 **Dental Knowledge:** Residents must be able to demonstrate a level of knowledge of established and evolving medical, dental, clinical, epidemiological and social-behavior sciences, as well as having the ability to apply this knowledge to patient care.	1.1 Integrate and apply the knowledge of clinical, biomedical, ethical, socio-behavioral epidemiological, and other supportive sciences, that are relevant to their discipline. 1.2 Understand the normal and deviations from normal in growth and development, as well as in occlusion & temporomandibular joint (TMJ), and integrate the knowledge in diagnosing, treatment planning, management and referrals of malocclusions and dentofacial abnormalities. 1.3 Integrate and apply the knowledge and concepts gained in biomaterials & biomechanics to the management of orthodontic and dentofacial problems and for the fabrication and selection of orthodontic appliances.
2 **Patient Care:** Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.	2.1 *Data Gathering and Data Analysis:* Gather essential and accurate information about patients by thorough history taking, physical examinations (extra-oral, intra-oral, and functional), obtain quality records and analyze it using contemporary photographic and radiographic techniques including 3D and 3D cephalometric radiography and diagnostic conventional and digital

	models (Digital records and virtual planning) and selection of appropriate laboratory, diagnostic tests and requesting proper consultations showing an investigatory and analytical thought process in clinical consultation. 2.2 *Problem list & Diagnosis:* Prioratize issues and problems in a detailed problem list and establish a patient-oriented diagnosis based on patient information (chief complaint), references, up to date scientific evidence and their own clinical judgment. 2.3 *Treatment objectives and treatment plan:* Formulate patient centered treatment objectives and treatment plans with alternatives in collaboration with patients and their families, explain the risks and benefits of the procedure and the rationale behind choosing that specific plan. Obtain and document informed consent. 2.4 *Treatment management:* Residents must be able to perform and apply evidence-based patient-centered treatment procedures and therapies: 2.4.1 Manage growing patients with different orthodontic and dentofacial orthopedic problems which can be minimized or treated by appropriate timely intervention.

	2.4.2 Treat and manage non-growing patients with different orthodontic and dentofacial problems, taking into consideration the clinical circumstances, constraints, resources, and contemporary techniques. 2.4.3 Treat and manage adult patients with different orthodontic problems that require restorative and periodontal management along with coordinated care. 2.4.4 Treat and manage patients in need for orthognathic surgery and coordinate their care with healthcare providers, including oral and maxillofacial surgeons. 2.4.5 Have exposure to the management of patients with cleft lip and palate & craniofacial syndromes and coordinate their care with craniofacial teams. 2.4.6 Manage patients with functional and temporomandibular disorders and coordinate or refer to other healthcare providers, including prosthodontists and oral maxillofacial surgeons. 2.5 *Retention and follow-up:* Implement a patient centered care plan that supports ongoing care, provide a follow up on investigators, records the response to treatment, and includes further consultation and long term follow up and records.

Communicator	
Key Competency	**Enabling Competency**
Communicator: Residents must demonstrate satisfactory interpersonal and communication skills that result in effective exchange of information and collaboration with patients and their families and other health professionals.	1.1 Demonstrate satisfactory interpersonal as well as verbal and written communication skills that result in the effective exchange of information and collaboration with patients and their families, colleagues, staff, and other healthcare professionals and in a timely and accessible manner. As well as share comprehensive and legibly written or electronic information in a timely manner about medical encounter to optimize clinical decision-making, patient safety, confidentiality, and privacy. 1.2 Establish professional therapeutic relationships with patients and their families: 1.2.1 Communicate using a patient-centered approach that encourages patient trust and autonomy and is characterized by empathy, respect, and compassion. 1.2.2 Optimize the physical environment for patient comfort, dignity, privacy, engagement, and safety. 1.2.3 Recognize when the values, biases, or perspectives of patients, physicians, or other health care professionals may have an impact on

	the quality of care and modify the approach to the patient accordingly. 1.2.4 Respond to a patient's non-verbal behaviors to enhance communication. 1.2.5 Manage disagreements and emotionally charged conversations. 1.2.6 Adapt to the unique needs and preferences of each patient and to his or her clinical condition and circumstances. 1.3 Elicit and synthesize accurate and relevant information, incorporating the perspectives of patients and their families: 1.3.1 Use patient-centered interviewing skills to effectively gather relevant biomedical and psychosocial information. 1.3.2 Provide a clear structure for and manage the flow of an entire patient encounter. 1.3.3 Seek and synthesize relevant information from other sources, including the patient's family, with the patient's consent. 1.4 Share health care information and plans with patients and their families: 1.4.1 Share information and explanations that are clear, accurate, and timely, while checking for patient and family understanding.

	1.4.2 Disclose harmful patient safety incidents to patients and their families accurately and appropriately. 1.4.3 Obtain and document informed consent, explaining the risks and benefits of, and the rationale for, a proposed procedure or therapy. 1.5 Engage patients and their families in developing plans that reflect the patient's health care needs and goals: 1.5.1 Facilitate discussions with patients and their families in a way that is respectful, non-judgmental, and culturally safe. 1.5.2 Assist patients and their families to identify, access, and make use of information and communication technologies to support their care and manage their health. 1.5.3 Use communication skills and strategies that help patients and their families make informed decisions regarding their health. 1.6 Document and share written and electronic information about the medical encounter to optimize clinical decision-making, patient safety, confidentiality and privacy: 1.6.1 Document clinical encounters in an accurate, complete, timely, and accessible manner, in compliance with regulatory and legal requirements.

	1.6.2 Communicate effectively using a written health record, electronic medical record, or other digital technology. 1.6.3 Share information with patients and others in a manner that respects patient privacy and confidentiality and enhances understanding.
Collaborator	
Key Competency	**Enabling Competency**
Collaborator: Resident must demonstrate effective teamwork with other healthcare professionals to provide safe, high quality, and patient-centered care.	1.1 Collaborate, communicate, understand and function competently, efficiently and effectively in the healthcare environment as a member of an inter-professional healthcare team and understand the setting of their organizational system. 1.2 Work effectively with dentists and other dental and medical colleagues in the health care professions: 1.2.1 Establish and maintain positive relationships with dentists, specialists, and other colleagues in the health care professions to support relationship-centered collaborative care. 1.2.2 Negotiate overlapping and shared responsibilities with dentists, specialists, and other colleagues in the health care professions in episodic and ongoing care.

	1.2.3 Engage in respectful shared decision-making with dentists, specialists, and other colleagues in the health care professions. 1.3 Work with dentists, specialists and other colleagues in the health care professions to promote understanding, manage differences, and resolve conflicts: 1.3.1 Show respect toward collaborators. 1.3.2 Implement strategies to promote understanding, manage differences, and resolve conflicts in a manner that supports a collaborative culture. 1.4 Hand over the care of a patient to another health care professional to facilitate continuity of safe patient care: 1.4.1 Determine when care should be transferred to another physician or health care professional. 1.4.2 Demonstrate safe handover of care, using both verbal and written communication, during a patient transition to a different health care professional, setting, or stage of care.

Leader	
Key Competency	**Enabling Competency**

Leader: Resident must demonstrate engagement with others to contribute to a vision of high-quality healthcare system and take responsibility for the delivery of excellent patient care through their activities as clinicians, administrators, scholars and teachers.	1.1 Apply quality management principles to improve patient care delivery and demonstrate an expertise in clinical safety initiatives. 1.2 Contribute to the improvement of health care delivery in teams, organizations, and systems: 1.2.1 Apply the science of quality improvement to contribute to improving systems of patient care. 1.2.2 Contribute to a culture that promotes patient safety. 1.2.3 Analyze patient safety incidents to enhance systems of care. 1.2.4 Use health informatics to improve the quality of patient care and optimize patient safety. 1.3 Engage in the stewardship of health care resources: 1.3.1 Allocate health care resources for optimal patient care. 1.3.2 Apply evidence and management processes to achieve cost-appropriate care. 1.4 Demonstrate leadership in professional practice: 1.4.1 Demonstrate leadership skills to enhance health care. 1.4.2 Facilitate change in health care to enhance services and outcomes. 1.5 Manage career planning, finances, and health human resources in a practice: 1.5.1 Set priorities and manage time to integrate practice and personal life.

	1.5.2 Manage a career and a practice. 1.5.3 Implement processes to ensure personal practice improvement.

Health advocate	
Key Competency	**Enabling Competency**
Health advocate: Residents must demonstrate the contribution of their expertise and influence as they work with communities or patients populations to improve health. They must demonstrate themselves working with those they serve to understand their needs, speak on behalf of others when required, and support the mobilization of resources to affect change.	1.1 Respond to individual patient's diagnostic and management need within and beyond the clinical environment. 1.2 Respond to an individual patient's health needs by advocating with the patient within and beyond the clinical environment: 1.2.1 Work with patients to address determinants of health that affect them and their access to needed health services or resources. 1.2.2 Work with patients and their families to increase opportunities to adopt healthy behaviors. 1.2.3 incorporate disease prevention, health promotion, and health surveillance into interactions with individual patients.

	1.3 Respond to the needs of the communities or populations they serve by advocating with them for system-level change in a socially accountable manner: 1.3.1 Work with a community or population to identify the determinants of health that affect them. 1.3.2 Improve clinical practice by applying a process of continuous quality improvement to disease prevention, health promotion, and health surveillance activities. 1.3.3 Contribute to a process to improve health in the community or population they serve.

Scholar	
Key competency	**Enabling competency**
Scholar: As a scholar, the residents are expected to have scientific attitude and an inquisitive mind that stimulates professional curiosity.	1.1 *Lifelong learner:* engage in the continuous enhancement of their professional practice through lifelong learning. Continuously improve patient care based on constant self-evaluation and life-long learning with more emphasis on their own population of patients and the larger population from which their patients are drawn: 1.1.1 Engage in the continuous enhancement of their professional activities through ongoing learning: 1.1.2 Develop, implement, monitor, and revise a personal learning plan to enhance professional practice. 1.1.3 Identify opportunities for learning and improvement by regularly reflecting on and assessing their performance using various internal and external data sources. 1.1.4 Engage in collaborative learning to continuously improve personal practice and contribute to collective improvements in practice. 1.2 *Teaching:* teach students, residents, the public and other healthcare professionals:

	1.2.1 Recognize the influence of role-modelling and the impact of the formal, informal, and hidden curriculum on learners. 1.2.2 Promote a safe learning environment. 1.2.3 Ensure patient safety is maintained when learners are involved. 1.2.4 Plan and deliver a learning activity. 1.2.5 Provide feedback to enhance learning and performance. 1.2.6 Assess and evaluate learners, teachers, and programs in an educationally appropriate manner. 1.3 *Evidence based and informed decision making:* Integrate the best available evidence into practice by critically and comprehensively reviewing and evaluating new literature and other information resources that are relevant to the orthodontic field: 1.3.1 Recognize practice uncertainty and knowledge gaps in clinical and other professional encounters and generate focused questions that address them. 1.3.2 Identify, select, and navigate pre-appraised resources. 1.3.3 Critically evaluate the integrity, reliability, and applicability of health-related research and literature. 1.3.4 Integrate evidence into decision-making in their practice.

1.4 *Research:* Contribute to the creation and dissemination of knowledge and practices applicable to health by posing questions amenable to scholarly inquiry and selecting appropriate methods to address them:

1.4.1 Contribute to the creation and dissemination of knowledge and practices applicable to health:

1.4.2 Demonstrate an understanding of the scientific principles of research and scholarly inquiry and the role of research evidence in health care.

1.4.3 Identify ethical principles for research and incorporate them into obtaining informed consent, considering potential harms and benefits, and considering vulnerable populations.

1.4.4 Contribute to the work of a research program.

1.4.5 Pose questions amenable to scholarly inquiry and select appropriate methods to address them.

1.4.6 Summarize and communicate to professional and lay audiences, including patients and their families, the findings of relevant research and scholarly inquiry.

Professional	
Key competency	**Enabling competency**

Professional: Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse population.	1.1 Demonstrate a commitment to patients by applying best practices and adhering to high ethical standards: 1.1.1 Exhibit appropriate professional behaviors and relationships in all aspects of practice, demonstrating honesty, integrity, humility, commitment, compassion, respect, altruism, respect for diversity, and maintenance of confidentiality. 1.1.2 Demonstrate a commitment to excellence in all aspects of practice. 1.1.3 Recognize and respond to ethical issues encountered in practice. 1.1.4 Recognize and manage conflicts of interest. 1.1.5 Exhibit professional behaviors in the use of technology-enabled communication. 1.2 Demonstrate a commitment to society by recognizing and responding to societal expectations in health care: 1.2.1 Demonstrate accountability to patients, society, and the profession by responding to societal expectations of dental professionals. 1.2.2 Demonstrate a commitment to patient safety and quality improvement.

	1.3 Demonstrate a commitment to the profession by adhering to standards and participating in dental professional-led regulation: 1.3.1 Fulfill and adhere to the professional and ethical codes, standards of practice, and laws governing practice. 1.3.2 Recognize and respond to unprofessional and unethical behaviors by dentists and other colleagues in the health care professions. 1.3.3 Participate in peer assessment and standard setting. 1.4 Demonstrate a commitment to dental professionals health and well-being to foster optimal patient care: 1.4.1 Exhibit self-awareness and manage influences on personal well-being and professional performance. 1.4.2 Manage personal and professional demands for a sustainable practice throughout the physician life cycle. 1.4.3 Promote a culture that recognizes, supports, and responds effectively to colleagues in need. 1.5 Demonstrate a commitment to patients by applying best practices and adhering to high ethical standards: 1.5.1 Exhibit appropriate professional behaviors and relationships in all aspects of practice, demonstrating honesty, integrity, humility, commitment, compassion,

	respect, altruism, respect for diversity, and maintenance of confidentiality. 1.5.2 Demonstrate a commitment to excellence in all aspects of practice. 1.5.3 Recognize and respond to ethical issues encountered in practice. 1.5.4 Recognize and manage conflicts of interest.

Appendix 3: KBO timetable/schedule

The timetables below are subject to change and will be updated on a regular basis.

KUWAIT BOARD OF ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS
البـــورد الكـويتـي لتقويـم الأسنـــان و عظـــام الوجـــه و الفكيـــن

R3: Year 1

Rotation2

	Sunday	Monday	Tuesday	Wedensday	Thursday
7:30 AM	Self Directed Learning				Self Directed Learning
7:45 AM	Clinic	Clinic	Clinic	Clinic	
8:00 AM					ORTH1.11 Growth and Development
8:30 AM					
9:00 AM					
9:30 AM					ORTH2.11 Diagnosis and treatment planning
10:00 AM					
10:30 AM					
11:00 AM					ORTH3.11 Biomechancis, Biomaterials and appliances in Orthodontics
11:30 AM					
12:00 PM					
12:30 PM	ORTH4 Initial Case presentation	ORTH5.11 Classic literature review	ORTH4 Initial Case presentation	ORTH5.11 Classic literature review	wire bending? Model triming ?
1:00 PM					
1:30 PM					
2:00 PM					

Rotation3

	Sunday	Monday	Tuesday	Wedensday	Thursday
7:30 AM	Self Directed Learning				
7:45 AM	Clinic	Clinic	Clinic	Clinic	
8:00 AM					SDL
8:30 AM					
9:00 AM					
9:30 AM					ORTH2.12 Diagnosis and treatment planning
10:00 AM					
10:30 AM					
11:00 AM					ORTH3.12 Biomechancis, Biomaterials and appliances in Orthodontics
11:30 AM					
12:00 PM					
12:30 PM	ORTH4 Initial Case presentation	ORTH5.12 Classic literature review	ORTH4 Initial Case presentation	ORTH5.12 Classic literature review	wire bending? Model triming ?
1:00 PM					
1:30 PM					
2:00 PM					

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R4: Year 2

Rotation1

	Sunday	Monday	Tuesday	Wedensday	Thursday
7:30 AM	Self Directed Learning				
7:45 AM – 12:00 PM	Clinic	Clinic	Clinic	Clinic	Clinic
12:30 PM – 2:00 PM	ORTH4 Initial Case presentation	ORTH6.21 Advanced Orthodontics	ORTH4 Initial Case presentation	ORTH5.2 Journal Club	ORTH4 Progress and Final case presentatoin

Rotation2

	Sunday	Monday	Tuesday	Wedensday	Thursday
7:30 AM	Self Directed Learning				
7:45 AM – 12:00 PM	Clinic	Clinic	Clinic	Clinic	Clinic
12:30 PM – 2:00 PM	ORTH4 Initial Case presentation	ORTH6.22 Advanced Orthodontics	ORTH4 Initial Case presentation	ORTH5.2 Journal Club	ORTH4 Progress and Final case presentatoin

Rotation3

	Sunday	Monday	Tuesday	Wedensday	Thursday
7:30 AM	Self Directed Learning				
7:45 AM – 12:00 PM	Clinic	Clinic	Clinic	Clinic	Clinic
12:30 PM – 2:00 PM	ORTH4 Initial Case presentation	ORTH6.23 Advanced Orthodontics	ORTH4 Initial Case presentation	ORTH5.2 Journal Club	ORTH4 Progress and Final case presentatoin

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R5: Year 3

Rotation1

	Sunday	Monday	Tuesday	Wedensday	Thursday
7:30 AM	Self Directed Learning				
7:45 AM	Clinic	Clinic	Clinic	Clinic	Clinic
8:00 AM					
8:30 AM					
9:00 AM					
9:30 AM					
10:00 AM					
10:30 AM					
11:00 AM					
11:30 AM					
12:00 PM					
12:30 PM	ORTH4 Initial Case presentation	SDL	ORTH4 Initial Case presentation	ORTH5.2 Journal Club	ORTH4 Progress and Final case presentatoin
1:00 PM					
1:30 PM					
2:00 PM					

Rotation2

	Sunday	Monday	Tuesday	Wedensday	Thursday
7:30 AM	Self Directed Learning				
7:45 AM	Clinic	Clinic	Clinic	Clinic	Clinic
8:00 AM					
8:30 AM					
9:00 AM					
9:30 AM					
10:00 AM					
10:30 AM					
11:00 AM					
11:30 AM					
12:00 PM					
12:30 PM	ORTH4 Initial Case presentation	SDL	ORTH4 Initial Case presentation	ORTH5.2 Journal Club	ORTH4 Progress and Final case presentatoin
1:00 PM					
1:30 PM					
2:00 PM					

Rotation3

	Sunday	Monday	Tuesday	Wedensday	Thursday
7:30 AM	Self Directed Learning				
7:45 AM	Clinic	Clinic	Clinic	Clinic	Clinic
8:00 AM					
8:30 AM					
9:00 AM					
9:30 AM					
10:00 AM					
10:30 AM					
11:00 AM					
11:30 AM					
12:00 PM					
12:30 PM	ORTH4 Initial Case presentation	SDL	ORTH4 Initial Case presentation	ORTH5.2 Journal Club	ORTH4 Progress and Final case presentatoin
1:00 PM					
1:30 PM					
2:00 PM					

Appendix 4: Work Based Assessments forms

WBA – Evaluation Form

Resident	Assessor
Stage of Training: R3 R4 R5	Type of Assessment: Formative Summative
Assessment Date:	Competency and number of times performed:

Feedback

Verbal and written feedback is mandatory following the assessment

General
Strengths
Development Needs
Recommended Actions

Global Summary

Level at which the competency was performed on this occasion based on competency steps attached (*pass)

Level		Tick
0	Insufficient evidence observed to support a summary judgement.	
1	Guidance required for all steps of the procedure (was not familiar with all steps of procedure).	
2	Guidance required for some/most of the procedure (was familiar with all steps of procedure).	
3a*	Procedure performed with minimal guidance or intervention (needed occasional help).	
3b*	Procedure performed competently without guidance or intervention.	
4*	Procedure performed confidently to a high standard without any guidance or intervention with adequate time management.	
5*	As 4 and was able to anticipate, avoid and/or deal with common problems/complications consistently throughout the procedure.	

Resident's Signature	Assessor's Signature

WBA- History Taking, Examination and Diagnosis		
Steps to be performed		
1	Ensures correct patient in the clinic.	
2	Ensures patient if accompanied by adult or legal guardian.	
3	Ensures asking patient about their main complaints.	
4	Ensures taking a full medical history.	
5	Ensures taking a full dental history including any previous orthodontic treatment and any habits.	
6	Ensures completing an extraoral examination and soft tissue examination.	
7	Ensures assessing for any TMJ complications.	
8	Ensures completing an intraoral examination.	
9	Ensures recording the incisor, canine and molar classifications.	
10	Ensures to record any spacing or crowding.	
11	Ensures to place any further comments relevant to the case.	
12	Ensures to request the necessary radiographs and is able to justify the reasons.	
13	Communicates well with the patient throughout.	
14	Explains to the parent and parent in detail all the relevant information collected and justification for radiographs.	
15	Explains the upcoming stages of treatment following the history taking and examination session.	
16	Ensure accurate completion of the KBO Orthodontic Assessment Form (KBO Form 1.1).	

WBA – Impression Taking		
Steps to be performed		
1	Explains to the patient what is going to happen at that appointment.	
2	Ensures appropriate instruments and materials are readily available.	
3	Ensures appropriate protective equipment in place for patient and clinician.	
4	Ensures the patient is positioned appropriately.	
5	Selects the correct tray size.	
6	Checks there is an appropriate amount of alginate in the tray and places the loaded tray in position correctly.	
7	Gives appropriate reassurance if the patient is finding the process unpleasant.	
8	Checks that all teeth are included in the impression when removed and that it is appropriately extended to include the vestibule, there are no air blows etc.	
9	Takes an appropriate wax bite (*if for a functional appliance, include constructed bite registration).	
10	Arranges appropriate disinfection of impressions and wax bite.	
11	Ensures the laboratory prescription is written up correctly.	
12	Ensures clinical records are completed correctly and follow-up is arranged.	
13	Ensures appropriate cross infection techniques observed throughout the entire observed period.	
14	Demonstrates high standards of professionalism throughout the entire observed period.	
15	Demonstrates good communication (including instructions when required) throughout the entire observed period.	
16	Demonstrates safe clinical practice throughout the entire observed period.	

WBA – Clinical Photographs		
Steps to be performed		
1	Explains to the patient what is going to happen at that appointment.	
2	Ensures appropriate instruments and materials are readily available.	
3	Ensures appropriate protective equipment in place.	
4	Ensures the patient is positioned correctly .	
5	Demonstrates correct use of camera and flash for taking the standard extra oral views.	
6	Ensures extra oral views in focus at the correct magnification.	
7	Ensures that the patient is appropriately positioned for the intra oral views.	
8	Demonstrates correct use of camera and flash for taking the standard intra oral views.	
9	Ensures the intra oral photographs in focus with the patient in occlusion for the buccal views, and no fogging of the mirror for the occlusal photographs.	
10	Ensures photographs are loaded onto the appropriate secure database.	
11	Ensures clinical records are completed correctly and follow-up is arranged.	
12	Ensures appropriate cross infection techniques observed throughout the entire observed period.	
13	Demonstrates high standards of professionalism throughout the entire observed period.	
14	Demonstrates good communication (including instructions when required) throughout the entire observed period.	
15	Demonstrates safe clinical practice throughout the entire observed period.	

WBA – Cephalometric Radiographs		
Steps to be performed		
1	Ensures appropriate equipment and materials are readily available.	
2	Checks tracing paper taped to radiograph and the radiograph fixed to light box or utilizing a cephalometric digitizing software.	
3	Accurately traces the following hard tissue bony outlines: (lower region of the frontal bone and entire nasal bone; maxilla; mandible; sella).	
4	Accurately traces the soft tissue profile.	
5	Accurately identifies the following hard tissue points as a minimum: (nasion; orbitale; A point; B point; pogonion; menton; gonion; sella; anterior nasal spine; posterior nasal spine; root apex and crown tips of the most prominent upper and lower central incisors; mesial cusp tips of the upper and lower first permanent molars).	
6	Accurately identifies the following soft tissue points as a minimum: (subnasale; labius superior; labius inferior; soft tissue pogonion).	
7	Accurately constructs the following hard tissue planes using the hard tissue points: (SN plane; maxillary plane; functional occlusal plane; mandibular plane; upper incisor axis; lower incisor axis; A-pogonion).	
8	Accurately constructs the following soft tissue planes using the soft tissue points according to the KBO analysis form 1.2.	
9	Constructs and measures the following hard tissue angles according to the KBO analysis form 1.2.	
10	Constructs and measures the following hard tissue distances according to the KBO analysis form 1.2.	
11	The soft tissue profile analysis should include all the relevant points according to the KBO analysis form 1.2.	
12	Is able to appraise the analysis.	
13	Ensures clinical records are completed correctly.	

WBA – Treatment Planning		
Steps to be performed		
1	Presents a summary of the case using the KBO presentation PowerPoint.	
2	Explains the rationale behind taking the records presented.	
3	Explains the extraoral features of the case.	
4	Explains the intraoral features of the case.	
5	Explains the radiographic outcomes with regards to radiographs taken (Panoramic/ Peri-apicals/ CBCT/ Lateral Cephalometric).	
6	Explains the meaning behind cephalometric measurements and outcomes.	
7	Presents a problem list.	
8	Presents a list of aims and objectives.	
9	Presents a treatment plan .	
10	Explains the rationale behind the treatment plan and present alternative treatment options.	
11	Able to defend treatment plan proposed.	
12	Explains the appliances used in detail.	
13	Explains the steps taken to achieve the aims and objectives previously set.	
14	Clear and affirmative in decision made yet accepting of other options which may be proposed.	

WBA –Presenting Treatment Plan to Patient and Obtaining Consent		
Steps to be performed		
1	Ensure all the relevant records taken are ready for presentation.	
2	Utilize KBO consent form 1.3 and covers the various sections.	
3	Uses clear jargon-free language to explain the various risk and complications of orthodontic treatment.	
4	Discusses Intra oral risks: demineralization, caries, enamel wear, transient pulpitis, discomfort, root resorption, breakages, gingivitis, periodontitis, recession, soft tissue injury from direct trauma or burns or allergy to elastics.	
5	Discusses extra oral risks such as soft tissue injury from burns (chemical/thermal), eye damage or skin damage from headgear, allergy to nickel.	
6	Discusses other aspects; length of treatment, risks of failure of treatment e.g. if terminated mid way through or ankylosis of a tooth (if appropriate) or root resorption and the importance of compliance throughout treatment.	
7	Discusses long term aspects such as stability, retention and growth.	
8	Gives them an opportunity to ask any questions and ensures the understanding of the patient/parent.	
9	Explains care of the appliance: Oral hygiene, soft diet, hours of wear, coping with contact sports or swimming, cleaning of appliance, managing speech interference.	
10	Explains procedure if problems with wear or damage/loss of appliance.	
11	Ensures that consent form (KBO consent form 1.3) is clearly explained before patient/parent is required to sign it (if applicable to that unit).	
12	Demonstrates high standards of professionalism throughout the entire observed period.	
13	Demonstrates good communication (including instructions when required) throughout the entire observed period.	

WBA – Placement of Fixed Appliance		
Steps to be performed		
1	Ensures consent form (KBO 1.3) has been signed.	
1	Explains to the patient what is going to happen at that appointment.	
2	Ensures appropriate instruments and materials are readily available.	
3	Ensures appropriate protective equipment is in place.	
4	Ensures the patient is positioned appropriately.	
5	Makes appropriate choice of bracket design/prescription.	
6	Ensures correct preparation of tooth/teeth (use of pumice).	
7	Ensures appropriate moisture control by use of cheek retractors and appropriate suction methods.	
8	Ensures correct application of and selection of etch and bonding agent.	
9	Demonstrates correct brackets/buccal tubes handling and placement/positioning.	
10	Uses appropriate bracket alterations as necessary (e.g. Inverting or swapping brackets).	
11	Demonstrates appropriate removal of excess bonding material.	
12	Demonstrates appropriate curing of the bonding material.	
13	Checks for occlusal interferences and the need for bite ramp placement.	
14	Ensures appropriate cross infection techniques observed throughout the entire observed period.	
15	Demonstrates high standards of professionalism throughout the entire observed period.	
16	Demonstrates good communication (including instructions when required) throughout the entire observed period.	
17	Demonstrates safe clinical practice throughout the entire observed period.	

WBA – Separator Placement		
Steps to be performed		
1	Explains to the patient what is going to happen at that appointment.	
2	Ensures appropriate instruments and materials are readily available.	
3	Ensures appropriate protective equipment in place for both patient and clinician .	
4	Ensures the patient is positioned appropriately.	
5	Selects appropriate separator size and type (elastomeric or metal).	
6	Selects appropriate means of separator placement.	
7	Places separator between contact points, minimizing discomfort to patient and soft tissue trauma.	
8	Ensures separator is securely retained.	
9	Present the patient with post operative instructions.	
10	Ensures appropriate cross infection techniques observed throughout the entire observed period.	
11	Demonstrates high standards of professionalism throughout the entire observed period.	
12	Demonstrates good communication (including instructions when required) throughout the entire observed period.	
13	Demonstrates safe clinical practice throughout the entire observed period.	

WBA – Fitting and Adjustment of Functional Appliance		
1	Explains to the patient what is going to happen at that appointment.	
2	Ensures appropriate instruments and materials are readily available.	
3	Ensures appropriate protective equipment in place for both clinician and patient.	
4	Ensures the patient is positioned appropriately.	
5	Checks the patient's name on the lab prescription.	
6	Checks the functional appliance on model to ensure appropriate design and that there are no rough or sharp areas.	
7	Tries the functional appliance in mouth and ensures appropriately retentive, adjusts as necessary.	
8	Checks the extent of the mandibular posture, retention and comfort with the appliance in situ. Adjusts if necessary.	
9	Demonstrates insertion and removal of functional appliance to patient (and parent if appropriate) with aid of a face mirror.	
10	Demonstrates practically how to carry out midline expansion (If the appliance is so designed) and gets the patient (or parent) to practically demonstrate this exercise.	
11	Ensures patient is adept at insertion and removal of appliance.	
12	Explains care of appliance: Hours of wear, coping with contact sports or swimming, cleaning of appliance, managing speech interference.	
13	Explains procedure if problems with wear or damage/loss of appliance.	
14	Ensures base line clinical parameters such as the overjet, overbite, reverse overjet and molar relationship are recorded at the fit appointment.	
15	Ensures appropriate cross infection techniques observed throughout the entire observed period.	
16	Demonstrates high standards of professionalism throughout the entire observed period.	
17	Demonstrates good communication (including instructions when required) throughout the entire observed period.	
18	Demonstrates safe clinical practice throughout the entire observed period.	

WBA – Fitting Molar Bands		
Steps to be performed		
1	Explains to the patient what is going to happen at that appointment.	
2	Ensures appropriate instruments and materials are readily available.	
3	Ensures appropriate protective equipment in place for both patient and clinician.	
4	Ensures the patient is positioned appropriately.	
5	Removes separator.	
6	Uses study model as reference for approximate initial size.	
7	Tries bands on appropriate teeth.	
8	Ensures correct band seating with band seater and pusher.	
9	Removes bands, dries the saliva off and controls the field dry.	
10	Gives bands to assistant and asks to load with cement.	
11	Cements bands in position and ensures proper setting.	
12	Cleans excess cement and allows to set (or cure).	
13	Ensures appropriate cross infection techniques observed throughout the entire observed period.	
14	Demonstrates high standards of professionalism throughout the entire observed period.	
15	Demonstrates good communication (including instructions when required) throughout the entire observed period.	
16	Demonstrates safe clinical practice throughout the entire observed period.	
17	Ensures band size is recorded in the patient's chart.	

WBA – Adjustment of Orthodontic Appliance		
Steps to be performed		
1	Explains to the patient what is going to happen at that appointment.	
2	Ensures appropriate instruments and materials are readily available.	
3	Ensures appropriate protective equipment in place.	
4	Ensures the patient is positioned appropriately.	
5	Removes existing arch wire, ligatures and any auxiliaries using appropriate instruments.	
6	Disposes of contaminated ligatures, auxiliaries and existing arch wire safely; observing health and safety and infection control measures.	
7	Evaluates current clinical situation, assess hygiene and determines tooth movements required from next stage of treatment.	
8	Selects arch wire material and dimensions appropriate for the required tooth movements. Explains this choice to assessor.	
9	Uses study models as reference to customize arch wire to patient's arch dimensions (where appropriate), estimates length of arch wire required and shortens ends using appropriate instruments.	
10	Places the proper arch wire in patient's mouth, ligates using appropriate ligature technique (modules or SS short ligatures), and includes any necessary auxiliaries.	
11	Cuts distal ends of archwire to final length for patient comfort using appropriate instruments, disposing of sharps safely and asks patient to check for sharp/rough ends.	
12	Ensures appropriate cross infection techniques observed throughout the entire observed period.	
13	Demonstrates high standards of professionalism throughout the entire observed period.	
14	Demonstrates good communication (including instructions when required) throughout the entire observed period.	
15	Demonstrates safe clinical practice throughout the entire observed period.	
16	Ensures to document the session in the notes and documents the new wire placed.	

WBA – Finishing and Detailing		
Steps to be performed		
1	Explains to the patient what is going to happen at that appointment.	
2	Ensures appropriate instruments and materials are readily available.	
3	Ensures appropriate protective equipment in place.	
4	Ensures the patient is positioned appropriately.	
5	Makes correct identification of any brackets/ bands that need repositioning.	
6	Makes correct identification of any wire bends that are needed to correct rotations, marginal ridge discrepancy and angulations.	
7	Selects appropriate arch wires.	
8	Demonstrates appropriate placement of finishing bends in the archwire(s).	
9	Makes correct identification of the need for, and teeth involved in, seating.	
10	Selects appropriate elastics for seating (size and strength).	
11	Demonstrates appropriate placement of auxiliaries to support the elastics.	
12	Ensures appropriate cross infection techniques observed throughout the entire observed period.	
13	Demonstrates high standards of professionalism throughout the entire observed period.	
14	Demonstrates good communication (including instructions when required) throughout the entire observed period.	
15	Ensures safe clinical practice throughout the entire observed period	

WBA – Deband & Debond		
Steps to be performed		
1	Explains to the patient what is going to happen at that appointment.	
2	Ensures appropriate instruments and materials are readily available.	
3	Ensures appropriate protective equipment in place.	
4	Ensures the patient is positioned appropriately.	
5	Ensures patient is satisfied with result and obtains consent for demanding & debonding by patient and legal guardian.	
6	Reassures patient before commencing debanding & debonding about possible discomfort.	
7	Uses appropriate bracket debonding pliers and the appropriate force and technique to allow for quick and painless debond of brackets.	
8	Uses appropriate debanding pliers for band removal.	
9	Removes bands and brackets safely to protect against risk to the airway.	
10	Uses appropriate hand piece for removing residual composite and ensures this is completely removed.	
11	Provides reassurance in case of discomfort and checks that the hand piece is not over heating.	
12	Advises patient/parent of any iatrogenic damage if present and future implications.	
13	Takes impressions for study models and retainers and discusses with patient the need for fixed retainers.	
14	Ensures appropriate cross infection techniques observed throughout the entire observed period.	
15	Demonstrates high standards of professionalism throughout the entire observed period.	
16	Demonstrates good communication (including instructions when required) throughout the entire observed period.	
17	Demonstrates safe clinical practice throughout the entire observed period.	

WBA – Placement of Fixed Orthodontic Retainer		
Steps to be performed		
1	Explains to the patient what is going to happen at that appointment.	
2	Ensures appropriate instruments and materials are readily available.	
3	Ensures appropriate protective equipment is in place.	
4	Ensures the patient is positioned appropriately.	
5	Tries bonded retainer to ensure contoured fit. Remove and dry.	
6	Ensures correct preparation of teeth, sandblasting (prophylaxis +/- scaling).	
7	Ensures appropriate moisture control and ensures correct application of etching agent for 30 seconds, wash thoroughly and then apply a thin coat of bonding agent.	
8	Ensures correct bonded retainer handling and placement/positioning.	
9	Appropriates application and curing of the bonding material with curing light protection for patient/parent/nurse/operator.	
10	Appropriates removal of any excess bonding material and check occlusion (as appropriate).	
11	Disposes of any “positioner” device (elastics, acrylic/silicone) and ensures patient comfort.	
12	Demonstrates new bonded retainer to patient and explains about oral hygiene and future care.	
13	Ensures clinical records are completed correctly and follow-up is arranged.	
14	Appropriates cross infection techniques throughout the entire observed period.	
15	Ensures high standards of professionalism throughout the entire observed period.	
16	Ensures good communication (including instructions when required) throughout the entire observed period.	
17	Ensures safe clinical practice throughout the entire observed period.	

WBA – Placement of Mini-Implant		
Steps to be performed		
1	Explains to the patient what is going to happen at that appointment.	
2	Ensures appropriate instruments and materials are readily available.	
3	Ensures appropriate protective equipment is in place.	
4	Ensures the patient is positioned appropriately.	
5	Ensures appropriate imaging is taken prior to the start of the procedure (PA, BW, CBCT) and select the appropriate site of insertion.	
6	Select the appropriate shape, diameter size and length of mini-implant.	
7	Gives local anesthesia and checks its effectiveness.	
8	Asks the patient to rinse with CHX 0.012 mouthwash before placement.	
9	Ensures that the stent (if used) fits accurately or that the insertion site and angulations are fully assessed .	
10	Removes a section of soft tissue where appropriate (palatal sites and those with loose mucosa).	
11	Perforates the cortical plate where appropriate (e.g. palatal areas and posterior mandible).	
12	Ensures sufficient instrument access (e.g. cheek retraction) to insertion site.	
13	Orientates screwdriver correctly at insertion site, or in the stent, at the planned angulation.	
14	Undertakes slow controlled mini-implant insertion.	
15	Ensures appropriate mini-implant insertion depth and head projection.	
16	Asks the patient to rinse with CHX 0.012 mouthwash after placement and continue for 7-10 days.	
17	Loads mini-implant with the correct force level for the specific application.	
18	Ensures appropriates cross infection techniques observed throughout the entire observed period.	
19	Ensures high standards of professionalism throughout the entire observed period.	
20	Ensures good communication (including post-insertion instructions) throughout the entire observed period.	
21	Ensures safe clinical practice throughout the entire observed period.	

Appendix 5: KBO Clinic Forms (KBO forms 1.1 to 1.8)

The following documents are the KBO clinical forms that need to be filled according to the clinical requirements of each case. The resident needs to fill it and keep a copy in the patient's file.

KBO ORTHODONTIC CLINICAL ASSESSMENT FORM

Patient:---------- **Age:-------** **file number: ----------** **Date:---/------/-------**
CID: ----------

1. Chief concern and history					
Chief Concern:					
Med Hx					
BMI	Weight: Kg	Height: Cm	Allergies:		
Dent Hx (SOHP/PCP)					
Sleep	Snoring	SOB	Tiredness	Irritability	Family history
ENT	Mouth	Nasal	Both	Adenoid/Tonsils: normal	enlarged
TMJ	Click	Pain	Crepitus	Other:	
Habits	Thumb sucking	Nail biting	Clenching	Others:	

2. EOE: Extra-oral examination				
Profile	Convex	Straight	Concave	
NL angle	Normal	Obtuse	Acute	
Lips	Normal	Protrusive	Retrusive	
Chin throat distance	Normal	Decreased	Increased	
Incisal disp. rest	mm		%	
Incisal disp. smile	mm		%	
U midline to facial	On	Off Right: mm	Off Left: mm	
L midline to facial	On	Off Right: mm	Off Left: mm	
L midline to chin	On	Off Right: mm	Off Left: mm	
Chin deviation	On	Off Right: mm	Off Left: mm	
Cant	Maxillary	Mandibular	Right up	Left up

3. IOE: Intra-oral examination							
Dental Stage	Primary	Early mixed	Late mixed	Permanent			
Gingival health	Healthy	Gingivitis	Periodontitis	Last scaling:			
Caries			**Caries risk**	Low	Moderate	High	
Right Molar	Class I	Class II	Class III:				
Right Canine	Class I	Class II	Class III:				
Left Molar	Class I	Class II	Class III:				
Left Canine	Class I	Class II	Class III:				
Overjet:	mm	%					
Overbite:	mm	%					
Posterior crossbite	None	Right/Buccal: Lingual:	Left/ Buccal: Lingual:				
Anterior crossbite	None	Yes:	mm				
Upper Crowding	Mild	Moderate	Severe				
Lower Crowding	Mild	Moderate	Severe				
Upper Spacing	Mild	Moderate	Severe				
Lower Spacing	Mild	Moderate	Severe				

KBO ORTHODONTIC CLINICAL ASSESSMENT FORM

Patient:---------- **Age:**------- **file number:** ---------- **Date:**---/------/-------
CID: ----------

4. Radiographic analysis	
OPG	**Last obtained**: --/-----/------ **Findings:**
Intra-oral x-rays	**Type:** ☐ **PA** ☐ **BW** ☐ **Vertical BW** ☐ **Occlusal** **Last obtained**: --/-----/------ **Findings:**
CBCT	**Last obtained**: --/-----/------ **Radiologist:** **Reason:** **Findings:**
PA cephalogram	**Last obtained**: --/-----/------ **Findings:**
Lateral Cephalogram (Use form 1.2 for KBO cephalometric analysis)	**Last obtained**: --/-----/------ **Findings:**

KBO ORTHODONTIC CLINICAL ASSESSMENT FORM

Patient:---------- **Age:**------- **file number:** ---------- **Date:**---/------/-------
CID: ----------

5. Diagnosis and Treatment

Findings/Problem list

IOTN score

Diagnosis

Treatment options

Treatment plan

Resident Name: ---------- Stamp/Signature: ----------

Supervising Faculty Name: ---------- Stamp/Signature: ----------

KBO CEPHALOMETRIC ANALYSIS FORM

Patient:---------- **Age:**------- **file number:** ----------**Date:**---/------/------

CID: ---------- **Resident:** ----------

Category/Measurement	Patient Value	Kuwait Norms	Kuwait SD	Norm (Caucasian)	SD	Dev norm
Cranial base						
FH - SN (º)				6.0	4.0	
Saddle/Sella Angle (SN-Ar) (º)				124.0	5.0	
Anterior Cranial Base (SN) (mm)				75.3	3.0	
Posterior Cranial Base (S-Ar) (mm)				35.0	4.0	
Porion Location (mm)				-38.6	2.2	
Maxilla to the cranial base						
SNA (º)		83.04	3.6	82.0	3.5	
A-N Perpendicular (mm)		-0.20	3.29	0.0	2.0	
SN-Palatal plane(º)				8	3	
Mandible to the cranial base						
SNB (º)		79.44	3.4	80.9	3.4	
Pog-N Perpendicular (mm)		-5.80	5.67	-1.0	3.0	
Facial Angle (FH-NPo) (º)		86.84	3.09	88.6	3.9	
Facial Axis-Ricketts (NaBa-PtGn)(º)				90.0	3.5	
Y-Axis (SGn-SN) (º)				67.0	5.5	
Mand Plane to SN (º)		33.49	5.39	32.4	4.7	
Mand Plane to FH (FMA) (º)		26.55	4.84	25.5	5.0	
Pog-NB(mm)		0.82	1.5	2.0	2.0	
MP/PP (º)		24.78	5.06	25	6.0	
SGn/FH (º)		60.05	3.29	59.4	3.82	
SN-Pog (º)						
NA-APog (mm)						
Mandible to Maxilla						
ANB (º)		3.6	2.16	1.6	1.5	
Maxillary length (ANS-PNS) (mm)				51.6	4.3	
Condylion to ANS (mm)				93.2	4.0	
Mandibular length (Co-Gn) (mm)				122.3	4.0	
Mx/Md Diff (Co-Gn - Co-ANS) (mm)		24.90	3.55	25.0	4.0	
Anterior Facial Ht (ANS-Me)(mm)				71.5	5.0	
Convexity (NA-APo) (º)		6.51	5.51	4.9	3.0	
Convexity (A-NPo) (mm)				0.7	2.0	
Wits Appraisal (mm)		-0.048	2.36	-1.0	1.0	
Gonial/Jaw Angle (Ar-Go-Me) (º)				122.9	6.7	
UFH:LFH, Upper (N-ANS/N-Gn) (%)				45.0	1.0	
UFH:LFH, Lower (ANS-Gn/N-Gn) (%)				55.0	1.0	
Dental						
Overbite (mm)				2.5	2.0	
Overjet (mm)				2.5	2.5	
Occ Plane to FH (º)				6.8	5.0	
U1/Mx plane* Eastman				109	6	

KUWAIT BOARD OF ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS
البـــورد الكويتـي لتقويـم الأسنـان و عظـام الوجـه و الفكيـــن

KBO Form 1.2
Revised 2023

KBO CEPHALOMETRIC ANALYSIS FORM

Patient:---------- **Age:**------- **file number:** ----------**Date:**---/------/------

CID: ---------- **Resident:** ----------

Category/Measurement	Patient Value	Kuwait Norms	Kuwait SD	Norm (Caucasian)	SD	Dev norm
Dental						
U1 - Occ Plane (º)				122.5	7.0	
U1 Most Labial-A (perp to FH) (mm)				3.9	1.4	
U-Incisor Protrusion (U1-APo) (mm)		6.91	2.09	6.0	2.2	
U1 - NA (mm)		4.57	2.03	4.3	2.7	
U1 - NA (º)		24.14	5.77	22.8	5.7	
U1 - FH (º)				111.0	6.0	
U1 - SN (º)		107.17	6.04	102.8	5.5	
U6 - PT Vertical (mm)				18.0	3.0	
L1 - NB (º)		30.24	5.31	25.3	6.0	
L1 - NB (mm)		6.40	2.40	4.0	1.8	
L1 Protrusion (L1-APo) (mm)		3.95	2.04	2.7	1.7	
IMPA (L1-MP) (º)		97.31	5.69	95.0	7.0	
FMIA (L1-FH) (º)		56.14	6.09	64.8	8.5	
L1 - Occ Plane (º)				72.0	5.0	
Interincisal Angle (U1-L1) (º)		122.04	5.12	130.0	6.0	
Soft tissue						
Lower Lip to E-Plane (mm)		-0.45	2.90	-2.0	2.0	
Upper Lip to E-Plane (mm)				-6.0	2.0	
Z angle (Merrifield)(º)		71.68	8.95	81.2	NA	
Nasolabial (º)				90-110		
Facial index (Farkas)				F86.2 M88.5	F4.6 M5.1	
Facial angle (º)				165-173	4.1	
H angle (º)		16.77	4.24	10	NA	

KUWAIT BOARD OF ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS
البـــورد الكويتـــي لتقويـــم الأســـنان و عظـــام الوجـــه و الفكيـــن

KBO Form 1.2
Revised 2023

KUWAIT BOARD OF ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS
البـــورد الكـويتـي لتقويـم الأسنـــان و عظـــام الوجـــه و الفكيـــن

إقرار بالعلم والتعهد بالالتزام لمراجعي تقويم الاسنان في برنامج البورد الكويتي لتقويم الاسنان وعظام الوجه والفكين التدريبي

أنا / ولي / ولية أمر المراجع:
الاسم الثلاثي للمراجع: ---------- رقم الملف: ---------- تاريخ اليوم: -----/-----/-----
اسم ولي/ولية الامر الثلاثي: ---------- العلاقة: ---------- التوقيع: ----------

أقر أنا الموقع أعلاه بأنني اطلعت على تفاصيل الخطة العلاجية الخاصة بي من قبل الطبيب المعالج/ الطبيبة المعالجة، كما قمت بإبلاغهم بجميع تفاصيل حالتي الصحية، وبناء عليه أتعهد بالالتزام بالتالي:

١- الالتزام بالحضور للموعد في الوقت المحدد، وفي حال التأخر عن الموعد لأكثر من ١٠ دقائق سوف يلغى الموعد.
٢- في حال عدم التمكن من حضور الموعد سوف أقوم بإبلاغ العيادة قبل الموعد ب ٤٨ ساعة على الأقل.
٣- عدم الاعتراض على تأخر أو انشغال الطبيب المعالج والمشرف/الطبيبة المعالجة والمشرفة على الحالة عن موعد العلاج لانشغالهم بمرضى آخرين.
٤- عدم الاعتراض في حالة متابعة الحالة من قبل أكثر من طبيب معالج/مشرف او طبيبة معالجة/مشرفة نظراً لطبيعة البرنامج التدريبية.
٥-في حال التخلف عن مراجعة الطبيب لأكثر من ٤ شهور أو عدم الحضور لثلاث (٣) مرات متتالية أو أربع (٤) مرات متفرقة يحق للطبيب المعالج إيقاف العلاج بعد موافقة رئيس البرنامج (أو من ينوب عنه) وإزالة جهاز التقويم.
٦- في حال عدم الاهتمام بنظافة وصحة الفم واهمال جهاز التقويم بالتكسير المستمر يحق ل الطبيب المعالج والمشرف/الطبيبة المعالجة والمشرفة إيقاف العلاج بعد موافقة رئيس البرنامج (أو من ينوب عنه) وإزالة جهاز التقويم.
٧- سيتخلل مراحل العلاج أخذ الصور للأسنان والوجه والفكين لتوثيق ودراسة الحالة حسب المتطلبات الطبية والتعليمية للبرنامج التدريبي، في حال الرفض لا يمكن اجراء العلاج التقويمي.
٨- يقدم العلاج أطباء أسنان كجزء من مرحلة التعليم الاكلينيكي في برنامج البورد الكويتي لتقويم الاسنان والوجه والفكين في مستشفى الفروانية التخصصي لطب الاسنان تحت اشراف أعضاء هيئة التدريس في برنامج البورد الكويتي لتقويم الأسنان وعظام الوجه والفكين، لذلك قد تطول مدة المواعيد وفترة العلاج.
٩- قد تستدعي خطة العلاج خلع بعض الاسنان الدائمة او اللبنية في بداية العلاج او خلال رحلة العلاج حسب الخطة العلاجية.
١٠- اتعهد باستمرار متابعة الحالة مع طبيب/طبيبة الاسنان العام/الشامل (مراجعة الصحة المدرسية) وإتمام تنظيف الاسنان واللثة في المدة المحددة
١١- أتعهد بتحمل تكاليف المواد والأجهزة الفموية و المختبر ان وجدت اللازمة لإتمام علاج تقويم الأسنان وعظام الوجه والفكين.

☐ علاج التقويم التدخلي الأولي Interceptive Orthodontics phase I

١- قد تتطلب الحالة تدخلا أولياً "علاج تدخلي أولي" لتصحيح بعض المشاكل الملحة كعلاج توسعة الفكين أو علاج العضة المعكوسة.
٢- في حال استعمال الجهاز المتحرك أتعهد بالالتزام باستعمال الجهاز المتحرك حسب المدة المحددة من قبل الطبيب/الطبيبة المعالج والمشرف/المشرفة على الحالة واتباع تعليماته/ تعليماتها.
٣-المحافظة الكاملة على الجهاز المتحرك/الثابت ونظافته حسب التعليمات وعدم تعمد تكسير أو تخريب الجهاز أو جزء من أجزائه.
٤- أتعهد في حال ضياع او كسر الجهاز بإبلاغ الطبيب/ الطبيبة لإعلامه بأخر المستجدات، ولا يحق لي المطالبة بجهاز متحرك أكثر من مرة في حال فقدان او ضياع او كسر الجهاز، ل الطبيب/الطبيبة المعالجة والمشرفة الاحقية في قرار متابعة الحالة والعلاج.
٥- غالبا لا تتضمن فترة العلاج هذه استعمال التقويم الثابت فيما عدا لو كانت هناك حاجة ملحة الى ذلك.

☐ علاج التقويم الثابت الشامل Comprehensive Fixed Orthodontic treatment

١- علاج التقويم الشامل يشمل جهاز تقويم الاسنان الثابت بهدف علاج شامل لمشاكل إطباق الاسنان والفكين.
٢- المحافظة الكاملة على جهاز التقويم الثابت حسب تعليمات الطبيب المعالج والمشرف/الطبيبة المعالجة والمشرفة بالنسبة للطعام والشراب والتنظيف وعدم تكسير جهاز التقويم أو أي جزء من أجزائه.
٣-الالتزام بتعليمات الطبيب المعالج والمشرف/الطبيبة المعالجة والمشرفة بشكل عام وبشكل خاص في حال استعمال أجهزة علاج الوجه والفكين والأجهزة المتحركة والسيور المطاطية.
٤- في حال طلب إزالة التقويم قبل الانتهاء من العلاج المتفق عليه سيتم توقيعي على إقرار بعدم أحقيتي في المطالبة بالعلاج مرة أخرى في المراكز التخصصية التابعة لوزارة الصحة أو في برنامج البورد الكويتي لتقويم الاسنان وعظام الوجه والفكين.
٥- في حال تركيب التقويم الداخلي ونظراً لطبيعة وجوده خلف الأسنان فإنه سيقوم بالاحتكاك مع اللسان بشكل مستمر مما سيؤدي إلى الشعور بعدم الراحة وألم وتشققات/تقرحات لسانيه إلى حين التعود عليه.
٦- من الممكن حدوث تغيير بسيط في مخارج الحروف عند الكلام بعد تركيب التالي: التقويم الداخلي، المعدني الثابت، أجهزة سقف الحلق، الأجهزة المتحركة، المثبت (الريتينر).
٧- الطبيب المعالج يبذل جهده للحصول على أفضل النتائج العلاجية، لكن لا يمكن ضمان النتائج ولا نضمن حدوث أي من العوائق التي تتخلل فترة العلاج، وعادة ما تكون فترة العلاج المتوقعة مطابقة لفترة العلاج الفعلية وهناك عدة عوامل قد تؤدي إلى إطالة فترة العلاج أو تغيير خطة العلاج.
٨- في حال تكرار كسر جهاز التقويم أو تعمد كسره يتم إيقاف علاجي دون الرجوع إلي ودون تحمل الطبيب المعالج أي مسؤولية تجاه ذلك.

☐ التقويم الجراحي لتصحيح عظام الوجه والفكين Orthognathic surgery and Orthodontics

١- تستدعي بعض الحالات التدخل الجراحي بالإضافة الى تقويم الاسنان عن طريق الاستعانة بجراح الوجه والفكين.
٢- يتكون العلاج من ثلاث مراحل (٣) علاجية تتكون غالباً من تقويم الاسنان قبل العملية الجراحية، العملية الجراحية التصحيحية للفكين أو أحدهما، ثم تقويم الاسنان بعد العملية يليها المثبت بعد إتمام العلاج.
٣- سيتم التنسيق بين طبيب/طبيبة التقويم وطبيب قسم الجراحة للاتفاق على تفاصيل الخطة العلاجية للتدخل الجراحي.
٤- يجب مناقشة جميع التفاصيل والمضاعفات المحتملة للعملية الجراحية مع طبيب قسم جراحة الوجه والفكين قبل البدء بالعلاج.
٥-أتعهد بالالتزام بجميع مواعيد الجراح وتعليمات ما بعد الجراحة لضمان أفضل نتائج للعلاج، وأعلم ان إيقاف علاج التقويم الجراحي بعد ابتداء تقويم الأسنان سوف ينتج عنه ازدياد عدم تطابق الأسنان والمظهر الخارجي للوجه الى أسوأ مما كان عليه قبل بداية العلاج.

☐ التقويم المتحرك الشفاف Clear aligner therapy:

١- أتعهد بالالتزام باستعمال التقويم المتحرك الشفاف حسب المدة المحددة من قبل الطبيب/الطبيبة المعالج والمشرف/المشرفة على الحالة واتباع تعليماته/ تعليماتها.
٢-الالتزام بعد تناول الطعام او الشراب أثناء وجود الجهاز في الفم، حيث يجب ازالته وتنظيفه ثم لبسه بعد الوجبات (المأكولات والمشروبات)
٣- أتعهد بتحمل تكلفة العلاج بالتقويم المتحرك الشفاف عن طريق الدفع للمختبر المصنع مباشرة ولا يتحمل برنامج البورد التدريبي أي تكلفة إضافية للعلاج.
٤- قد يتطلب هذا العلاج الاستعانة ببعض الأجهزة المساندة مثل السيور المطاطية او الغرسات المعدنية.

☐ تثبيت الغرسة المعدنية /الزرعات التقويمية (TAD):

قد تحتاج بعض الحالات ل الزرعات التقويمية المؤقتة وهذه الغرسات قد يكون لها مضاعفات ومنها:

- من الممكن أن تلتحم بالعظم وقد تتطلب عملية جراحية لاستخراجها.
- قد تفقد ثباتها وتخرج تلقائيا أو تنكسر. (يجب إبلاغ الطبيب فور الحدوث).
- من الممكن أن تسبب بإصابة للسن المجاور أو العصب.
- من الممكن أن تسبب التهابات للثة أو العظم المغروس فيه.

الاعراض الجانبية والمضاعفات المحتملة خلال العلاج

١- **تسوس الأسنان والبقع البيضاء:** جهاز التقويم يزيد فرص ظهور التسوس والبقع البيضاء، يجب الالتزام بزيارة طبيب الأسنان العام كل ٣"أشهر للفحص الدوري والتنظيف.

٢-**أمراض اللثة:** قد تسوء حالة اللثة خلال فترة العلاج خصوصاً في حال عدم الاهتمام بنظافة الفم، إذا حال أصبح مرض اللثة متقدما يحق للطبيب المعالج وقف علاج التقويم لمصلحة المريض.

٣-**انحسار اللثة وانكشاف الجذور:** إذا كان هناك انحسار اللثة لسن أو مجموعة من الأسنان فمن الممكن أن يزيد الانحسار بشكل قد يؤثر سلباً على وضعية الأسنان، وقد يؤدي إلى خلخلتها واحتمال خلعها تبديلها بزراعة الاسنان.

٤- **تأكل الجذور:** من الممكن حصول تآكل لجذور الأسنان لتصبح أقصر، ولا يوجد سبب علمي واضح يبين أسباب التآكل على وجه الدقة، إذا تم اكتشاف حالة تآكل الجذور فيمكن وقف علاج التقويم مؤقتاً أو كلياً بنزع جهاز التقويم حتى قبل إتمام فترة العلاج.
٥-**إصابة عصب الاسنان:** في بعض الحالات يكون لعلاج التقويم أثر سلبي على العصب، وقد يتطلب الأمر علاجاً للعصب.

٦-**الحساسية:** من الممكن أن تسبب بعض المعادن أو السيور المطاطية بالحساسية لدى بعض المرضى، وقد يتطلب استخدام نوع خاص من التقويم أو التوقف عن العلاج، يجب على المراجع/المراجعة الإفصاح عن جميع أنواع الحساسية لديه/لديها.

٧- **إصابات ناتجة عن جهاز التقويم:** يجب مراعاة الابتعاد عن الأطعمة والممارسات التي يمكن أن تؤدي إلى كسر أو نزع جهاز التقويم، حيث من الممكن ابتلاع واستنشاق الجهاز والتسبب بضرر أكبر، يجب إبلاغ الطبيب المعالج فوراً عند الاشتباه بحصول كسر أو تلف لجهاز التقويم.
٨- **خلع الأسنان:** بعض الحالات تتطلب خلع بعض الأسنان (سواء لبنية أو دائمة) ومضاعفات خلع الأسنان يجب أن تناقش مع الطبيب الذي سيقوم بالخلع.
٩- **الاسنان المدفونة (المضمورة):** تطول مدة علاج هذه الحالات، ومن الممكن حدوث بعض المضاعفات أثناء علاج هذه الحالات مثل فقدان السن المدفون أو فقدان الأسنان المجاورة أو حاجتها لعلاج العصب.

المدة الزمنية للعلاج:

هناك عدة عوامل قد تؤدي إلى إطالة فترة العلاج أو تغيير خطة العلاج ومنها:

- نمو غير طبيعي /غير متوقع لأي من الفكين للمريض
- صعوبة الحالة وتعدد المشكلات المراد حلها
- أي عادة مضرة تؤثر على الفم والأسنان
- تسوس الاسنان والحاجة الى الحشوات العلاجية، أمراض اللثة
- عدم تعاون المريض
- بعض الأمراض أو الأدوية التي تؤثر على النمو مثل هرمونات النمو التعويضية

المثبت (الريتينر) بعد العلاج Retainer:

١- الالتزام بلبس جهاز المثبت واتباع تعليمات الطبيب المعالج والمشرف/الطبيبة المعالجة والمشرفة لتفادي رجوع الأسنان إلى وضعها السابق بعد انتهاء العلاج حيث لا يمكن ضمان نتيجة العلاج للأبد.

٢- المحافظة على المثبت وسلامته ونظافته، وفي حال ضياع أو كسر المثبت يحق لي تعويضه مرة واحدة فقط.

٣- الالتزام والتعهد بشراء المواد اللازمة للمثبت سواء المتحرك أو الثابت.
٤- مع تقدم العمر تتحرك الأسنان باستمرار وخاصة الأسنان الأمامية والسفلية، ولذلك قد تتطلب بعض الحالات أن يكون المثبت ثابتا.

الخطة العلاجية للمراجع:

مدة العلاج المتوقعة (هذا الرقم يعتبر مجرد توقع و قد تزيد مدة العلاج عن ذلك):

خطط العلاج الاخرى التى تم تقديمها:

بعد قراءة النموذج الطبيب المعالج والمشرف/الطبيبة المعالجة والمشرفة، فإن توقيعي اعلاه فيه إقرار مني على أني أخول وأوافق على عمل الإجراء الموصوف من قبل الفريق المعالج في برنامج البورد الكويتي لتقويم الأسنان وعظام الوجه والفكيين في مستشفى الفروانية

اسم الطبيب المعالج /الطبيبة المعالجة: ----------

التوقيع: ----------

اسم الطبيب المشرف /الطبيبة المشرفة على الحالة: ----------

التوقيع: ----------

التاريخ: ---------/-------/-----

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إقرار و تعهد

أنا / ولي / ولية أمر المراجع:

الاسم الثلاثي للمراجع: ----------

رقم الملف: ---------- رقم البطاقة المدنية: ----------

اسم ولي/ولية الامر الثلاثي: ----------

العلاقة: ----------

- أقر بأنني **لا ارغب في استكمال علاج تقويم اسناني** وان طلبي إزالة جهاز التقويم بناءً على رغبتي الشخصية.
- أقر بأن طبيب الاسنان المعالج قد أعلمني بأن عدم استكمال علاج تقويم الاسنان وإزالة جهاز التقويم دون استكمال العلاج قد يترتب عليه الاضرار والسلبيات الصحية الفموية.
- **أتعهد بعدم المطالبة بتقويم اسناني مره أخرى**
- أتعهد بعدم تحمل طبيب الاسنان المعالج ووزارة الصحة ممثلة بمركز الفروانية التخصصي لطب الاسنان بأية مسؤولية لعدم استكمال علاج تقويم اسناني

وهذا إقرار وتعهد مني بذلك
المقرر بما فيه...

التوقيع: ---------- تاريخ اليوم: ----------

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إقرار بالعلم والتعهد بالالتزام بمثبت الأسنان بعد علاج التقويم في برنامج البورد الكويتي لتقويم الاسنان وعظام الوجه والفكين التدريبي

أنا / ولي / ولية أمر المراجع:

الاسم الثلاثي للمراجع: ---------- رقم الملف: ---------- تاريخ اليوم: -----/------/------

اسم ولي/ولية الامر الثلاثي: ---------- العلاقة: ---------- التوقيع: ----------

أقر أنا الموقع أعلاه بأنني اطلعت على تفاصيل الالتزام بمثبت الأسنان (الريتينر) بعد العلاج Retainer من قبل الطبيب المعالج/ الطبيبة المعالجة، كما قمت بإبلاغهم بجميع تفاصيل حالتي الصحية، وبناء عليه أتعهد بالالتزام بالتالي:

1. الالتزام بتعليمات الطبيب المعالج والمشرف/الطبيبة المعالجة والمشرفة بخصوص طريقة ومدة لبس المثبت لتفادي رجوع الأسنان إلى وضعها السابق.
2. إتمام علاج تقويم الاسنان والفكين لا يضمن بالضرورة ثبات الاسنان مدى الحياة، يوجد قابلية محتملة بأن تتحرك الاسنان من موقعها النهائي بعد العلاج نحو موقعها الاولي قبل بداية العلاج.
3. الالتزام بلبس المثبت بعد انتهاء العلاج ضروري حيث إن منطقة الاسنان والوجه والفكين معرضة للتغيير تبعاً للتغيرات التي تطرأ على جسم ووجه الانسان نتيجة التقدم بالعمر.
4. قد تتطلب بعض الحالات أن يكون المثبت مثبتاً بصورة دائمة على الاسنان خاصة الأسنان الأمامية السفلية.
5. في بعض الأحيان وحتى مع الالتزام بالمثبت قد تتعرض الاسنان وبالأخص السفلية الامامية لبعض التغيرات /الانتكاس نحو التزاحم/ الفراغات مرة أخرى.
6. المحافظة على المثبت وسلامته ونظافته، وفي حال ضياع أو كسر المثبت يحق لي تعويضه مرة واحدة فقط.
7. أتعهد بالتواصل مع العيادة / الطبيب المعالج والمشرف/الطبيبة المعالجة والمشرفة فور ضياع/تلف المثبت.
8. القيام بتنظيف المثبت المتحرك باستخدام فرشة الاسنان والماء الفاتر والاستعانة بمواد التنظيف الخاصة بالمثبت كالفوم او الفوار والمتوفرة في الصيدليات حسب تعليمات الطبيب المعالج والمشرف/الطبيبة المعالجة والمشرفة.
9. الالتزام والتعهد بشراء المواد اللازمة لتصنيع المثبت المتحرك أو الثابت حسب تعليمات الطبيب المعالج والمشرف/الطبيبة المعالجة والمشرفة.
10. أتعهد بالالتزام و حضور المواعيد المخصصة للمتابعة بعد انتهاء مدة العلاج (بعد بازالة أجهزة التقويم) و ذلك للكشف على الاسنان و سلامة المثبت (Retainer) حسب التعليمات.
11. في حال تم عمل أي حشوات أو قشرات تجميلية او تلبيسات على الاسنان فان ذلك قد يغير من شكل الاسنان وبالتالي لن يكون مقاس المثبت مناسبا، لذلك أتعهد بالحرص على إخبار طبيب الاسنان المعالج بذلك و إحضار المثبت معي للموعد حتى يأخذ ذلك بعين الاعتبار عند عمل الحشوات أو القشرات التجميلية أو التلبيسات.

اسم الطبيب المعالج /الطبيبة المعالجة : ---------- التوقيع: ----------

اسم الطبيب المشرف /الطبيبة المشرفة على الحالة : ---------- التوقيع: ----------

التاريخ: -----/------/--------

KBO Form 1.5
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KBO CASE TRANSFER FORM

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This case is being transferred to another care provider after informing 1) The patient/legal guardian and getting their consent 2) A KBO full time faculty member			
Patient name			
Age:		**Date of Birth:**	
CID:		**File number:**	
Medical history:			
Dental history:			
Patient compliance/behavior			
Transferred from			
Transferred to			
Supervising faculty			
Reason of referral			
Treatment plan			
Current bracket system company			
Current wires	Upper:	Lower:	
Auxiliaries			
Photos available	◯ Yes	**Date obtained:**	
X-rays	◯ OPG(--/--/----)	◯ LCR(--/--/----)	◯CBCT(--/--/----) ◯ Others

Resident Name: ---------- **Stamp/Signature:** ----------

KBO Faculty Name: ---------- **Stamp/Signature:** ----------

Date:------/----------/----------

KBO Form 1.6
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KBO INSPECTION AND NEW CASE REFERRAL FORM

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Patient name	
Patient CID/ID	
Age	
Diagnosis	
Referral reason	

IOTN	**X-rays included:**
Referred by	**Dept:**
Contact info	
Signature/Stamp	**Date:**
KBO faculty	
Signature/Stamp	**Date:**
Case status	☐ Accepted ☐ Rejected ☐ Recall
Assigned to:	

KBO Form 1.7
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Appendix 6: KBO Academic forms (KBO Forms 2.1 to 2.4)

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KBO Literature review evaluation form

Resident's name *
Please Select

Date *
Month Day Year

Supervising faculty *
Please Select

Please evaluate the resident's presentation by answering the following questions

Introduction: Introduces the research and provides context supporting rationale; statement of why research is needed in this area and relevance. *
Please Select

Methodology: Reflects the methodology used and details in relation to design, sample size, intervention, method of measurement, techniques to eliminate bias and hierarchy of clinical research method (where applicable) *
Please Select

Results: Presentation of data, discussion of whether any data is missing, statistics used, confidence intervals and general outcome (where applicable). *
Please Select

Conclusion: Discussion of whether investigators measured what was set out to investigate, detailed outcomes and take-home message. *

Please Select

Critique: Ability to constructively critique the paper taking into consideration aspects of validity, reliability, reproducibility, generalizability, measurement errors, statistical errors, systematic errors and bias (where applicable). *

Please Select

References and Citations: Contains relevant references and citations. *

Please Select

Overall Organization of the Presentation: Presentation with a smooth flow and provides good explanations and/or elaboration. *

Please Select

Depth of Knowledge: Depth of thought and ability to answer questions in an intelligent manner. The presentation is also clear reflecting understanding subject matter. *

Please Select

Delivery Skills: Clear and audible to the audience. Grammatical errors are insignificant and pronunciation is very good with engagement. *

Please Select

Name of evaluator *

First Name Last Name

Email of evaluator *

example@example.com

Complete

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KBO Case presentation evaluation form

Resident's name *
Please Select

Date *
Month Day Year

Clinical case type *
Please Select

Supervising clinical trainer *
Please Select

Appliance system *
Please Select

Please evaluate the case presentation by answering the following questions

The overall quality of the presentation including but not limited to clarity, details, comprehensiveness, supporting documents *
Please Select

The overall quality of photos, radiographs, and models *
Please Select

The resident presented the patient's chief concern, medical and dental history, and findings of physical exam adequately *

Please Select

The resident selected appropriate investigations, and interpreted their results for the purpose of diagnosis and management, disease prevention, and health promotion *

Please Select

The resident established patient centered treatment objectives(plan) in collaboration with supervisor, patient, and their family as a priority list *

Please Select

The resident was able to answer questions comfortably and accept feedback *

Please Select

Name of evaluator *

First Name Last Name

Email of evaluator *

example@example.com

Complete

Clear All Questions

KUWAIT BOARD OF ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS
البـــورد الكويتـــي لتقويـــم الأســـنان و عظـــام الوجـــه و الفكيـــن

KBO Course Evaluation Form

Course Information

Lecturer's name *

Rotation/Year *

Course Number/Title *

Date *

Month Day Year

Course Evaluation

Please evaluate to the best of your experience and knowledge *

	1(Strongly disagree)	2(Disagree)	3(Agree)	4(Strongly agree)	NA(Not applicable)
Overall course evaluation	○	○	○	○	○
The objectives of the course were met	○	○	○	○	○

Appropriate resources were provided per topic	○	○	○	○	○
The course improved my knowledge and clinical confidence as an Orthodontist	○	○	○	○	○
The course was organized	○	○	○	○	○

Scholar *

	1(Strongly disagree)	2(Disagree)	3(Agree)	4(Strongly agree)	NA(Not applicable)
Shows enthusiasm about teaching and enjoys interacting with residents	○	○	○	○	○
Conducts discussions that are interesting and stimulating and include topics that are important and relevant to resident	○	○	○	○	○
Teaches approaches to problems and basic principles	○	○	○	○	○
Facilitates discussions in clear, organized, focused fashion and involves residents	○	○	○	○	○
Provides constructive feedback and criticism in a supportive way	○	○	○	○	○
Provides good supervision, allowing the resident to take responsibility, but willing to help when necessary and appropriate	○	○	○	○	○
Teaches critical appraisal and evidence based Dentistry/Orthodontics	○	○	○	○	○

Medical Expert *

	1(Strongly disagree)	2(Disagree)	3(Agree)	4(Strongly agree)	NA(Not applicable)
Provides teaching that is clinically oriented, accurate, in-depth and up-to-date	○	○	○	○	○
Role model with good knowledge and good clinical and problem solving skills	○	○	○	○	○

Communicator *

	1(Strongly disagree)	2(Disagree)	3(Agree)	4(Strongly agree)	NA(Not applicable)
Provides feedback to learners about their interactions with patients, families and colleagues	○	○	○	○	○
Teaches communication skills by demonstrating good inter-personal skills	○	○	○	○	○

Collaborator *

	1(Strongly disagree)	2(Disagree)	3(Agree)	4(Strongly agree)	NA(Not applicable)
Role model working collaboratively with other health care professionals	○	○	○	○	○

Manager *

	1(Strongly disagree)	2(Disagree)	3(Agree)	4(Strongly agree)	NA(Not applicable)
Provides support for team, and helps work run smoothly and efficiently	○	○	○	○	○
Includes quality assurance / quality improvement and patient safety issues in teaching	○	○	○	○	○

Advocate *

	1(Strongly disagree)	2(Disagree)	3(Agree)	4(Strongly agree)	NA(Not applicable)
In discussions, identifies advocacy issues, such as health risks, disease prevention, and public health issues	○	○	○	○	○

Professional *

	1(Strongly disagree)	2(Disagree)	3(Agree)	4(Strongly agree)	NA(Not applicable)
Includes ethical issues and professionalism in teaching	○	○	○	○	○
Is accessible and available, spends appropriate time with resident	○	○	○	○	○

The amount of effort you put into this course was: *

- ○ Excellent
- ○ Very Good
- ○ Good
- ○ Fair
- ○ Poor
- ○ Very Poor

On average, how many hours a week did you spend on this course (in and out of class)? *

- ○ 0 - 2
- ○ 2 - 5
- ○ 6 - 10
- ○ 11 - 14
- ○ 15 Up

What grade do you expect in this course? *

- ○ A (4.5 - 5.0)
- ○ B (3.5 - 4.4)
- ○ C (2.5 - 3.4)
- ○ D (1.7 - 2.4)

Evaluate Now!

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KBO Tutor Evaluation Form

Tutor Information

Tutor's name *

Rotation/Year *

Course Number/Title *

Lecturer/Tutor evaluation

Date *

Month Day Year

Scholar *

	1(Strongly disagree)	2(Disagree)	3(Agree)	4(Strongly agree)	NA(Not applicable)
Shows enthusiasm about teaching and enjoys interacting with residents	○	○	○	○	○

Conducts discussions that are interesting and stimulating and include topics that are important and relevant to resident	○	○	○	○	○
Teaches approaches to problems and basic principles	○	○	○	○	○
Facilitates discussions in clear, organized, focused fashion and involves residents	○	○	○	○	○
Provides constructive feedback and criticism in a supportive way	○	○	○	○	○
Provides good supervision, allowing the resident to take responsibility, but willing to help when necessary and appropriate	○	○	○	○	○
Teaches critical appraisal and evidence based Dentistry/Orthodontics	○	○	○	○	○

Medical Expert *

	1(Strongly disagree)	2(Disagree)	3(Agree)	4(Strongly agree)	NA(Not applicable)
Provides teaching that is clinically oriented, accurate, in-depth and up-to-date	○	○	○	○	○
Role model with good knowledge and good clinical and problem solving skills	○	○	○	○	○

Communicator *

	1(Strongly disagree)	2(Disagree)	3(Agree)	4(Strongly agree)	NA(Not applicable)
Provides feedback to learners about their interactions with patients, families and colleagues	○	○	○	○	○
Teaches communication skills by demonstrating good inter-personal skills	○	○	○	○	○

Collaborator *

	1(Strongly disagree)	2(Disagree)	3(Agree)	4(Strongly agree)	NA(Not applicable)

Role model working collaboratively with other health care professionals	○	○	○	○	○

Manager *

	1(Strongly disagree)	2(Disagree)	3(Agree)	4(Strongly agree)	NA(Not applicable)
Provides support for team, and helps work run smoothly and efficiently	○	○	○	○	○
Includes quality assurance / quality improvement and patient safety issues in teaching	○	○	○	○	○

Additional comments

Advocate *

	1(Strongly disagree)	2(Disagree)	3(Agree)	4(Strongly agree)	NA(Not applicable)
In discussions, identifies advocacy issues, such as health risks, disease prevention, and public health issues	○	○	○	○	○

Professional *

	1(Strongly disagree)	2(Disagree)	3(Agree)	4(Strongly agree)	NA(Not applicable)
Includes ethical issues and professionalism in teaching	○	○	○	○	○
Is accessible and available, spends appropriate time with resident	○	○	○	○	○

Appendix 6: KBO endorsed MOrth long case write up

The document will be shared during the Clinical Orthodontics Seminar (ORTH4) orientation session.

Appendix 7: Audit report forms

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Record of Audit/ Research Meeting

Resident Name:	Date:
Supervisor:	Meeting attendees:

Points of discussion:
Agreed action(s) to take moving forwards:
Comments on current expectations and whether being met:

Date of next meeting	

Supervisors Signature	Residents Signature

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Audit Presentation Evaluation Form

Resident Name:	Date:
Assessor Name:	Audit Stage:

1-Unsatisfactory 2-Needs Improvement 3-Meets Expectations 4-Exceeds Expectations 5-Outstanding

Clear aims/objectives	1	2	3	4	5
Standards clearly and appropriate	1	2	3	4	5
Organized and easy to follow presentation	1	2	3	4	5
Clearly and sequentially presented stages of the audit	1	2	3	4	5
Ability to anticipate complications and finds solutions	1	2	3	4	5
Use of evidence and references in presentation	1	2	3	4	5
Adequate action plan moving forwards	1	2	3	4	5
General presentation skills	1	2	3	4	5
Use of visual aids and media	1	2	3	4	5
Confidence in knowledge, fluency and enthusiasm	1	2	3	4	5
Handling Questions	1	2	3	4	5

Comments:

Assessors Signature: